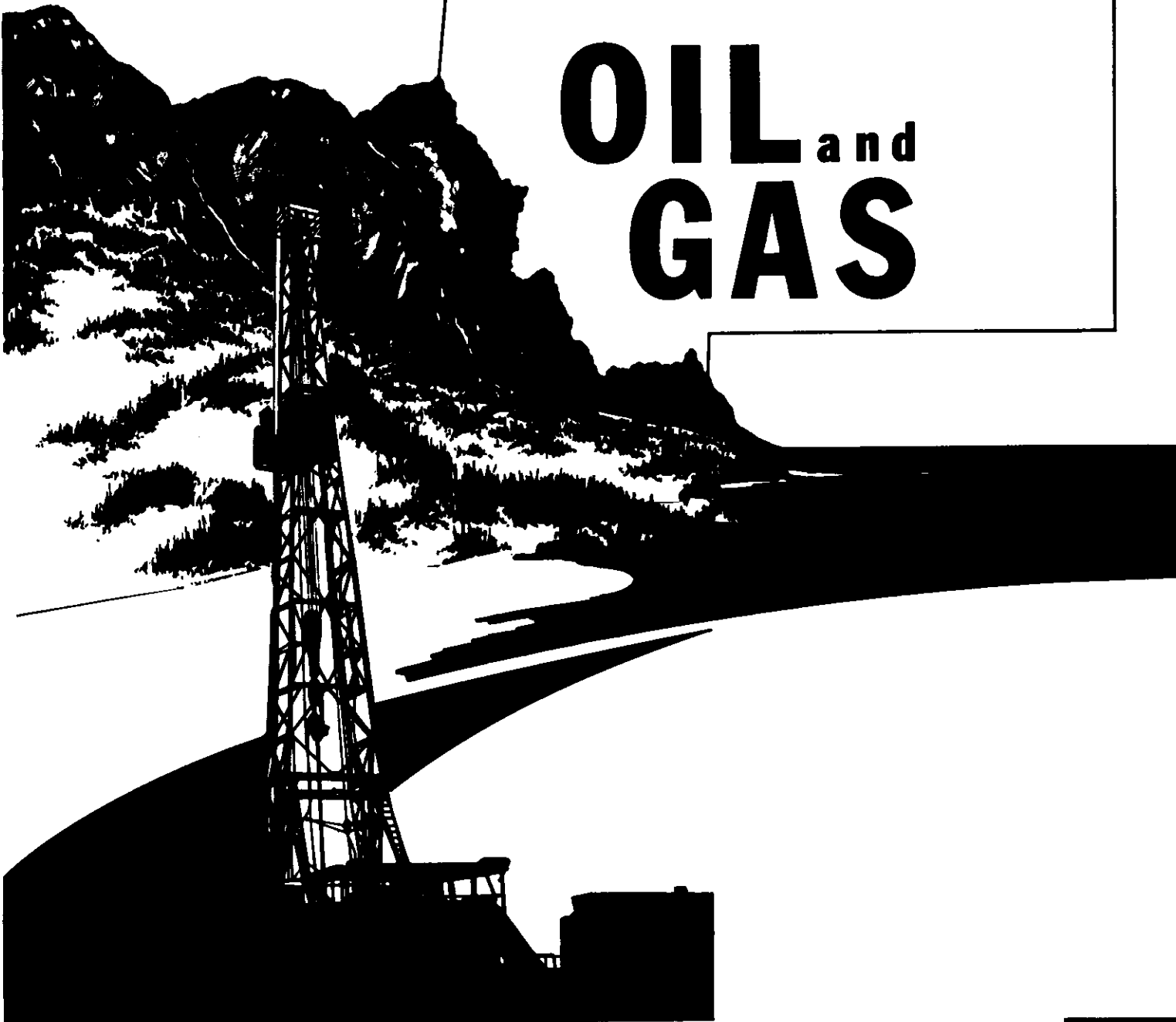


MONTANA



OIL^{and} GAS

ANNUAL REVIEW 1993

Volume Thirty-seven

DEPARTMENT OF NATURAL RESOURCES AND CONSERVATION
OF THE STATE OF MONTANA

Oil and Gas Conservation Division

Marc Racicot, Governor



ANNUAL REVIEW FOR THE YEAR 1993

Relating to

OIL AND GAS

Volume 37

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Chinook, Montana

STANLEY LUND, Vice-Chairman

Reserve, Montana

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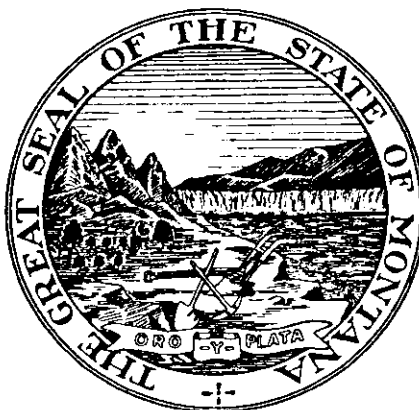
Baker, Montana

August, 1994

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ACKNOWLEDGMENTS

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Annual Review for the Year 1993 Volume 37 ACTIVITY REVIEW

Montana's oil production was 17.4 million barrels in 1993, a 5.8% decrease from the previous year. Gas production increased from 54.8 million MCF in 1992 to 55.8 million MCF in 1993, reflecting the continuing interest in shallow gas development and the success of several infill drilling programs in existing gas fields. Well drilling activities dropped from 259 completions in 1992 to 182 completions in 1993. Forty four wildcat wells were drilled in 1993.

A substantial increase in geophysical activity took place in 1993. Eight geophysical contractors were active during the year and 26 seismic projects were completed. Many of these projects involved 3 dimensional seismic prospecting methods and interest focused on northeast Montana although projects were also conducted in several other parts of the state.

The Board's staff issued 216 permits to drill during the year and prepared 174 environmental assessments for operations on private and state-owned lands. The Board issued 74 Orders during the year. Most of these authorized increased well density to accommodate infill drilling programs, delineate and establish rules for new fields, and to allow exceptions to existing field rules.

The declining revenue generated by the License and Privilege Tax, the 2/10 percent tax on production used to fund the Board, precipitated a reorganization and consolidation of duties within the Oil and Gas Division. Administrative functions previously done in Helena and certain permitting functions done in Shelby were shifted to the Billings office. Staff was reduced and duties reassigned from the eliminated positions to the remaining staff.

During November of 1993, the Montana Legislature passed and Governor Racicot signed tax incentive legislation designed to encourage enhanced recovery projects and horizontal drilling. The bill extends the 12 month reduced tax rate on all new wells to 18 months for new horizontal wells. Additionally lower tax rates are established for new secondary and tertiary projects and on the incremental production above the established decline rate for expanded enhanced recovery projects and horizontally recompletions of existing wells. The Board will adopt rules to implement its responsibilities under the legislation for certification of horizontal wells and approval of project and production decline rates.

1993

SUMMARY OF YEAR ACTIVITIES

OIL

	BBLS	BBLS/DAY
Oil Produced.....	17,398,300	47,667
Oil Imported From:		
Canada	30,976,782	
Wyoming	<u>15,116,355</u>	
Total	46,093,137	126,283
Oil Exported.....	13,900,000	38,082

GAS

	MCF	MCF/DAY
Gas Withdrawals:		
Natural	48,501,818	
Associated	<u>7,230,700</u>	
Total	55,732,518	152,692
Gas Imported From:		
Canada	7,473,091	
North Dakota	9,594,509	
Wyoming	<u>9,698,540</u>	
Total	26,766,140	73,332
Gas Exported To:		
North Dakota	20,311,663	
South Dakota	7,186,817	
Wyoming	10,888,493	
Midwest	<u>18,113,101</u>	
Total	56,500,074	154,795

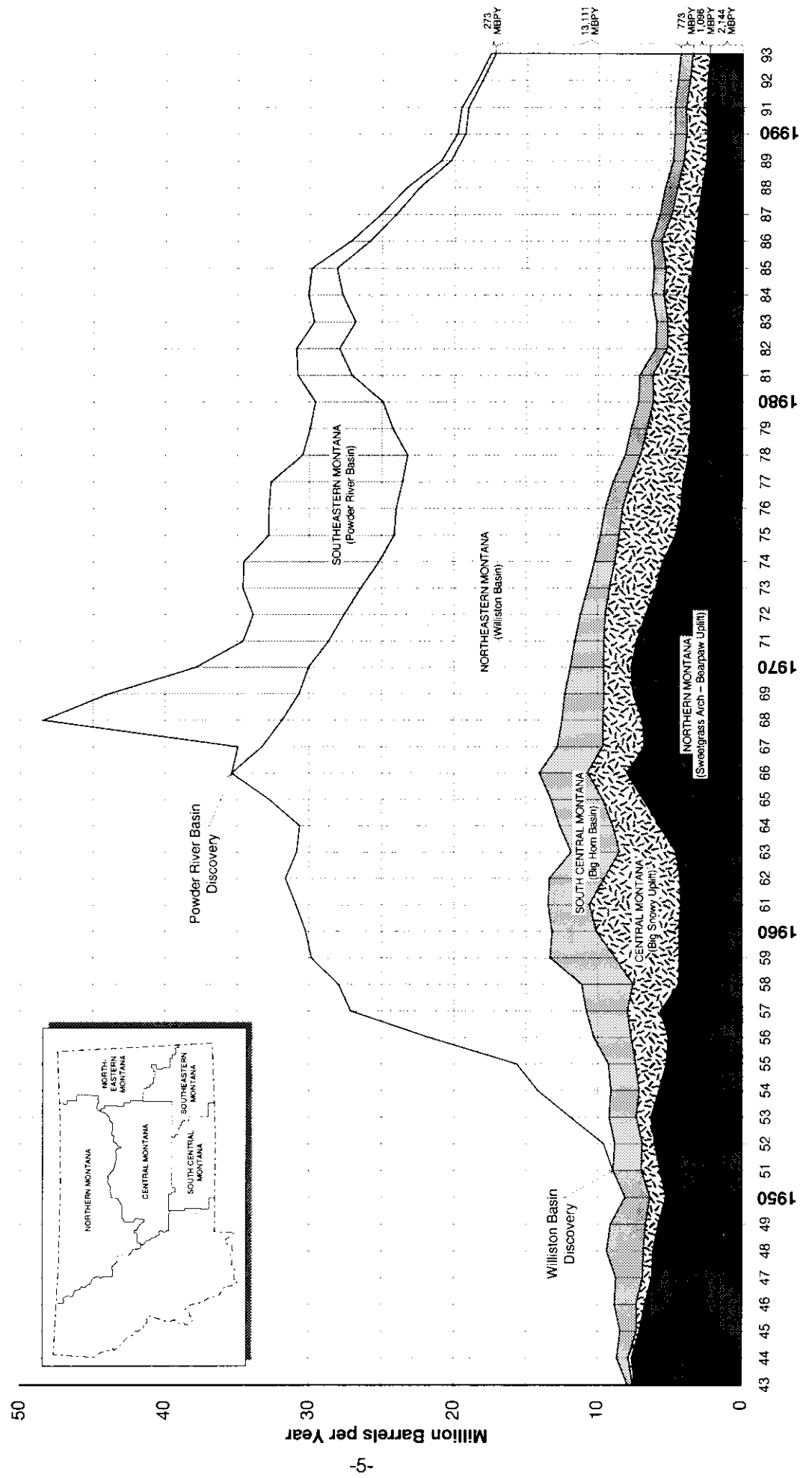
FIVE YEAR SUMMARY

	1989	1990	1991	1992	1993
OIL PRODUCTION IN BARRELS					
Northern Montana	2,488,169	2,432,506	2,510,130	2,426,783	2,143,943
South Central	773,372	805,807	804,003	832,580	772,668
Central	1,544,989	1,454,066	1,393,046	1,227,475	1,095,551
Williston Basin	15,476,534	14,592,497	14,380,288	13,637,695	13,110,882
Powder River Basin	686,228	550,211	485,881	355,139	272,517
TOTAL	20,969,292	19,835,087	19,573,348	18,479,672	17,395,561
NUMBER OF PRODUCING OIL WELLS					
Northern Montana	2,644	2,579	2,534	2,568	2,408
South Central	131	135	123	138	122
Central	331	323	310	287	298
Williston Basin	1,377	1,356	1,338	1,338	1,287
Powder River Basin	112	118	79	69	56
TOTAL	4,595	4,514	4,385	4,400	4,171
AVERAGE DAILY PRODUCTION/OIL WELL					
Northern Montana	2.6	2.6	2.7	2.6	2.4
South Central	16.2	16.4	17.9	16.5	17.4
Central	12.8	12.3	12.3	11.7	10.1
Williston Basin	30.8	29.5	29.4	27.8	27.9
Powder River Basin	16.8	12.8	16.9	14.1	13.3
STATE AVERAGE	12.5	12.0	12.2	11.5	11.4
DEVELOPMENT WELLS DRILLED					
Oil Wells	32	34	46	36	39
Gas Wells	115	180	140	136	80
Dry Holes	29	39	34	31	18
Service Wells	8	5	6	4	1
TOTAL	184	258	226	207	138
EXPLORATORY WELLS DRILLED					
Oil Wells	8	4	2	1	9
Gas Wells	12	12	17	8	3
Dry Holes	38	57	32	41	29
Temporary Abandoned	0	1	1	2	3
TOTAL	58	74	52	52	44
TOTAL WELLS DRILLED	242	332	278	259	182
TOTAL FOOTAGE DRILLED	720,785	920,283	822,739	788,721	677,698
AVERAGE FOOTAGE DRILLED	2,978	2,772	2,959	3,045	3,723

SUMMARY OF DRILLING BY COUNTIES—1993

County	Development			Wildcat			Temp. Aband.	Total Wells	Footage Drilled	Average Depth
	Oil	Gas	Dry	Oil	Gas	Dry				
Big Horn	0	0	1	0	0	0	0	1	6,185	6,185
Blaine	0	12	1	2	0	6	0	21	55,321	2,634
Chouteau	0	1	0	0	0	0	0	1	800	800
Daniels	1	0	0	2	0	1	0	4	26,978	6,744
Dawson	5	0	0	0	0	0	0	5	45,680	9,136
Fallon	14	0	1	1	0	0	1	17	169,385	9,963
Fergus	0	0	0	0	0	1	0	1	3,550	3,550
Garfield	0	0	0	0	0	1	0	1	5,040	5,040
Glacier	2	4	1	0	0	0	0	7	22,675	3,239
Hill	0	4	1	0	0	2	0	7	10,637	1,519
Liberty	0	1	0	0	0	1	0	2	4,695	2,347
Musselshell	1	0	1	0	0	4	0	6	32,080	5,346
Phillips	0	22	0	0	0	0	0	22	29,858	1,357
Pondera	0	0	0	0	0	1	0	1	2,165	2,165
Powder River	0	0	0	0	0	1	0	1	6,260	6,260
Richland	3	0	0	2	0	0	0	5	54,839	10,967
Roosevelt	0	0	0	2	0	1	1	4	37,082	9,270
Rosebud	0	0	0	0	0	3	0	3	15,305	5,101
Sheridan	0	0	0	0	0	3	0	3	25,340	8,446
Stillwater	0	0	0	0	0	1	0	1	2,300	2,300
Toole	12	36	12	0	3	3	0	68	114,223	1,679
Valley	1	0	0	0	0	0	0	1	7,300	7,300
TOTALS	39	80	18	9	3	29	1	182	677,698	3,723

Crude Oil Production 1943–1993



GAS PRODUCTION DATA - 1993

NATURAL GAS

Field	County	Reported Formation	Produced MCF
Alma	Liberty	Bow Island, Blackleaf	1,043
Amanda	Toole	Swift, Bow Island, Sunburst, Dakota	208,572
Arch Apex	Toole	Bow Island, Sunburst-Swift	321,501
Ashfield	Phillips	Carlile, Greenhorn, Phillips, Bowdoin	1,444,936
Badlands	Hill	Eagle	199,566
Battle Creek	Blaine	Eagle	1,798,912
Bears Den	Liberty	Bow Island, Swift	16,342
Bell Creek, Southeast	Powder River	Muddy	531,103
Big Coulee	Golden Valley, Stillwater	Morrison, Cat Creek 3	232,646
Big Rock	Glacier	Bow Island, Colorado, Dakota, Kootenai	431,174
Black Butte	Hill	Eagle	86,791
Black Coulee	Blaine	Eagle	216,950
Blackfoot Shallow Gas	Glacier	Dakota-Sunburst	65,085
Blackjack	Liberty	Second White Specks, Sunburst, Blackleaf	
		Bow Island, Dakota, Kootenai	78,383
Border	Toole	Sunburst, Moulton	7,081
Bowdoin and Area	Phillips, Valley	Bowdoin (Carlile) Greeehorn, Phillips	3,192,744
Bowes	Blaine	Eagle	390,343
Bradley	Glacier	Bow Island	6,157
Browns Coulee, East	Hill	Eagle	38,037
Bullwacker and Area	Blaine, Chouteau	Eagle, Judith River, Virgelle	701,008
Camp Creek	Chouteau	Eagle	20,138
Canadian Coulee and Area	Hill	Sawtooth	269
Canadian Coulee, North	Hill, Liberty	Sawtooth	2,765
Cedar Creek	Fallon	Eagle	1,271,678
Clarks Fork	Carbon	Greybull	22,353
Coal Coulee	Hill	Eagle	10,946
Coal Mine Coulee	Chouteau	Eagle, Second White Specks	34,360
Cut Bank	Glacier, Toole	Cut Bank, Lander, Moulton, Sunburst	
		Bow Island, Madison, Dakota, Kootenai	2,843,527
Devon	Toole	Bow Island	101,401
Devon, East	Toole	Bow Island	16,354
Devon, South	Toole	Bow Island	7,225
Dry Creek	Carbon	Frontier, Judith River, Virgelle-Eagle, Greybull	482,725
Dry Creek (Shallow Gas)	Carbon	Virgelle	61,934
Dry Creek, Middle	Carbon	Frontier	19,101
Dry Creek, West	Carbon	Greybull	22,767
Dry Fork	Pondera	Bow Island	16,947
Dunkirk	Toole	Dakota	107,040
Dunkirk, North	Toole	Bow Island, Swift, Sunburst	276,440
Dutch John Coulee	Toole	Sunburst	76,860
Eagle Springs	Toole	Bow Island, Sunburst-Swift	12,562
Ethridge Area	Toole	Swift	117,250
Ethridge, North	Toole	Swift, Bow Island	42,110
Fitzpatrick Lake	Toole	Bow Island	94,258
Flat Coulee	Liberty	Bow Island, Dakota, Swift	76,622
Fort Conrad	Toole, Pondera	Bow Island	28,330
Fred and George Creek	Toole	Bow Island, Sunburst/Swift	41,110
Fresno and Area	Hill	Eagle	23,706
Galata	Toole	Bow Island	55,972
Gold Butte	Toole	Bow Island	1,531
Golden Dome	Carbon	Greybull, Frontier, Eagle	61,640
Grandview	Liberty	Bow Island	28,203
Hardpan and Area	Pondera, Chouteau	Bow Island	66,911
Havre	Hill, Blaine	Eagle	33,585
Haystack Butte	Liberty	Bow Island	43,278
Haystack Butte, West	Liberty	Bow Island	90,203
Keith, East and Area	Liberty	Second White Specks, Sawtooth, Bow Island Niobrara	506,935
Kevin, Area	Toole	Bow Island	25,260
Kevin Southwest	Toole	Bow Island, Sunburst, Swift, Dakota	267,367
Kevin Sunburst	Toole	Dakota, Eagle, Madison, Swift, Ellis	
		Nisku, Sunburst, Bow Island, Kootenai, Burwash	732,994
Kevin Sunburst (Dakota)	Toole	Dakota	50,512
Kevin Sunburst-Bow Island Toole	Toole	Bow Island	70,504
Kevin Sunburst Nisku	Toole	Swift	72,465
Kevin, East Bow Island	Toole	Bow Island	30,199

GAS PRODUCTION DATA - 1993
NATURAL GAS (CONTINUED)

Field	County	Reported Formation	Produced MCF
Kevin, East Nisku Oil	Toole	Sunburst, Nisku	58,502
Kicking Horse	Toole	Bow Island, Sunburst, Sawtooth	94,952
Kinyon Coulee Area	Toole	Bow Island	13,883
Kippen Area, East	Toole	Madison, Swift	8,686
Ledger	Pondera	Bow Island, Sawtooth	133,987
Leroy	Blaine	Eagle	333,534
Liscom Creek	Custer	Shannon	62,483
Little Creek	Chouteau	Eagle, Virgelle	24,067
Little Rock	Glacier	Bow Island-Blackleaf	245,106
Lohman and Area	Blaine	Eagle	177,877
Loring Unit	Phillips	Phillips-Bowdoin-Carlile-Greenhorn	2,186,684
Loring, East	Phillips	Phillips-Bowdoin-Carlile-Greenhorn	435,596
Loring, West	Phillips	Bowdoin, Greenhorn, Phillips	30,375
Marias River	Toole, Pondera	Bow Island	56,503
Middle Butte	Toole, Liberty	Bow Island, Second White Specks, Blackleaf	40,516
Miners Coulee	Toole	Sunburst/Swift, Bow Island, Sawtooth Blackleaf	266,312
Mount Lily	Liberty	Swift, Bow Island	7,591
O'Briens Coulee	Liberty	Bow Island, Second White Specks, Blackleaf	
		Bow-Island Spike	238,898
Old Shelby	Toole	Bow Island, Sunburst-Swift	1,394,027
Phantom	Toole	Sunburst	17,720
Phantom, West	Toole	Sunburst	29,070
Police Coulee	Toole	Bow Island	37,203
Prairie Dell	Toole	Bow Island-Swift-Sunburst, Dakota	930,018
Prairie Dell, West	Toole	Swift, Blackleaf	34,671
Rattlesnake Coulee	Toole	Bow Island, Sunburst	540
Red Rock Area	Hill	Eagle, Judith River	465,542
Rocky Boy	Hill	Eagle	59,685
Rudyard	Hill	Sawtooth, Eagle	58,706
Sage Creek	Liberty	Blackleaf, Second White Specks, Bow Island	113,443
Sandwich	Liberty	Swift	15
Sawtooth Mountain	Blaine	Judith River, Eagle	649,881
Shelby Area	Toole	Sunburst, Burwash	20,396
Sherard and Area	Blaine, Chouteau	Eagle, Judith River	1,667,034
Sixshooter Dome	Sweet Grass	Eagle, Lakota	355,975
Snoose Coulee	Liberty	Bow Island, Sunburst	41,754
Soberup Coulee	Pondera	Bow Island	812
Strawberry Creek	Toole	Bow Island, Burwash	45,171
Swanson Creek	Phillips, Valley	Phillips-Bowdoin-Greenhorn	318,971
Sweetgrass and Area	Toole	Sunburst	26,844
Three Mile	Blaine	Eagle	71,557
Tiber	Toole	Bow Island	101
Tiber, East	Toole	Bow Island	60,466
Tiger Ridge and Area	Toole	Eagle, Judith River	15,297,619
Tiger Ridge North	Toole	Eagle	8,850
Timber Creek	Toole	Sunburst	25,735
Trail Creek	Liberty, Toole	Bow Island, Sunburst, Swift	128,181
Utopia	Liberty	Sawtooth, Bow Island	73,829
Vandalia	Valley	Carlile	36,189
West Butte	Toole	Bow Island, Sunburst	22,122
West Butte Shallow Gas	Toole	Bow Island-Dakota	10,715
Whitewater	Phillips	Bowdoin-Phillips-Greenhorn Carlile	2,594,415
Whitewater, East	Phillips	Bowdoin-Phillips-Greenhorn Carlile	212,729
Whitlash	Liberty	Dakota, Swift-Sunburst, Bow Island, Madison, Spike	554,258
Whitelash, West	Toole	Bow Island, Swift-Sunburst	14,117
Williams	Pondera	Bow Island	100,723
Willow Ridge	Toole	Bow Island, Swift, Dakota, Sunburst	216,242
Willow Ridge, South	Toole	Sunburst	171,498
Willow Ridge, West	Toole	Bow Island	8,535
Wildcat	Stillwater		59,034
Wildcat	Toole		215,162

TOTAL NATURAL GAS

48,501,818

GAS PRODUCTION DATA - 1993

ASSOCIATED GAS

Field	County	Reported Formation	Produced MCF
Anvil	Roosevelt	Nisku, Ratcliffe, Red River, Winnipegosis	165,351
Bainville	Roosevelt	Red River, Ratcliffe, Winnipegosis	34,407
Bainville, North	Roosevelt	Interlake, Ratcliffe, Red River, Winnipegosis Mission Canyon, Nisku	171,472
Bainville, West	Roosevelt	Red River	5,518
Bainville II	Roosevelt	Red River	28,359
Beanblossum	Garfield	Tyler	3,242
Bell Creek	Carter, Powder River	Muddy	8,151
Benrud, East	Roosevelt	Nisku	13,764
Benrud, Northeast	Roosevelt	Nisku	1,783
Big Muddy Creek	Roosevelt	Red River	6,329
Black Diamond	Wibaux	Madison, Nisku, Duperow	7,601
Blackfoot	Glacier	Dakota	563
Bloomfield	Dawson	Dawson Bay, Red River, Interlake	17,292
Box Canyon	Richland	Red River	4,930
Breed Creek	Rosebud	Tyler	2,193
Brorson	Richland	Madison, Red River, Mission Canyon Ratcliffe	77,967
Brorson, South	Richland	Madison, Red River, Bakken, Mission Canyon	48,058
Brush Lake	Sheridan	Red River	19,071
Cabin Creek	Fallon	Madison, Siluro-Ord, Red River	486,368
Canal	Richland	Madison, Red River, Mission Canyon	32,548
Cannon Ball	Fallon	Red River	1,547
Cattails	Richland	Ratcliffe	39,641
Cattails, South	Richland	Madison, Ratcliffe	14,469
Charlie Creek	Richland	Red River	10,557
Charlie Creek, East	Richland	Red River	47,027
Clear Lake	Sheridan	Nisku, Red River, Ratcliffe, Mission Canyon	82,717
Clear Lake, South	Sheridan	Red River	3,051
Colored Canyon	Sheridan	Red River, Nisku	3,969
Comertown	Sheridan	Duperow, Nisku, Red River, Ratcliffe	37,600
Comertown, South	Sheridan	Red River	7,238
Cottonwood	Richland	Ratcliffe	7,847
Cottonwood, East	Roosevelt	Ratcliffe	4,152
Crane	Richland	Devonian, Red River, Interlake, Duperow	130,648
Cupton	Fallon	Red River	29,847
Cut Bank	Pondera, Glacier, Toole	Madison, Cut Bank	32,005
Dagmar	Sheridan	Red River	12,864
Deer Creek	Dawson	Charles	3,335
Diamond Point	Roosevelt	Red River, Interlake	68,158
Divide	Sheridan	Madison, Red River, Ratcliffe	47,057
Dooley	Sheridan	Ratcliffe	11,897
Dry Creek	Carbon	Greybull	85,768
Dwyer	Sheridan	Nisku, Red River, Charles	41,970
Eagle	Richland	Duperow, Madison, Mission Canyon Red River, Ratcliffe	83,032
Elk Basin	Carbon	Madison, Frontier, Tensleep, Embar	325,915
Elk Basin, Northwest	Carbon	Madison	43,676
Enid, North	Richland	Red River	19,206
Fairview	Richland	Red River, Mission Canyon, Ratcliffe, Madison	283,480
Fairview, East	Richland	Winnipegosis	12,855
Fairview, West	Richland	Madison	548
Fertile Prairie	Fallon	Red River	10,332
Fishhook	Sheridan	Red River	15,179
Flat Coulee	Liberty	Swift	7,927
Flat Lake	Sheridan	Nisku, Ratcliffe	50,647
Flat Lake, South	Sheridan	Ratcliffe	1,330
Fort Gilbert	Richland	Madison, Red River, Mission Canyon	47,259
Four Mile Creek	Richland	Red River	3,551
Four Mile Creek, West	Richland	Red River	15,286
Fred & George Creek	Toole	Sunburst	178
Frog Coulee	Richland	Red River	1,242
Froid, South	Roosevelt	Red River	4,407
Girard	Richland	Red River	10,271
Glendive	Dawson	Siluro-Ord, Red River, Stoney Mountain	18,415
Golden Dome	Carbon	Greybull	30,897
Goose Lake	Sheridan	Ratcliffe, Red River	21,830
Goose Lake, Southeast	Sheridan	Ratcliffe	4,674
Goose Lake, West	Sheridan	Red River	6,776

**GAS PRODUCTION DATA - 1993
ASSOCIATED GAS (CONTINUED)**

Field	County	Reported Formation	Produced MCF
Gossett	Richland	Red River	7,963
Gun sight	Roosevelt	Mission Canyon	9,884
Hardscrable Creek	Richland	Red River	4,555
Hay Creek	Richland	Mission Canyon, Red River	19,086
Hell Coulee	Daniels	Madison, Charles C	1,846
Hiawatha	Musselshell	Tyler, Stensvad	1,920
High Five	Rosebud	Tyler, Stensvad	8,740
Intake II	Richland	Madison, Ordovician, Mission Canyon	18,265
Jim Coulee	Musselshell	Tyler	2,203
Katy Lake	Sheridan	Red River	61,633
Katy Lake, North	Sheridan	Red River, Madison, Nesson, Mission Canyon	125,815
Kevin-Sunburst	Toole	Madison, Sunburst	28,989
Kevin, East Nisku Oil	Toole	Nisku	20,102
Kincheloe Ranch, West	Rosebud	Tyler	7,614
Laird Creek	Liberty	Swift	388
Lambert	Richland	Red River	24,613
Landslide Butte	Glacier	Madison	32,014
Leary	Powder River	Muddy	9,040
Little Beaver	Fallon	Siluro-Ord, Red River	28,320
Little Beaver, East	Fallon	Siluro-Ord, Mission Canyon	9,270
Little Wall Creek	Musselshell	Tyler, Stensvad	12,068
Little Wall Creek, South	Musselshell	Tyler	7,519
Lone Butte	Richland	Red River, Mission Canyon	23,682
Lonetree Creek	Richland	Mission Canyon, Red River	113,935
Long Creek, West	Roosevelt	Nisku	488
Lookout Butte	Fallon	Siluro-Ord, Madison, Red River	61,311
Lookout Butte, East	Fallon	Red River, Lodgepole	5,627
Lowell	Sheridan	Red River	2,440
Lustre	Valley	Charles, Mission Canyon, Ratcliffe	82,948
Lustre, North	Valley	Charles	2,770
McCabe	Roosevelt	Ratcliffe	4,351
McCoy Creek	Sheridan	Red River	1,610
Medicine Lake	Sheridan	Duperow, Gunton, Interlake, Red River Winnepegosis, Nisku	122,493
Melstone	Musselshell	Tyler	19,458
Midfork	Valley	Charles C, Nisku, Madison	16,205
Missouri Breaks	Richland	Red River	7,575
Mon Dak, West	Richland	Madison, Siluro-Ord, Duperow, Red River Stoney Mountain, Interlake, Mission Canyon	312,974
Mona	Richland	Red River	51,741
Monarch	Fallon	Siluro-Ord, Interlake, Red River	23,527
Mustang	Richland	Red River, Madison	39,618
Neiser Creek	Sheridan	Red River	15,528
Nielsen Coulee	Daniels	Madison	50,979
Ninemile	Toole	Nisku	3,549
Nohly	Richland	Red River, Nisku, Madison, Mission Canyon, Ratcliffe	262,180
North Fork	Richland	Mission Canyon	9,492
Olje	Sheridan	Mission Canyon	3,255
Ollie	Fallon	Red River	2,064
Otis Creek	Richland	Ratcliffe	6,434
Otis Creek, South	Richland	Red River	6,106
Outlet	Daniels	McGowan	1,954
Outlook	Sheridan	Duperow, Winnepegosis, Nisku, Interlake	26,139
Oxbow	Roosevelt	Red River	21,833
Oxbow II	Roosevelt	Red River, Nisku	68,045
Palomino	Roosevelt	Nisku	287
Pennel	Fallon	Siluro-Ord, Red River, Stoney Mountain	549,760
Pine	Fallon, Wibaux Prairie, Dawson	Siluro-Ord, Mission Canyon	272,861
Poplar, Northwest	Roosevelt	Charles	84,189
Pronghorn	Sheridan	Red River	1,299
Putnam	Richland	Madison, Interlake, Mission Canyon Red River	66,047
Ragged Point	Musselshell	Tyler	1,470
Rainbow	Richland	Red River	12,303
Rattler Butte	Rosebud	Tyler	6,804
Rattlesnake Butte	Petroleum	Cat Creek 1	4,320
Raymond	Sheridan	Mississippian, Red River, Winniepegosis Nisku, Duperow	334,509

**GAS PRODUCTION DATA - 1993
ASSOCIATED GAS (CONTINUED)**

Field	County	Reported Formation	Produced MCF
Reagan	Glacier	Madison	156,764
Red Bank	Roosevelt	Madison, Mission Canyon, Ratcliffe	14,838
Red Bank, South	Roosevelt	Red River	7,107
Red Creek Unit	Glacier	Cut Bank, Madison	4,582
Red Water, East	Richland	Red River	13,260
Refuge	Sheridan	Red River	7,926
Reserve	Sheridan	Red River,	5,634
Reserve II	Sheridan	Interlake, Red River	5,731
Reserve South	Sheridan	Winnipegosis	5,594
Ridgelawn	Richland	Duperow, Madison, Red River, Ratcliffe Mission Canyon	122,889
Ridgelawn, North	Richland	Madison	26,585
RipRap Coulee	Roosevelt	Ratcliffe	26,605
River Bend	Richland	Red River	11,945
Rocky Point	Roosevelt	Red River	14,563
Royals	Dawson	Dawson Bay	4,070
Rush Mountain	Sheridan	Winnipegosis, Gunton	3,920
Salt Lake	Sheridan	Red River	2,601
Second Creek	Richland	Red River	21,378
Shotgun Creek	Roosevelt	Ratcliffe	7
Sidney	Richland	Madison, Red River, Ratcliffe, Mission Canyon	47,598
Sidney, East	Richland	Madison	2,115
Singletree	Roosevelt	Nisku	13,443
Sioux Pass	Richland	Interlake, Red River	67,511
Sioux Pass, Middle	Richland	Red River	31,280
Sioux Pass, North	Richland	Madison, Red River, Nisku, Ratcliffe	119,363
Sioux Pass, South	Richland	Red River	19,583
Snoose Coulee	Liberty	Bow Island	3,889
South Fork	Richland	Red River, Mission Canyon	14,335
Spring Lake	Richland	Bakken, Red River	17,102
Spring Lake, West	Richland	Bakken	5,445
Stampede	Richland	Red River, Bakken	26,482
Sumatra	Rosebud	Tyler	690
Sunny Hill, West	Sheridan	Red River, Gunton, Madison	7,398
Target	Roosevelt	Nisku	24,166
Three Buttes	Richland	Red River	11,963
Tule Creek	Roosevelt	Devonian, Nisku	11,402
Tule Creek, East	Roosevelt	Nisku	5,770
Two Waters	Richland	Bakken	1,689
Utopia	Liberty	Swift	20,825
Vaux	Richland	Bakken, Interlake, Madison, Red River, Stonewall, Mission Canyon, Ratcliffe	155,028
Wakea	Sheridan	Red River, Winnipegosis, Nisku, Duperow Gunton	52,045
Weed Creek	Yellowstone	Arnsden	748
Whitlash	Liberty	Swift, Dakota, Bow Island, Sunburst	46,569
Wills Creek, South	Fallon	Siluro-Ord	3,676
Windmill	Richland	Red River	134
Woodrow	Dawson	Charles, Interlake	4,320
Wragler	Sheridan	Red River	28,303
Wragler, North	Sheridan	Red River	2,262
Wright Creek	Powder River	Muddy	6,316

TOTAL ASSOCIATED GAS

7,230,700

REFINERS' ANNUAL REPORT — 1993

COMPANY	BEGINNING STORAGE	MONTANA OIL	WYOMING OIL	CANADA OIL	REFINED	ENDING STORAGE
Cenex	163,524	1,978,841	4,575,430	8,070,788	14,545,440	243,143
Conoco	140,207	421,718	1,474,465	14,935,035	16,858,054	113,371
Exxon Corp.	155,541	459,104	9,066,460	6,053,056	15,591,475	142,686
Montana Refining Co.	11,056	535,715	-0-	1,917,903	2,447,880	16,794
TOTALS	470,328	3,395,378	15,116,355	30,976,782	49,442,849	515,994

PERCENTAGE OF CRUDE OIL RECEIVED

YEAR	MONTANA	CANADA	WYOMING
1989	9.60	54.64	35.76
1990	8.49	57.10	34.41
1991	9.23	58.30	32.47
1992	8.34	60.02	31.64
1993	6.86	62.59	30.55

AVERAGE BARRELS PER DAY

YEAR	MONTANA	CANADA	WYOMING	TOTAL
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
1992	10,676	76,803	40,492	127,971
1993	9,302	84,868	41,415	135,585

REFINING FIVE YEAR COMPARISON

1989	1990	1991	1992	1993
46,615,040	47,517,800	46,247,992	47,131,774	49,442,849

1993 STATEMENT OF CRUDE OIL PRODUCTION - ALL MONTANA FIELDS

FIELD	COUNTY	1993 BARRELS	CUMULATIVE BARRELS
Ace High	Rosebud	0	3,686
Agawan	Teton	0	79
Alkali Coulee	Sheridan	0	19,546
Andes	Richland	0	21,175
Antelope, North	Sheridan	0	2,484
Anvil	Roosevelt	139,820	4,196,161
Anvil, North	Sheridan	0	9,446
Ash Creek	Big Horn	5,239	854,462
Autumn	Valley	0	35,546
Bainville	Roosevelt	53,708	853,211
Bainville (Ratcliffe /Mission Canyon)	Roosevelt	1,192	1,192
Bainville II	Roosevelt	33,699	695,698
Bainville, North	Roosevelt	254,747	2,092,246
Bainville, West	Roosevelt	5,645	234,311
Bannatyne	Teton	8,004	392,816
Bascom	Musselshell	0	27,830
Beanblossom	Garfield	25,916	521,983
Bear's Den	Liberty	29,379	576,383
Belfry	Carbon	0	101,245
Bell Creek	Powder River	253,780	131,764,142
Benrud	Roosevelt	0	289,695
Benrud, East	Roosevelt	25,785	2,891,085
Benrud, Northeast	Roosevelt	5,384	1,007,190
Berthelote	Toole	572	95,374
Big Gully	Musselshell	1,141	110,510
Big Gully, North	Musselshell	0	29,892
Big Muddy Creek	Roosevelt	9,053	1,317,910
Big Rock	Glacier	0	10,764
Big Wall	Musselshell	78,500	7,998,679
Big Wall, North	Musselshell	0	7,218
Black Diamond	Wibaux	12,246	638,882
Blackfoot	Glacier	34,568	1,640,437
Blackfoot, East	Glacier	0	810
Blackleaf Canyon	Teton	0	32,922
Bloomfield	Dawson	18,546	540,382
Blue Hill	Richland	0	162,251
Blue Mountain	Wibaux	2,203	69,258
Border	Toole	7,292	1,453,766
Boulder	Richland	0	156,754
Bowes	Blaine	149,285	10,288,688
Box Canyon	Richland	5,447	244,320
Bradley	Glacier	2,533	263,051
Brady	Pondera	6,360	207,512
Bredette	Roosevelt	0	232,121
Bredette, North	Roosevelt	0	488,554
Breed Creek	Rosebud	81,466	1,551,797
Brorson	Richland	90,997	3,862,767
Brorson, South	Richland	96,166	1,953,366
Brush Lake	Sheridan	40,903	2,781,916
Buffalo Flats	Chouteau	0	603
Buffalo Lake	Glacier	0	936
Burget	Roosevelt	0	6,504
Burget, East	Roosevelt	14,359	254,965
Burns Creek	Dawson, Richland	2,840	258,987

FIELD	COUNTY	1993 BARRELS	CUMULATIVE BARRELS
Burns Creek, South	Dawson	0	79,958
Butchers Creek	Carbon	0	579
Bynum	Teton	0	5,971
Cabaret Coulee	Daniels	8,297	429,846
Cabin Creek	Fallon	1,382,069	96,705,481
Cadmus	Glacier	0	1,173
Canadian Coulee	Hill	0	2,145
Canal	Richland	30,455	1,194,771
Cannonball	Fallon	1,328	74,779
Carlyle	Wibaux	7,000	314,954
Cat Creek	Petroleum, Garfield	48,925	23,763,201
Cattails	Richland	68,081	634,891
Cattails, South	Richland	31,411	101,416
Charlie Creek	Richland	8,828	732,505
Charlie Creek, East	Richland	61,371	705,146
Charlie Creek, North	Richland	0	43,894
Chelsea Creek	Roosevelt	0	104,243
Clark Fork, North	Carbon	0	1,024,608
Clark Fork, South	Carbon	0	80,553
Clark's Fork	Carbon	600	92,798
Clear Lake	Sheridan	127,965	3,236,502
Clear Lake, South	Sheridan	9,249	186,308
Coal Ridge	Sheridan	0	22,582
Colored Canyon	Sheridan	10,407	873,743
Comertown	Sheridan	95,608	2,506,716
Comertown, South	Sheridan	21,921	361,457
Conrad, South	Pondera	1,310	158,510
Corner Pocket	Richland	0	14,483
Cottonwood	Richland	38,353	234,496
Cottonwood, East	Roosevelt	11,840	47,522
Cow Creek	McCone	0	127,813
Cow Creek, East	McCone	36,180	2,565,763
Crane	Richland	106,650	2,382,737
Crocker Springs, East	Pondera	0	3,464
Crooked Creek	Yellowstone	0	27,395
Culbertson	Roosevelt	0	175,652
Cupton	Fallon	56,682	2,463,353
Curlew	Sheridan	0	5,468
Cut Bank	Glacier, Toole	641,074	165,140,410
Dagmar	Sheridan	14,803	598,881
Dagmar, North	Sheridan	0	55,342
Deadman's Coulee	Roosevelt	0	264,528
Dean Dome	Stillwater	0	92,597
Deer Creek	Dawson	19,846	2,355,786
Delphia	Musselshell	1,764	342,195
Devil's Basin	Musselshell	3,005	122,898
Devil's Pocket	Golden Valley	53	52,192
Diamond Point	Roosevelt	65,639	919,752
Divide	Sheridan	111,008	2,408,294
Dooley	Sheridan	25,686	246,651
Dry Creek	Carbon	1,995	4,159,971
Dry Creek, Middle	Carbon	117	1,627
Dry Creek, West	Carbon	958	12,689
Dugout Coulee	Richland	0	66,740
Dunkirk, North	Toole	0	19

1993 STATEMENT OF CRUDE OIL PRODUCTION - ALL MONTANA FIELDS

FIELD	COUNTY	1993 BARRELS	CUMULATIVE BARRELS
Dutch John Coulee	Toole	6,096	219,672
Dwyer	Sheridan	135,544	8,668,541
Eagle	Richland	55,867	1,972,781
East Glacier	Glacier	723	23,343
Elk Basin	Carbon	565,284	84,786,284
Elk Basin, Northwest	Carbon	89,661	2,035,862
Enid, North	Richland	21,580	395,936
Epworth	Richland	0	55,142
Fairview	Richland	137,974	8,909,136
Fairview, East	Richland	8,234	421,069
Fairview, West	Richland	14,374	240,413
Fertile Prairie	Fallon	26,848	768,571
Fiddler Creek	Stillwater	0	2,574
Fishhook	Sheridan	21,510	1,081,591
Flat Coulee	Liberty	82,371	5,079,300
Flat Lake	Sheridan	179,381	16,030,506
Flat Lake, East	Sheridan	11,756	96,450
Flat Lake, South	Sheridan	10,599	1,236,975
Flaxville	Daniels	0	56,283
Fort Gilbert	Richland	35,909	2,289,580
Four Buttes	Sheridan	0	41,067
Four Mile Creek	Richland	7,232	393,457
Four Mile Creek, West	Richland	26,704	330,849
Fox Creek	Richland	0	200,464
Fox Creek, North	Richland	109	75,323
Frannie	Carbon	0	773,613
Fred & George Creek	Toole	48,733	13,269,172
Frog Coulee	Richland	4,370	196,007
Froid, South	Roosevelt	5,513	249,863
Gage	Musselshell	1,742	650,073
Gage, Southwest	Musselshell	0	16,289
Gas City	Dawson	77,696	10,302,058
Gettysburg	Richland	0	304
Girard	Richland	19,408	484,477
Glendive	Dawson	128,738	13,302,555
Glendive, South	Dawson	0	68,936
Golden Dome	Carbon	1,962	106,769
Goose Lake	Sheridan	132,113	9,358,244
Goose Lake, East	Sheridan	0	4,522
Goose Lake, Southeast	Sheridan	5,026	44,684
Goose Lake, West	Sheridan	16,349	560,101
Gossett	Richland	18,144	351,040
Graben Coulee	Glacier	42,599	2,267,019
Grandview	Liberty	0	9,784
Grandview, East	Liberty	1,626	53,773
Gray Blanket	Big Horn	41,871	104,608
Green Coulee	Sheridan	5,653	195,843
Green Coulee, East	Sheridan	0	62,942
Gumbo Ridge	Rosebud	1,544	594,589
Gunsight	Roosevelt	21,180	283,491
Gypsy Basin	Pondera	3,565	500,426
Hardpan	Pondera	0	2,805
Hardscrabble Creek	Richland	5,100	135,874
Hawk Creek	Musselshell	223	12,925
Hawk Haven	Richland	0	7,392

FIELD	COUNTY	1993 BARRELS	CUMULATIVE BARRELS
Hay Creek	Richland	20,323	1,409,358
Hell Coulee	Daniels	11,527	11,527
Hiawatha	Musselshell	12,680	1,617,406
Hibbard	Rosebud	0	219,686
High Five	Rosebud	73,337	2,560,847
Highview	Pondera	3,623	93,102
Homestead	Roosevelt	0	303
Honker	Sheridan	0	117,078
Horse Creek	Liberty	125	12,798
Howard Coulee	Musselshell	3,759	173,118
Injun Creek	Rosebud	338	126,113
Intake II	Richland	44,468	851,406
Ivanhoe	Musselshell	15,696	4,556,132
Jack Creek	Carbon	0	1,310
Jim Coulee	Musselshell	27,549	4,377,997
Katy Lake	Sheridan	7,798	168,840
Katy Lake, North	Sheridan	201,031	4,787,032
Keg Coulee	Musselshell	24,993	5,683,556
Keg Coulee, North	Musselshell	2,242	440,730
Kelley	Musselshell	3,056	1,018,640
Kevin Nisku Oil, East	Toole	42,106	452,883
Kevin Sunburst	Toole	306,644	79,904,989
Kicking Horse	Toole	0	1,526
Kincheloe Ranch, West	Rosebud	27,365	748,994
Kippen, East	Toole	0	150
Krug Creek	Dawson	0	15,288
Laird Creek	Liberty	3,458	597,507
Lake Basin	Stillwater	0	473,639
Lakeside	Roosevelt	0	487
Lambert	Richland	16,942	480,507
Lambert, North	Richland	0	36,552
Lamesteer Creek	Wibaux	0	31,845
Landslide Butte	Glacier	38,830	461,046
Lariat	Sheridan	0	3,599
Laurel	Yellowstone	0	1,017
Leary	Powder River	9,109	651,186
Ledger	Toole	0	275
Line Coulee	Daniels	0	57,789
Lisk Creek	Richland	0	1,939
Little Beaver	Fallon	268,591	13,968,681
Little Beaver, East	Fallon	105,186	6,037,071
Little Phantom	Toole	849	55,901
Little Wall Creek	Musselshell	148,246	4,561,588
Lobo	Sheridan, Roosevelt	0	260,141
Lodge Grass	Big Horn	7,419	327,951
Lone Butte	Richland	34,582	718,036
Lone Rider	Roosevelt	0	5,903
Lonetree Creek	Richland	92,397	3,772,891
Lonetree Creek, West	Richland	0	33,029
Long Creek	Roosevelt	2,256	77,015
Long Creek, West	Roosevelt	25,696	729,102
Lookout Butte	Fallon	449,867	25,662,482
Lookout Butte, East	Fallon	124,275	623,320
Lost Creek	McCone	0	1,534
Lowell	Sheridan	8,925	267,995

1993 STATEMENT OF CRUDE OIL PRODUCTION - ALL MONTANA FIELDS

FIELD	COUNTY	1993 BARRELS	CUMULATIVE BARRELS
Lustre	Valley	203,445	4,962,454
Lustre, North	Valley	11,575	176,987
Mackay Dome	Stillwater	0	77,334
Malcolm Creek	Sheridan	0	11,450
Mason Lake	Musselshell	6,841	980,278
Mason Lake, North	Musselshell	0	17,923
McCabe	Roosevelt	5,177	248,895
McCabe, East	Roosevelt	0	6,805
McCabe, South	Roosevelt	0	6,599
McCabe, West	Roosevelt	0	69,988
McCoy Creek	Sheridan	3,160	55,561
Meander	Pondera	208	5,972
Medicine Lake	Sheridan	99,358	3,533,316
Melstone	Musselshell	42,028	3,787,056
Midby	Sheridan	0	70,172
Midfork	Valley	62,865	309,578
Mineral Bench	Roosevelt	0	186,656
Miners Coulee	Toole	0	152,708
Missouri Breaks	Richland	10,351	340,594
Mon Dak, West	Richland	355,632	9,898,592
Mona	Richland	8,724	126,699
Monarch	Fallon	109,284	6,127,880
Mosser Dome	Yellowstone	6,532	405,099
Musselshell	Musselshell	536	38,620
Mustang	Richland	46,994	669,826
Neiser Creek	Sheridan	15,286	285,221
Nielsen Coulee	Daniels	81,931	94,652
Ninemile	Toole	2,530	53,434
Nohly	Richland	396,059	5,546,232
Nohly, South	Richland	0	125,082
North Fork	Richland	10,343	528,344
Olje	Sheridan	1,124	162,956
Ollie	Fallon	5,424	241,834
Otis Creek	Richland	18,018	857,702
Otis Creek, South	Richland	7,080	264,218
Otter Creek	Sheridan	0	28,492
Outlet	Daniels	3,907	3,907
Outlook	Sheridan	31,416	8,901,438
Outlook, South	Sheridan	0	693,151
Outlook, West	Sheridan	24,905	836,000
Oxbow	Roosevelt	18,153	441,119
Oxbow II	Roosevelt	89,043	153,846
Palomino	Roosevelt	149,436	2,096,140
Pasture	Dawson	0	2,869
Pasture Creek	Dawson	0	1,914
Pelican	Sheridan	0	191,494
Pennel	Fallon	2,472,902	85,872,445
Pete Creek	Toole	550	22,728
Phantom	Toole	0	43,585
Pine	Dawson, Fallon, Prairie, Wibaux	1,043,042	111,168,483
Pine, East	Wibaux	0	19,349
Pipeline	Sheridan	0	16,424
Plentywood	Sheridan	0	22,830
Pole Creek	Musselshell	0	169,726
Police Coulee	Toole	0	14

FIELD	COUNTY	1993 BARRELS	CUMULATIVE BARRELS
Pondera	Pondera, Teton	279,171	26,415,134
Pondera Coulee	Teton	3,605	86,629
Poplar, East	Roosevelt	151,282	45,944,406
Poplar, Northwest	Roosevelt	121,100	3,837,352
Poplar, Southeast	Roosevelt	0	162,546
Prairie Dell	Toole	123	1,397
Prairie Elk	McCone	0	104,226
Prichard Creek	Toole	499	164,205
Pronghorn	Sheridan	11,352	444,552
Putnam	Richland	116,846	5,102,306
Rabbit Hills	Blaine	143,862	1,380,144
Ragged Point	Musselshell	6,036	2,589,735
Ragged Point, Southwest	Musselshell	41,434	1,635,456
Rainbow	Richland	6,661	164,688
Rattler Butte	Rosebud	19,014	997,306
Rattlesnake Butte	Petroleum	25,042	556,484
Rattlesnake Coulee	Toole	0	91,024
Raymond	Sheridan	80,809	4,918,786
Raymond, North	Sheridan	0	119,990
Raymond, Northeast	Sheridan	0	120,687
Reagan	Glacier	116,620	9,176,501
Red Bank	Roosevelt	66,528	1,956,515
Red Bank, South	Roosevelt	9,084	351,566
Red Creek	Glacier	54,324	6,335,004
Red Fox	Roosevelt	0	380,137
Red Water	Richland	4,873	70,999
Red Water, East	Richland	8,004	245,392
Redstone	Sheridan	0	468,178
Refuge	Sheridan	7,083	217,616
Repeat	Carter	10	547,064
Reserve	Sheridan	6,258	1,685,095
Reserve II	Sheridan	8,928	192,103
Reserve, South	Sheridan	8,450	65,014
Richey	Dawson, McCone	512	2,029,422
Richey Area, West	McCone	0	11,062
Richey, East	Dawson	0	10,386
Richey, Southwest	McCone	97	1,903,012
Ridgelawn	Richland	271,520	6,255,289
Ridgelawn, North	Richland	36,762	122,338
RipRap Coulee	Roosevelt	36,186	671,548
River Bend	Richland	11,371	255,033
Rocky Point	Roosevelt	13,009	512,695
Roscoe Dome	Carbon	0	15,556
Rosebud	Rosebud	13,974	494,786
Rough Creek	Powder River	0	3,599
Royals	Dawson	8,758	320,480
Royals, South	Dawson	0	3,082
Rudyard	Hill	740	20,226
Runaway	Teton	0	4,532
Rush Mountain	Sheridan	8,916	609,677
Salt Lake	Sheridan	60,593	867,114
Salt Lake, West	Sheridan	33,532	70,307
Sand Creek	Dawson	0	2,349,120
Saturn	Daniels	0	32,773
Scobey	Daniels	0	3,916

1993 STATEMENT OF CRUDE OIL PRODUCTION - ALL MONTANA FIELDS

FIELD	COUNTY	1993 BARRELS	CUMULATIVE BARRELS
Second Creek	Richland	24,092	1,295,190
Second Guess	Teton	2,108	12,682
Sheepherder	Musselshell	0	76,942
Shotgun Creek	Roosevelt	16,032	455,198
Shotgun Creek, North	Roosevelt	0	89,647
Sidney	Richland	54,245	3,290,500
Sidney, East	Richland	3,155	581,936
Singletree	Roosevelt	19,015	354,386
Sioux Pass	Richland	82,401	3,618,576
Sioux Pass, East	Richland	0	89,267
Sioux Pass, Middle	Richland	37,227	1,538,261
Sioux Pass, North	Richland	151,449	4,190,329
Sioux Pass, South	Richland	15,365	283,635
Smoke Creek	Daniels	0	100,305
Snoose Coulee	Liberty	630	4,837
Snowden	Roosevelt	0	1,938
Snyder	Big Horn	1,868	470,808
Soap Creek	Big Horn	41,494	2,761,914
Soap Creek, East	Big Horn	7,668	172,006
South Fork	Richland	16,735	1,022,648
Spring Lake	Richland	25,004	1,073,698
Spring Lake, South	Richland	0	110,660
Spring Lake, West	Richland	4,306	53,654
Stampede	Richland	17,224	329,765
Stampede, North	Richland	0	4,566
Stensvad	Musselshell, Rosebud	16,366	10,202,209
Studhorse	Garfield	2,294	189,662
Sumatra	Rosebud	278,422	44,854,262
Sunnyhill	Sheridan	6,223	256,664
Sunnyhill, West	Sheridan	11,400	155,199
Target	Roosevelt	51,393	773,332
Thirty Mile	Blaine	30	11,690
Three Buttes	Richland	16,571	420,715
Tinder Box	Musselshell	1,157	11,705
Tippy Buttes	Musselshell	0	126,246
Tule Creek	Roosevelt	34,189	8,230,412
Tule Creek, East	Roosevelt	4,265	2,035,271
Tule Creek, South	Roosevelt	11,321	941,099
Two Medicine Creek	Glacier	0	10,249
Two Waters	Richland	7,257	323,834
Utopia	Liberty	26,011	696,541
Vaux	Richland	174,687	4,383,592
Vida	McCone	0	264,988
Viking	Sheridan	0	160
Volt	Roosevelt	73,789	3,387,432
Wagon Box	Musselshell	0	32,379
Wagon Trail	Richland	0	43,321

FIELD	COUNTY	1993 BARRELS	CUMULATIVE BARRELS
Wakea	Sheridan	111,084	2,353,795
Weed Creek	Yellowstone	1,628	611,617
Weldon	McCone	0	7,050,531
West Butte	Toole	1,547	308,146
West Fork	Roosevelt	0	6,671
Weygand	Blaine	13,106	300,205
Whitlash	Liberty, Toole	35,167	5,433,892
Whitlash, West	Toole	2,030	129,362
Wibaux	Wibaux	0	23,580
Willow Creek, North	Musselshell	8,183	386,042
Willow Ridge	Toole	1,632	53,767
Willow Ridge, South	Toole	0	3,267
Wills Creek, South	Fallon	11,033	1,166,429
Windmill	Richland	275	31,943
Winnett Junction	Musselshell	19,942	968,195
Wolf Creek	Roosevelt	0	1,979
Wolf Springs	Yellowstone	17,409	4,777,513
Wolf Springs, South	Yellowstone	13,249	851,657
Woman's Pocket	Golden Valley	0	3,526
Woodrow	Dawson	14,679	1,234,784
Wrangler	Sheridan	26,930	605,795
Wrangler, North	Sheridan	4,652	129,427
Wright Creek	Powder River	9,618	321,210
Yates	Wibaux	0	70,861
Yellowstone	Dawson	0	39,405
Wildcat	Carbon	0	6,368
Wildcat	Daniels	0	3,508
Wildcat	Dawson	0	1,489
Wildcat	Fallon	0	10,683
Wildcat	Garfield	0	468
Wildcat	Glacier	0	48,412
Wildcat	Hill	0	405
Wildcat	Liberty	0	3,254
Wildcat	McCone	0	12,575
Wildcat	Musselshell	0	925
Wildcat	Pondera	464	1,197
Wildcat	Powder River	0	27,445
Wildcat	Richland	0	339,856
Wildcat	Roosevelt	0	87,044
Wildcat	Sheridan	0	52,561
Wildcat	Stillwater	0	11,283
Wildcat	Teton	0	9,324
Wildcat	Toole	0	36,379
Wildcat	Valley	0	447
Wildcat	Wibaux	0	8,388
Statewide Totals		17,398,300	1,371,279,921

1993 VALUATION REPORT

OIL MARKETED

	<u>OIL (BBLS)</u>	<u>VALUE</u>	<u>AVG (\$/BBL)</u>
First Quarter	4,264,488	\$ 69,949,795	16.40
Second Quarter	4,352,561	70,114,927	16.11
Third Quarter	4,426,867	61,799,328	13.96
Fourth Quarter	<u>4,282,938</u>	<u>54,266,899</u>	<u>12.67</u>
TOTAL	17,326,854	256,130,949	14.78

Estimated cumulative value for produced oil (12/31/93) is \$11,642,947,364

GAS MARKETED

	<u>GAS (MCF)</u>	<u>VALUE</u>	<u>AVG (\$/MCF)</u>
First Quarter	15,931,344	\$ 24,129,401	1.51
Second Quarter	14,418,530	22,362,280	1.55
Third Quarter	12,570,421	19,649,501	1.56
Fourth Quarter	<u>15,889,504</u>	<u>24,853,165</u>	<u>1.56</u>
TOTAL	58,809,799	90,994,347	1.55

Information provided by Montana Department of Revenue.

1993 WELL COMPLETIONS

								INITIAL POTENTIAL		
OPERATOR	LOCATION	WELL NAME	STATUS CODE	API NO.	FIELD	PRODUCING FORMATION	DATE COMPLETED	TOTAL DEPTH	OIL B/D	GAS MCF/D
003 Big Horn										
Macum Energy Inc.	NWNE 18 6S 36E	Mann 2-18-6-36	3	21209	Gray Blanket		07/31/93	6185	0	0
005 Blaine										
Brown, J. Burns Operating Co.	NWNW 17 34N 20E	Federal 17-4	**4	22589	Rabbit Hills, Northeast		02/04/92	4210	0	0
Brown, J. Burns Operating Co.	NWNW 6 25N 19E	Federal 6-4-25-19	2	22640	Sherard, Area	Eagle	11/19/93	2072	0	250
Brown, J. Burns Operating Co.	NESE 33 26N 19E	Federal 33-9-26-19	2	22641	Sherard, Area	Eagle	11/22/93	1900	0	1500
Brown, J. Burns Operating Co.	SWSW 9 34N 21E	Federal 9-13	6	22551	Wildcat		05/05/92	4280	0	0
Brown, J. Burns Operating Co.	SESE 8 34N 21E	Federal 8-16	6	22569	Wildcat		08/21/91	4450	0	0
Brown, J. Burns Operating Co.	SWNW 17 34N 20E	Federal 17-5	6	22594	Wildcat		03/15/92	4210	0	0
Dangerfield Resources, Inc.	NWNW 14 32N 23E	Dangerfield Fed. 1	6	22624	Wildcat		02/07/93	3981	0	0
L.E. Behm, Inc.	NWSW 13 34N 19E	Rabbit 3	**4	22627	Rabbit Hills, Southwest	Sawtooth	09/28/93	4126	165	0
Meridian Oil, Inc.	NWNW 24 34N 19E	Montgomery 11-24	3	22621	Rabbit Hills, Southwest		01/18/93	4133	0	0
Montana Power Company	SENE 16 31N 19E	State 8-16	2	22637	Bowes	Eagle	10/11/93	1204	0	300
Montana Power Company	SWSE 16 31N 19E	State 15-16	2	22638	Bowes	Eagle	10/13/93	1200	0	300
Norfolk Energy Inc.	NESE 13 26N 18E	U.S. 13-9	2	22466	Sherard, Area	Eagle	10/14/88	2150	0	3200
UMC Petroleum Corp. (Ensource)	NENE 15 25N 18E	Federal 15-1	2	22630	Sherard, Area	Eagle	11/17/93	1900	0	1450
UMC Petroleum Corp. (Ensource)	SENE 27 25N 19E	Federal 27-8	2	22631	Sherard, Area	Eagle	11/16/93	1800	0	6
UMC Petroleum Corp. (Ensource)	NWSE 29 25N 19E	Federal 29-10	2	22633	Sherard, Area	Eagle	11/16/93	1600	0	2000
UMC Petroleum Corp. (Ensource)	NWNE 29 26N 18E	Federal 29-2	2	22634	Sherard, Area	Eagle	11/18/93	2000	0	46
UMC Petroleum Corp. (Ensource)	NWNW 26 26N 18E	Moore 26-4	2	22636	Sherard, Area	Eagle	11/17/93	2000	0	585
UMC Petroleum Corp. (Ensource)	SESW 17 25N 18E	U.S. 17-14	2	22639	Sherard, Area	Eagle	11/29/93	2000	0	25
UMC Petroleum Corp. (Ensource)	NENW 28 25N 19E	Federal 28-3	6	22632	Wildcat		10/29/93	1600	0	0
UMC Petroleum Corp. (Ensource)	NWNW 36 26N 18E	State 36-4	6	22635	Wildcat		10/26/93	2315	0	0
Xeno Inc	SWNW 21 36N 19E	Battle 5-21	2	22643	Battle Creek	Niobrara	11/08/93	2190	0	100
015 Chouteau										
Mountain Pacific General, Inc.	SENW 15 27N 3E	Hollandsworth #2	2	21666	Hardpan	Bow Island	03/06/93	800	0	100
019 Daniels										
Armstrong Operating, Inc.	SENW 19 34N 46E	State 19-1	*** 4	21100	Hell Coulee	Madison	08/26/93	6100	385	6
Armstrong Operating, Inc.	NENW 27 33N 48E	Anderson 27-2	1	21099	Nielsen Coulee	Madison	06/30/93	6660	197	82
Armstrong Operating, Inc.	NWNE 18 33N 48E	Veis 18-1	6	21098	Wildcat		05/27/93	7720	0	0
BWAB Incorporated	NWNE 8 36N 48E	Burgett 8-31 RE	*** 4	21097	Outlet	McGowan	09/16/93	6498	51	0
021 Dawson										
Castle Resources, Inc.	NESW 23 17N 53E	NPG NCT-4 #3 ReEntry	1	05144	Deer Creek	Charles A	11/02/93	8500	80	0
Castle Resources, Inc.	SWNW 23 17N 53E	NCT-4 #2 Re-entry	1	05147	Deer Creek	Charles	08/01/93	10050	57	0
Home-Stake Royalty Corp.	SWSE 21 14N 55E	Gas City Unit 34X-21	1	21120	Gas City	Red River	05/18/93	9200	59	10
Home-Stake Royalty Corp.	NESW 8 14N 55E	S&H Rentals 23X-08	1	21121	Glendive	Red River	10/13/93	8870	73	0
Home-Stake Royalty Corp.	NWSE 36 15N 54E	State "D" 7	1	21122	Glendive	Red River	12/31/93	9060	60	0
025 Fallon										
Meridian Oil, Inc.	SENE 25 7N 60E	Votruba 42-25H	4	21507	Lookout Butte Area	Red River	07/10/93	11052	77	132
Meridian Oil, Inc.	NESE 31 7N 61E	MOI 43-31H	1	21508	Lookout Butte Area	Red River	08/23/93	10869	114	0
Meridian Oil, Inc.	NENE 36 7N 60E	State 41-36H	1	21510	Lookout Butte Area	Red River	10/03/93	12347	125	0
Meridian Oil, Inc.	SWSW 24 7N 60E	Lee 14-24H	1	21503	Lookout Butte East	Red River	05/01/93	10935	50	0

1993 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.	NWSW 36 7N 60E	State 13-36H	1	21514	Lookout Butte East	Red River	11/08/93	11560	97	0
Shell Western E & P Inc.	NWSE 7 10N 58E	Unit 33-7	1	21493	Cabin Creek	Red River/Interlake	06/10/93	8950	52	30
Shell Western E & P Inc.	NWSW 6 10N 58E	Unit 13-6	1	21496	Cabin Creek	Red River	04/01/93	9168	270	66
Shell Western E & P Inc.	NENW 7 10N 58E	Unit 21X-7A	1	21497	Cabin Creek	Red River	02/24/93	9225	115	44
Shell Western E & P Inc.	SESE 7 10N 58E	Unit 44-7	1	21501	Cabin Creek	Red River	01/30/93	9002	390	88
Shell Western E & P Inc.	NWSE 29 10N 58E	Unit 33X-29	1	21505	Cabin Creek	Devonian/Ordovician	07/02/93	9085	171	65
Shell Western E & P Inc.	NWNE 29 10N 58E	Unit 31-29	1	21506	Cabin Creek	Devonian/Ordovician	08/04/93	9000	100	46
Shell Western E & P Inc.	NENW 33 10N 58E	Cabin Creek 21x-33	8	21509	Cabin Creek		10/19/93	9025	0	0
Shell Western E & P Inc.	NWSE 16 7N 60E	Unit 33X-16B	1	21511	Lookout Butte	Red River	10/22/93	11331	241	54
Shell Western E & P Inc.	SESW 28 7N 60E	Unit 24X-28B	1	21515	Lookout Butte	Red River	11/22/93	11199	357	76
Shell Western E & P Inc.	NENW 26 8N 59E	Pennel Unit 21X-26	1	21498	Pennel	Interlake/Stoney Mountain	07/14/93	8850	22	12
Shell Western E & P Inc.	NWSE 26 8N 59E	Unit 33X-26	1	21502	Pennel	Red River	05/26/93	8867	19	11
Shell Western E & P Inc.	NWSW 11 8N 59E	Pennel Unit 13X-11R	3	21504	Pennel		10/08/93	8920	0	0
027 Fergus										
Florentine Exploration & Prod.	SENW 23 20N 15E	Carter 6-23-20-15	6	21227	Wildcat		08/18/93	3550	0	0
033 Garfield										
Meridian Oil, Inc.	SWSE 27 13N 33E	Breed Creek 34-27	6	21142	Wildcat		06/11/93	5040	0	0
035 Glacier										
Gypsy Highview Gathering	SWNW 35 34N 6W	NCCBSU 62-2	1	21873	Cut Bank	Cut Bank	11/09/92	3085	2	0
Montana Power Company	NENE 31 35N 5W	Brown 1-31	2	21883	Cut Bank	Cut Bank	06/29/93	2742	0	100
Montana Power Company	SENE 20 34N 5W	Hope 8-20	3	21884	Cut Bank		07/02/93	2717	0	0
Montana Power Company	NWSE 32 35N 5W	Schutte 10-32A	2	21885	Cut Bank	Cut Bank	06/24/93	2648	0	100
Montana Power Company	NWSE 1 36N 5W	Swenson 10-1	2	21886	Cut Bank	Moulton	12/12/93	2777	0	300
Northland Royalty Operating Co	NESW 24 36N 6W	Swisher 11-24	2	21877	Cut Bank	Lander	12/22/92	2970	0	600
Union Oil Company Of Calif.	NESW 14 33N 6W	J.A. Armstrong 2-14H	1	21879	Cut Bank	Cut Bank	06/28/93	5736	27	0
041 Hill										
Appling, J. B.	SWNW 32 33N 15E	Graham 1-32	2	22457	Badlands	Eagle	10/25/91	1163	0	200
Brown, J. Burns Operating Co.	SENE 3 32N 15E	Kulbeck 3-32-15C	2	22501	Black Butte	Eagle	01/28/93	1368	0	0
Brown, J. Burns Operating Co.	SWSW 5 32N 15E	State 5-32-15E	3	22500	Highline	Eagle	01/26/93	1206	0	0
Brown, J. Burns Operating Co.	SWSW 19 32N 17E	Dow 19-32-17B	2	22505	Tiger Ridge	Eagle	12/08/93	1700	0	1500
Brown, J. Burns Operating Co.	NESE 3 34N 16E	Pattison 3-34-16	6	22498	Wildcat	Eagle	02/03/93	1550	0	0
Elenberg Exploration	SWSE 17 37N 15E	Surean 1-17	6	22503	Wildcat		02/27/93	2100	0	0
Norfolk Energy Inc.	NWSW 3 30N 15E	Hillbrant 3-12	2	22487	Tiger Ridge	Eagle	06/18/92	1550	0	1124
051 Liberty										
Great Northern Drilling Co.	NWNE 7 36N 6E	Federal 31-7	6	21685	Wildcat		04/21/93	2615	0	0
Walls, A. G. Aka Walls, Adrian	NENE 5 35N 4E	Beaudoin 1-5	2	21686	Haystack Butte, West	Bow Island	04/28/93	2080	0	0
065 Musselshell										
ANR Production Company	NESE 12 8N 28E	8-28-12 Federal #1	6	21811	Wildcat		12/17/93	7200	0	0
Grynberg Petroleum Co.	SESW 5 11N 30E	Manion #1 ReEntry	3	21745	Ragged Point		12/13/93	4448	0	0
Macum Energy Inc.	SWNE 22 10N 30E	Bloom 32-22	6	21810	Wildcat		10/30/93	5192	0	0
Spence Accounts, Inc.	NWSW 4 10N 28E	Palmer 1-4	6	21809	Wildcat		10/15/93	3970	0	0

1993 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
Texaco Exploration And Prod.	SESE 19 10N 27E	BNRR "B" NCT-1 #16	1	21807	Big Wall	Amsden	11/14/93	4700	302	0
Tidemark Petroleum Inc.	NWNW 22 9N 27E	Mike Goffena 1-22	6	21805	Wildcat		03/21/93	6570	0	0
071 Phillips										
Falcon Oil & Gas Company, Inc.	SWNE 28 33N 34E	Federal 28-2	2	22233	Swanson Creek	Phillips	10/13/93	1400	0	151
Falcon Oil & Gas Company, Inc.	SWNE 32 33N 34E	Handcock Fed. 32-2	2	22234	Swanson Creek	Phillips	10/10/93	1371	0	269
Falcon Oil & Gas Company, Inc.	SWSW 32 33N 34E	Federal 32-2A	2	22235	Swanson Creek	Phillips	10/09/93	1317	0	503
Falcon Oil & Gas Company, Inc.	SWSW 33 33N 34E	Federal 33-2	2	22236	Swanson Creek	Phillips	10/11/93	1263	0	241
Falcon Oil & Gas Company, Inc.	NWSE 34 33N 34E	Mavencamp Fed. 34-1	2	22237	Swanson Creek	Phillips	10/12/93	1183	0	115
Falcon Oil & Gas Company, Inc.	SWNE 35 33N 34E	Federal 35-1	2	22238	Swanson Creek	Phillips	10/13/93	1303	0	187
Falcon Oil & Gas Company, Inc.	SWNE 1 32N 34E	Bilaji Farms 1-1	2	22239	Swanson Creek	Phillips	10/14/93	1191	0	204
Falcon Oil & Gas Company, Inc.	SESW 1 32N 34E	Bowman 1-2	2	22240	Swanson Creek	Phillips	10/14/93	1199	0	305
Falcon Oil & Gas Company, Inc.	SWSE 2 32N 34E	Brokkie 2-1	2	22241	Swanson Creek	Phillips	10/11/93	1210	0	259
Falcon Oil & Gas Company, Inc.	SWSE 3 32N 34E	Whitaker 1-3	2	22242	Swanson Creek	Phillips	10/11/93	1251	0	355
Falcon Oil & Gas Company, Inc.	NESW 7 32N 35E	Bowman 3-7	2	22243	Swanson Creek	Phillips	10/15/93	1326	0	135
Falcon Oil & Gas Company, Inc.	SWNE 7 32N 35E	Bowman 4-7	2	22244	Swanson Creek	Phillips	10/15/93	1339	0	122
Falcon Oil & Gas Company, Inc.	SWNE 27 33N 34E	Yeska 1-27	2	22245	Swanson Creek	Phillips	10/13/93	1190	0	186
Falcon Oil & Gas Company, Inc.	SESE 35 33N 34E	Mavencamp 2-35	2	22246	Swanson Creek	Phillips	10/15/93	1385	0	152
Freeport-Mcmoran Inc.	SWNE 4 37N 30E	Well 0470-3	2	22125	Loring	Bowdoin/Greenhorn/Phillips	09/15/93	2050	0	321
Freeport-Mcmoran Inc.	SWSW 30 37N 30E	Federal 3070-4	2	22251	Loring	Bowdoin	09/11/93	1490	0	232
Freeport-Mcmoran Inc.	NESW 20 37N 30E	Well 2070-4	2	22255	Loring	Bowdoin	09/10/93	1640	0	163
Freeport-Mcmoran Inc.	SWSE 14 35N 31E	Federal 1451-3	2	22247	Whitewater	Greenhorn/Phillips	09/11/93	1400	0	300
Freeport-Mcmoran Inc.	SENE 14 35N 31E	Federal 1451-4	2	22248	Whitewater	Greenhorn/Phillips	09/09/93	1445	0	194
Freeport-Mcmoran Inc.	SESW 15 35N 31E	Federal 1551-2	2	22249	Whitewater	Greenhorn/Phillips	09/13/93	1455	0	759
Freeport-Mcmoran Inc.	SWNE 16 33N 32E	State 1632-4	2	22253	Whitewater	Greenhorn/Phillips	09/14/93	1225	0	355
Freeport-Mcmoran Inc.	SESW 16 33N 32E	State 1632-3	2	22254	Whitewater	Greenhorn/Phillips	09/14/93	1225	0	577
073 Pondera										
Faith Drilling, Inc.	NENE 12 28N 4W	Bourne 11-12	6	21757	Wildcat		11/19/93	2165	0	0
075 Powder River										
Axem Resources Incorporated	SWNW 17 9S 51E	Bay Horse Creek 5-17	6	22218	Wildcat		11/04/93	6260	0	0
083 Richland										
ANR Production Company	SWNE 2 21N 58E	Bakken 32-2	1	21803	Crane	Duperow	02/08/93	10540	30	34
Choctaw II Oil & Gas, Ltd.	NWSW 26 26N 59E	Filler 26-13	1	21810	Nohiy	Madison	12/11/93	10800	120	72
EP Operating Ltd Partnership	NWNW 23 24N 59E	Sundheim 23-4 1H ***	4	21811	Ridgelawn, North	Mission Canyon	12/08/93	11434	60	50
Luff Exploration Company	SWSW 17 26N 58E	Trudell M-17	1	21808	Sioux Pass, North	Red River	01/15/93	12550	15	0
Slawson Exploration Company	NWSE 8 26N 59E	Burgess 1-8	** 4	21809	Cottonwood	Ratcliffe	04/27/93	9515	116	0
085 Roosevelt										
J N Exploration & Production	NENE 18 27N 58E	Harmon 41-18	** 4	21581	Oxbow II	Nisku	* 02/28/93	10910	157	97
Placid Oil Company	SWSE 13 31N 47E	Lilleboe 15-13	6	21583	Wildcat		10/28/93	7900	0	0
Slawson Exploration Company	SENE 13 28N 58E	Granley 1-13 RE	*** 4	21444	Bainville (RAT/MC)	Madison	08/23/93	10282	22	10
Terrol Energy Corp.	SESW 20 29N 49E	Zimmerman 2-20 (R)	7	21293	Wildcat	Nisku	12/17/92	7990	0	0
087 Rosebud										
Cline Production Co., A.B. Cline	NWNE 34 13N 33E	Galt 31-34	6	21633	Wildcat		11/14/93	5045	0	0

1993 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
True Oil Co	NENE 9 11N 32E	King 41-9	6	21630	Wildcat		03/25/93	5520	0	0
True Oil Co	SESW 20 11N 32E	Radella State 24-20	6	21631	Wildcat		05/29/93	4740	0	0
091 Sheridan										
Cenex, Inc.	SESE 27 35N 58E	Nielsen 16-27	6	21671	Wildcat		07/06/93	7200	0	0
Oryx Energy Company	NESE 22 33N 55E	Sun Allotted #1	6	21618	Wildcat		09/11/87	11050	0	0
Upton Resources USA Inc.	SWNW 11 35N 57E	Upton Holst 12-11	6	21672	Wildcat		06/20/93	7090	0	0
095 Stillwater										
Equitable Resources - Balcon	NWNE 11 3N 20E	Boston Group 31-11A	6	21246	Wildcat		07/06/93	2300	0	0
101 Toole										
Basin Operating Company	SESE 19 34N 1W	Rogers 4	8	23547	Kevin Sunburst		09/20/93	1375	0	0
Basin Operating Company	NENE 11 35N1W	Mineral Fee #1	2	23579	Kevin Sunburst	Bow Island	12/07/92	960	0	0
Branch, Jerry L.	SESE 13 34N 3W	Blumberg 16-13	1	23500	Kevin Sunburst	Madison	01/13/92	1587	61	0
Branch, Jerry L.	SESE 13 34N 3W	Blumberg 17-13	1	23628	Kevin Sunburst	Madison	08/10/93	1555	18	0
Brown, J. Burns Operating Co.	SWSW 27 34N 4W	Steyee 27-34-4	3	23633	Kevin Sunburst		10/09/93	926	0	0
Brown, J. Burns Operating Co.	NENE 36 34N 2E	State 36-34-2	6	23606	Wildcat		06/07/93	1950	0	0
C R Energy Corp.	NWSW 30 34N 2W	Federal 12-30	1	23584	Kevin Sunburst	Madison	05/13/93	1585	10	0
C R Energy Corp.	SESE 17 34N 2W	Federal 16-17	3	23602	Kevin Sunburst		05/20/93	1410	0	0
C R Energy Corp.	NWSE 9 34N 2W	Federal 10-9	1	23603	Kevin Sunburst	Madison	05/22/93	1493	1	0
Coolidge, G. B., Inc.	SWNW 12 34N 1W	Johnson #1	1	23550	Kevin Sunburst	Swift	09/21/92	1354	5	0
Coolidge, G. B., Inc.	SENW 12 34N 1W	Johnson #2	1	23581	Kevin Sunburst	Swift	05/28/93	1370	0	0
Croft Petroleum Company	NWSW 35 35N 2E	State 12-35	6	23622	Wildcat		09/29/93	2030	0	0
Intermountain Leasing, Inc.	SWSW 6 33N 4W	Baker 14-6	2	23639	Cut Bank	Cut Bank	10/22/93	2617	0	108
Intermountain Leasing, Inc.	SWNW 29 34N 4W	Peters 12-29	2	23640	Cut Bank	Colorado	10/25/93	2343	0	78
Intermountain Leasing, Inc.	SWNW 32 34N 4W	Lohman 12-32	3	23641	Cut Bank		10/29/93	2285	0	0
Kee Sun Corporation	NENE 24 34N 3W	Potter 1-24B	1	23503	Kevin Sunburst	Madison	01/26/92	1605	10	0
Kee Sun Corporation	SESW 10 34N 1W	Konrad 14-10	2	23604	Kevin Sunburst	Bow Island/Dakota /Sunburst	05/25/93	1737	0	75
Kee Sun Corporation	NWNW 19 34N 2W	Frazier 4C-19	1	23630	Kevin Sunburst	Madison	09/09/93	1587	2	0
Kee Sun Corporation	SWSE 15 35N 1W	Alme-Krause 15-15	2	23642	Kevin Sunburst	Bow Island	11/02/93	850	0	14
Kee Sun Corporation	SESW 10 35N 1W	AlmeVanderpass 14-10	2	23643	Kevin Sunburst	Bow Island	11/06/93	1701	0	30
Kee Sun Corporation	SENW 15 35N 1W	Alme-Geis 6-15	2	23644	Kevin Sunburst	Bow Island	10/31/93	1655	0	18
Kee Sun Corporation	SENE 15 35N 1W	Alme Krause 8-15	2	23645	Kevin Sunburst	Bow Island	11/10/93	980	0	31
Kee Sun Corporation	NENE 15 35N 1W	Alme Geis 1-15	2	23646	Kevin Sunburst	Bow Island	11/08/93	870	0	81
Kee Sun Corporation	NWSE 6 32N 2W	Murray 10-6	3	23587	Old Shelby		04/27/93	1513	0	0
Kee Sun Corporation	NESW 14 32N 2W	Hoyt 11-14	3	23631	Old Shelby		09/23/93	1714	0	0
Kee Sun Corporation	SENW 31 34N 2W	Potter 6-31	3	23586	Prairie Dell		05/12/93	1770	0	0
Kee Sun Corporation	SWSW 8 33N 1W	Taylor 13-8	2	23629	Prairie Dell	Bow Island	08/10/93	1330	0	50
Montana Power Company	NWNW 19 35N 4W	Del Re 4-19	3	23526	Cut Bank		04/16/92	1587	0	0
Montana Power Company	SWSW 32 35N 4W	Enneburg 13-32	2	23548	Cut Bank		06/10/93	2160	0	150
Montana Power Company	SWNW 32 35N 4W	Thiel #5-32	2	23554	Cut Bank	Cut Bank	09/04/92	2177	0	104
Montana Power Company	SENW 29 37N 4W	Cobb 6-29	3	23560	Cut Bank		10/02/92	2713	0	0
Montana Power Company	NWNW 20 34N 4W	Lohman 4-20	2	23648	Cut Bank	Cut Bank	11/29/93	2156	0	150
Montana Power Company	SWSW 20 32N 1W	Ridle 13-20	2	23530	Old Shelby	Sunburst	03/01/93	1492	0	110
Montana Power Company	SWNE 34 33N 1W	MPC Fee #7-34	2	23594	Old Shelby	Swift	03/04/93	1434	0	274

1993 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
Montana Power Company	NWSW 27 33N 1W	Fee #12-27	2	23595	Old Shelby	Swift/ Sunburst	03/07/93	1403	0	398
Montana Power Company	NENE 16 33N 1W	State #1-16	3	23596	Old Shelby		03/15/93	1357	0	0
Natural Gas Processing Co.	SESE 26 36N 2W	Shaw 13	1	23608	Kevin Sunburst	Sunburst	05/31/93	1625	12	0
Natural Gas Processing Co.	NWNE 35 36N 2W	Yealy Shaw 12K	1	23609	Kevin Sunburst	Sunburst	05/28/93	1666	1	0
Quest Petroleum Corp.	SESW 14 35N 2W	Reeg 1-H	1	23599	Kevin Sunburst	Madison	10/22/93	2651	5	0
Quest Petroleum Corp.	SENE 36 35N 2W	State 1-H	8	23600	Kevin Sunburst	Madison	09/01/93	1663	0	0
Quest Petroleum Corp.	NESE 28 35N 2W	Loransen 1-H	1	23601	Kevin Sunburst	Madison	09/01/93	2900	8	0
Roberts Exploration	NWNE 11 37N 2W	Danbrook 4-03	6	23647	Wildcat		11/15/93	2295	0	0
Sands Oil Company	NWNW 8 34N 4W	Dahquist 11-8	2	23590	Cut Bank	Cut Bank	02/05/93	2125	0	194
Sands Oil Company	NWNW 17 34N 4W	Luther College 11-17	2	23591	Cut Bank	Cut Bank/Bow Island	02/10/93	2120	0	550
Sands Oil Company	NWSW 8 34N 4W	Dahquist 13-8	2	23598	Cut Bank	Cut Bank	04/25/93	2100	0	245
Sands Oil Company	NWSW 17 34N 4W	Luther College 13-17	2	23605	Cut Bank	Cut Bank/Bow Island	05/25/93	2105	0	478
Sands Oil Company	NWNE4 33N 4W	Torgerson 31-4	** 5	23524	Ethridge, North	Bow Island	04/01/92	1150	0	175
Sands Oil Company	SWNW 3 33N 4W	J.K. Lowry 12-3	** 5	23585	Ethridge, North	Bow Island	01/31/93	1070	0	144
Sands Oil Company	SWNW 34 34N4W	MPC/UNOCAL 12-34	2	23611	Ethridge, North	Bow Island	06/09/93	1070	0	211
Sands Oil Company	SWSE 28 34N4W	Owen 34-28	** 5	23612	Ethridge, North	Bow Island	06/11/93	1205	0	175
Somont Oil Company, Inc.	NWNE 4 35N 4W	State 4-2	2	23614	Cut Bank	Sunburst	08/13/93	2585	0	220
Somont Oil Company, Inc.	SWSE 28 36N 4W	Kahlbaugh 28-15	2	23615	Cut Bank	Bow Island	06/30/93	1840	0	99
Somont Oil Company, Inc.	NWNE 21 36N 4W	Fitzpatrick 21-2	2	23616	Cut Bank	Cut Bank	06/27/93	2783	0	30
Somont Oil Company, Inc.	NWNW 5 34N4W	Klein 5-4	2	23619	Cut Bank	Cut Bank	06/20/93	2145	0	336
Somont Oil Company, Inc.	NESE 10 36N 4W	State 10-9	2	23618	Fitzpatrick Lake	Swift	08/20/93	2615	0	1610
Somont Oil Company, Inc.	SWNW 2 35N 4W	South Jacobson 2-5	3	23613	Kevin Sunburst		08/23/93	2615	0	0
Spectrum Energy, Inc.	NENW 33 33N 1W	Williams 2D-33	2	23607	Old Shelby	Swift	05/17/93	1418	0	718
Spectrum Energy, Inc.	SWNW 26 33N 1W	Bankston State 3-26	2	23623	Old Shelby	Swift	10/05/93	1305	0	33
Spectrum Energy, Inc.	SESE 29 33N 1W	Parker 1-29	2	23624	Old Shelby	Swift	08/13/93	1409	0	32
Spectrum Energy, Inc.	NWSE 33 33N 1W	Rogers 1-33	2	23625	Old Shelby	Swift	08/05/93	1445	0	121
Spectrum Energy, Inc.	SESE 27 33N 1W	Benjamin FLB 4-27	2	23626	Old Shelby	Swift	08/19/93	1314	0	487
Spectrum Energy, Inc.	NENE 27 33N 1W	Benjamin FLB 1R	2	23627	Old Shelby	Sunburst	08/09/93	1174	0	53
Spectrum Energy, Inc.	NESE 29 33N 1W	Parker 2-29	2	23634	Old Shelby	Swift	10/06/93	1391	0	76
Spectrum Energy, Inc.	SWSW 26 33N 1W	Bankston-State 4-26	2	23635	Old Shelby	Swift	10/01/93	1336	0	445
Spectrum Energy, Inc.	SESW 26 33N 1W	Bankston-State 5-26	3	23636	Old Shelby		10/03/93	1312	0	0
Spectrum Energy, Inc.	SENW 33 33N 1W	Williams 4-33	2	23651	Old Shelby	Swift	12/30/93	1460	0	114
Sunburst Exploration, Inc.	CNW 2 32N 1W	Peoples St. Bank 2-2	2	23556	Dunkirk, North	Bow Island	09/24/92	790	0	97
Sunburst Exploration, Inc.	SWNW 5 34N 1E	Suphellen 1G	3	23557	Kevin, East	Nisku Oil	10/22/92	910	0	0

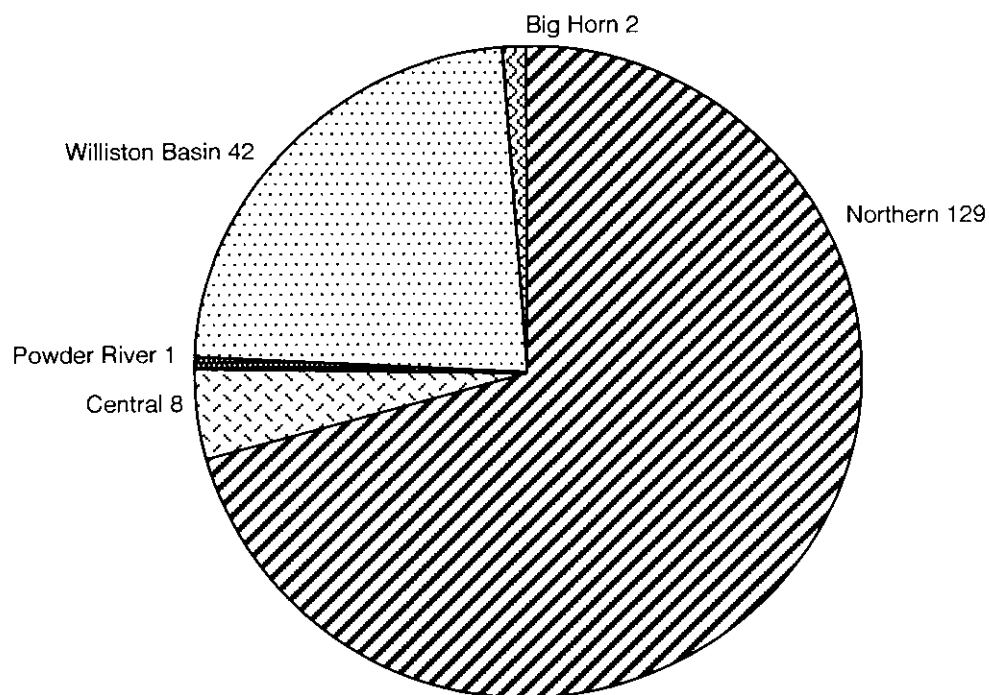
105 Valley

Continental Resources Inc	SENW 15 30N 45E	Darlene 1-15	1	21417	Midfork	Charles C	06/26/92	7300	180	54
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Status Codes:

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

**WELLS COMPLETED IN 1993
(182 Wells - by Region)**



1993 SUMMARY OF SECONDARY RECOVERY PROJECTS

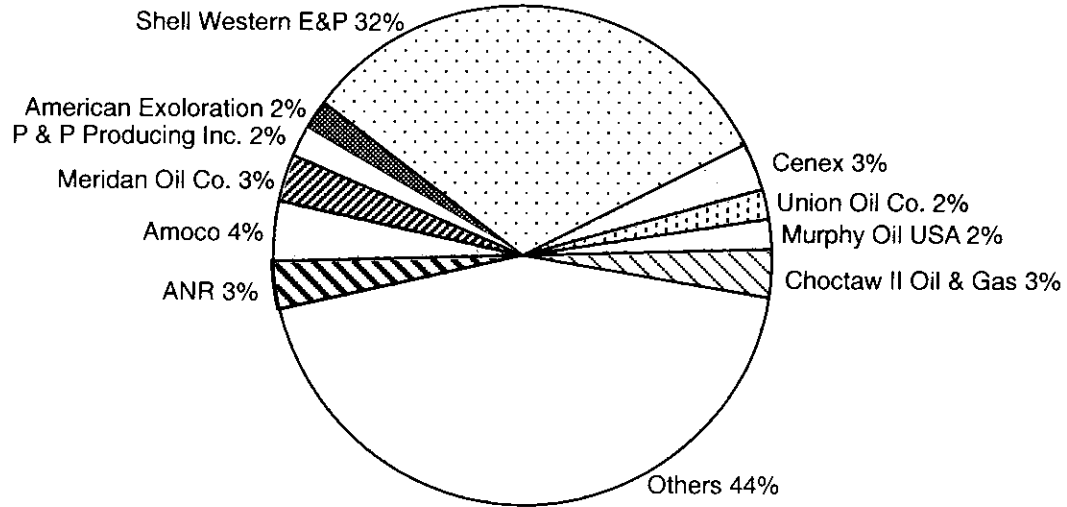
Field	Formation	Operator	Type of Project	Injection Pattern	Date Injection Commenced	1993 Cumulative Injections MMBLS or MCF	Avg. Daily Injection Rate BBLs or MCF	No. of Injection Wells	Source of Injection Media and Remarks
Ash Creek Crow Tribal	Shannon	Mobil	Waterflood	Peripheral	10/64	256	-	-	Idle
Ash Creek SU (Mont)	Shannon	DNR Oil & Gas Inc.	Waterflood	Peripheral	10/64	1355	35	1	WSW and produced
Bears Den	Liberty	J.R. Bacon, Inc.	Waterflood	Random	11/90	756	586	4	WSW/Produced
Bell Creek Consolidated	Muddy	Exxon Corporation	Waterflood	5 Spot	*4/70	525948	15369	32	Produced (*Consolidated 1/92)
Bell Creek, South	Muddy	Exxon Corporation	Waterflood	Peripheral	2/91	870	1152	5	Produced
Big Wall BWLTSU	Lower Tyler	Texaco	Waterflood	Random	10/84	26371	19322	3	Produced
Big Wall BWUTSU	Upper Tyler	Texaco	Waterflood	Random	8/66	41834	3043	1	Produced
Blackfoot	Cut Bank	Croft Petroleum	Waterflood	Random	7/76	3814*	575	4	Madison
Border, New	Cut Bank	P&M Petroleum	Waterflood	Random	1/82	-	-	-	Idle
Border, Old	Cut Bank	Gypsy Highview	Waterflood	Random	6/73	1783*	227	1	Madison
Breed Creek	Tyler	True Oil Co.	Waterflood	Random	11/92	128	350	1	NA
Cabin Creek	Siluro-Ord.	Shell	Waterflood	Semi-Perip	6/59	355510*	20625	26	Produced
Cat Creek East Dome	Ellis Sand	Robert Hoss	Waterflood	Semi-Perip	7/70	1561	150	3	Third Cat Creek
Cat Creek Mosby	Amsden	Cenex	Waterflood	Random	6/71	313	-	-	Idle
Cat Creek Mosby Dome	Swift	Cenex	Waterflood	Random	7/67	6775*	218	2	Third Cat Creek
Cat Creek Unit 1	1st Cat	Cenex	Waterflood	Semi-Perip	10/62	8431	504	1	Third Cat Creek
Cat Creek Unit 1	2nd Cat	Cenex	Waterflood	Semi-Perip	10/62	12646	1140	2	Third Cat Creek
Cat Creek Unit 2	1st Cat	Cenex	Waterflood	Semi-Perip	12/59	9963	130	2	Third Cat Creek
Cat Creek Unit 2	2nd Cat	Cenex	Waterflood	Semi-Perip	12/59	14019	815	3	Third Cat Creek
Cut Bank 2 Medicine	Madison	Montana Mill Oper.	Waterflood	Random	12/67	58499*	-	-	Idle
Cut Bank Airport Unit	Madison	Union Oil of Calif.	Waterflood		6/93	109	514	1	Madison
Cut Bank Dahlquist	Cut Bank	Bluejay Resources	Waterflood	Random	11/79	609	202	1	Madison
Cut Bank Lander A	Lander Sand	Quest Petroleum Corp.	Waterflood	Random	4/65	2115	-	-	Idle
Cut Bank Marina	Cut Bank	P&M Petroleum	Waterflood	5 Spot	6/72	2075	-	-	Idle
Cut Bank No. East	Cut Bank	J and G Operating	Waterflood	5 Spot	6/63	13409	-	-	Idle
Cut Bank No. West	Cut Bank	Quest Petroleum Corp.	Waterflood	5 Spot	1/62	19794*	-	-	Idle
Cut Bank No. Central	Cut Bank	Gypsy Highview	Waterflood	5 Spot	5/78	5757	-	-	Idle
Cut Bank So. Central	Cut Bank	Union Oil	Waterflood	5 Spot	5/63	70441	5217	29	Madison
Cut Bank So. West	Cut Bank	J.R. Bacon Drilling	Waterflood	5 Spot	9/62	143058	7332	32	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	979*	10	1	Cut Bank
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	Samedan Oil Corp.	Waterflood	Peripheral	10/68	2521*	530	3	Dwyer/Charles
Elk Basin	Frontier	Amoco	Waterflood	Crestal	12/72	6039	-	-	Idle
Elk Basin	Madison	Amoco	Waterflood	Semi-Perip	8/61	126852*	10881	11	Produced
Elk Basin NW	Madison	Amoco	Waterflood	Semi-Perip	12/88	2405	1094	2	Produced
Elk Basin NW	Tensleep	Amoco	Waterflood	Semi-Perip	1/67	5918	-	-	Idle
Elk Basin Unit	Tensleep	Amoco	Waterflood	Semi-Perip	4/67	2431	-	-	Idle
Fairview	Red River	Mepna, Inc.	Pressure M	Random	5/70	4186	-	-	Idle
Flat Coulee	Swift	Breck Operating Corp	Waterflood	Peripheral	2/72	17176	2614	12	Eagle
Flat Lake Unit	Ratcliffe	P & P Producing Inc.	Pressure M	Random	6/71	45928	4303	15	Produced
Flat Lake West	Ratcliffe	American Exploration	Pressure M	Random	11/74	8607	604	2	Produced
Frannie	Tensleep	Conoco	Waterflood	Random	11/70	526846*	55057	40	Produced
Frannie	Tensleep	Conoco	LPG Inj	Random	11/70	23131*	-	-	Idle
Fred & George Creek	Sunburst "A"	William M. Fulton	Waterflood	Random	7/76	59844	4813	2	Madison/Eagle
Gas City	Red River	Home-Stake Royalty Co	Waterflood	Semi-Perip	10/69	17445	806	3	Mission Canyon
Goose Lake	Ratcliffe	Forcenergy Gas Explor	Waterflood	Semi-Perip	1/73	29165	2745	2	Produced
Graben Coulee	Cut Bank	Monte Grande Explor.	Waterflood	Random	7/83	735*	274	1	Madison (#reported as disposal)
Gumbo Ridge	Tyler B	Cline Production Co.	Waterflood	Semi-Perip	6/80	3040	63	1	Produced
Highview	Madison	Mountain States Res.	Waterflood	Random	12/91	74	88	1	Madison (Converted from CO2)
Ivanhoe	Tyler	Tomahawk Oil Co.	Pressure M	Random	5/64	328	126	1	Produced
Jim Coulee	Tyler	Beartooth Oil & Gas	Waterflood	Semi-Perip	7/72	26204*	2692	3	Produced Cat Creek
Keg Coulee NW Unit	Tyler	No. Central Oil Corp.	Waterflood	Semi-Perip	3/64	6322*	181	1	Madison
Keg Coulee Tyler SU	Tyler	Cline Production Co.	Waterflood	Semi-Perip	12/69	3610	17	1	Active 2 mos.
Keg Coulee Unit	Tyler	Reunion Energy Co.	Waterflood	Semi-Perip	8/66	6854	476	1	Produced
Kelley	Tyler B	Grand Resources, Ltd.	Waterflood	Random	7/69	4772*	225	1	Produced
Kevin Homestake SU	Sunburst	Natural Gas Process.	Waterflood	Random	8/64	8547*	1284	7	Madison & Produced
Kevin Sunburst SU	Sunburst	Basin Operating Co.	Waterflood	Random	8/64	13108	-	-	Idle

1993 SUMMARY OF SECONDARY RECOVERY PROJECTS (CONTINUED)

Field	Formation	Operator	Type of Project	Injection Pattern	Date Injection Commenced	1993 Cumulative Injections MBBLS or MCF	Avg. Daily Injection Rate BBLS or MCF	No. of Injection Wells	Source of Injection Media and Remarks
Kincheloe Ranch	Tyler A	E. Doyle Huckabay	Waterflood	Random	11/89	1348	872	2	Third Cat Creek
Kincheloe Ranch, West	Tyler "A"	E. Doyle Huckabay Ltd	Waterflood	Random	02/92	72	103	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	56718*	3684	10	Produced
Little Beaver East	Red River	Shell Oil	Waterflood	Semi-Perip	4/65	25036*	1639	8	Produced
Little Wall - Hamilton	Tyler	Beartooth Oil & Gas	Waterflood	Random	07/92	37	25	1	Produced
Little Wall - Weisner	Tyler	Beartooth Oil & Gas	Waterflood	Random	01/92	164	259	1	Produced
Little Wall Creek	Tyler	Texaco E & P Inc.	Waterflood	Random	/84	874	305	2	Produced
Little Wall S - Gunder	Tyler	Beartooth Oil & Gas	Waterflood	Random	10/87	1069	469	1	Produced
Little Wall S - Unit	Tyler	Beartooth Oil & Gas	Waterflood	Random	10/83	15387	3652	4	Produced
Lookout Butte Coral Ck.	Red River	Shell Oil	Waterflood	Semi-Perip	4/67	63205*	7249	12	Minnelus
Lookout Butte East	Red River B	Meridian Oil Inc.	Waterflood	Pilot	7/88	225	149	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	7081	1610	3	3rd Cat Creek
Monarch	Siluro/Ord	Shell Oil	Waterflood	Unknown	12/73	7191	246	2	
Pennel	Siluro/Ord	Shell Oil	Waterflood	Random	8/69	252055*	45420	83	Dakota/Produced
Pine A	Siluro/Ord	Shell Oil	Waterflood	Semi-Perip	3/59	193927	19700	26	Fox Hills/Produced
Pine C & D	Red River	Shell Oil	Waterflood	Semi-Perip	3/68	25836*	4173	2	Lodgepole
Prichard Creek	Sunburst	Fulton Producing	Waterflood	Random	4/73	1184	-	-	Idle
Ragged Point SW	Tyler	Grand Resources, Ltd.	Waterflood	Random	10/82	9773	3559	4	Produced
Ragged Point Tyler A	Tyler	Reunion Energy Co.	Waterflood	Semi-Perip	12/66	1189	208	1	Produced
Rattler Butte	Tyler	Anchor Bay Corp.	Waterflood		5/93	20	81	1	Cat Creek
Raymond	Nisku	Santa Fe Energy	CO2 Inj.		8/83	2167	637	1	Produced
Red Creek	Cut Bank	Exxon	Waterflood	5 Spot	6/65	1793*	-	-	Idle
Regan Dome	Madison	Union Oil	Waterflood	Random	7/73	8311	1367	5	Produced
Ridgelawn	Duperow	Cowry Enterprises Ltd	Secondary	Unknown	7/90	2944	1699	2	Dakota
Roscoe Dome	Lakota	E. American Energy	Steam Inj.	Unknown	5/82	5	-	-	Idle
Rosebud	Tyler	Anchor Bay Corp.	ER	Random	09/91	318	367	1	Cat Creek
Shepherd	Tyler	Summit Resources	Secondary	Random	11/84	95	-	-	Idle
Stensvad	Tyler	Tomahawk Oil Co.	Waterflood	Semi-Perip	12/63	29077*	741	4	Produced
Sumatra Central	Tyler	Ballard & Associates	Waterflood	Semi-Perip	9/69	191765	19342	11	Madison/Produced
Sumatra Grebe	Tyler	Tomahawk Oil Co.	Waterflood	Random	6/75	969	289	1	Produced
Sumatra NE	Tyler	Ballard & Associates	Waterflood	Semi-Perip	9/69	13097*	1439	2	Produced
Sumatra SE	Tyler	Reunion Energy Co.	Waterflood	Semi-Perip	12/69	31479	1991	3	Produced
Sumatra Sawyer	Tyler	Reunion Energy Inc.	Waterflood	Semi-Perip	6/80	1349	176	1	Madison
Sumatra W. Kincheloe	Tyler	Forcenergy Gas Explor	Waterflood	Semi-Perip	5/82	22843	4399	5	Madison
Sumatra West	Tyler	Conoco	Waterflood	Semi-Perip	10/68	64855	3871	4	Produced
Tippy Buttes	Tyler	True Oil	Waterflood	Random	5/82	262	-	-	Abandoned
Utopia	Swift	True Oil Co.	Waterflood	Random	03/92	26	47	1	
Winnett Junction	Tyler	Beartooth Oil & Gas	Waterflood	Random	10/77	9045	1150	2	Produced
Wolf Springs South	Amsden	Beartooth Oil & Gas	Waterflood		1/93	115	314	2	Water Supply Well

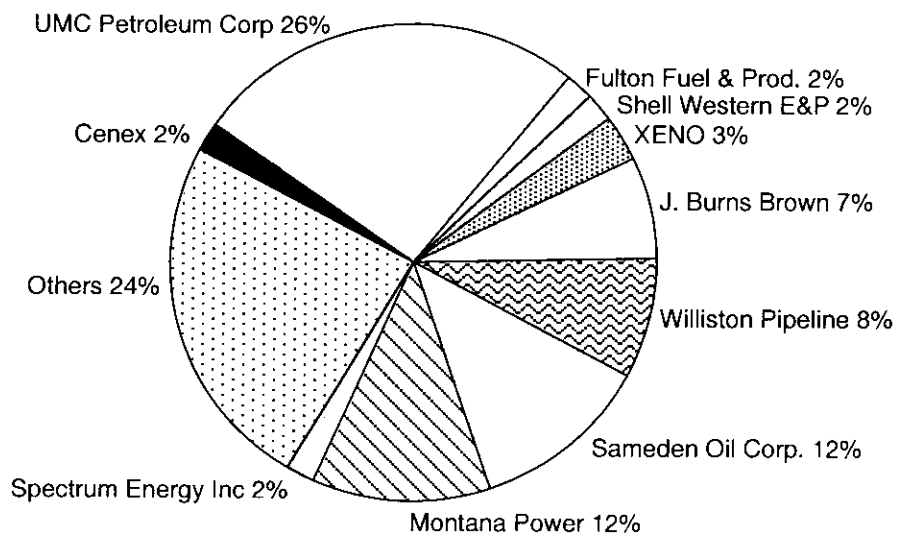
* Cumulative figures adjusted by operator

Top Producing Oil Companies - 1993
17,395,561 Barrels



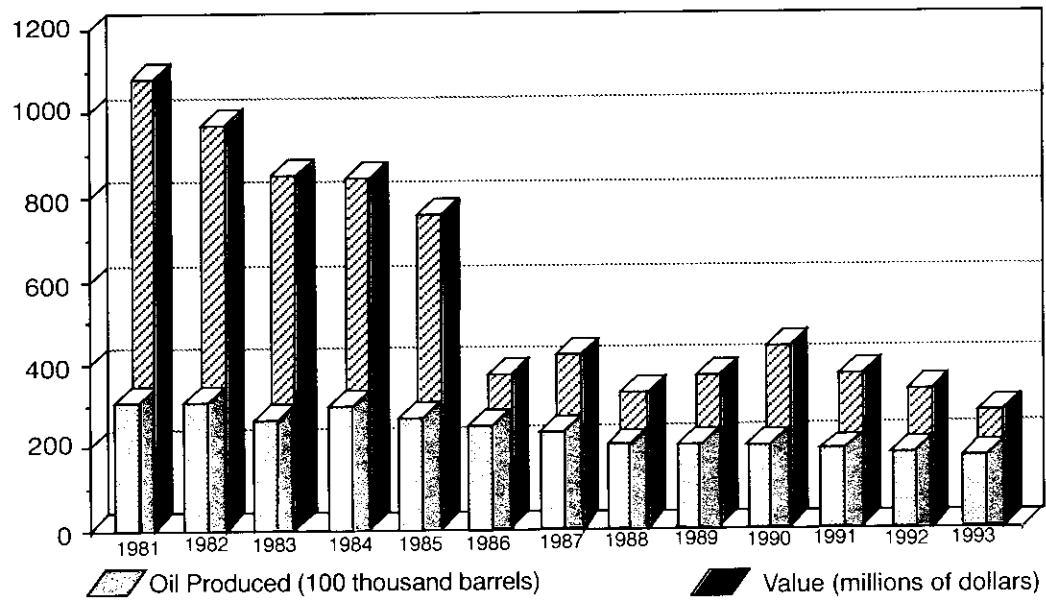
235 Active Oil Producers

Top Producing Gas Companies - 1993
55,764,675 Mcf

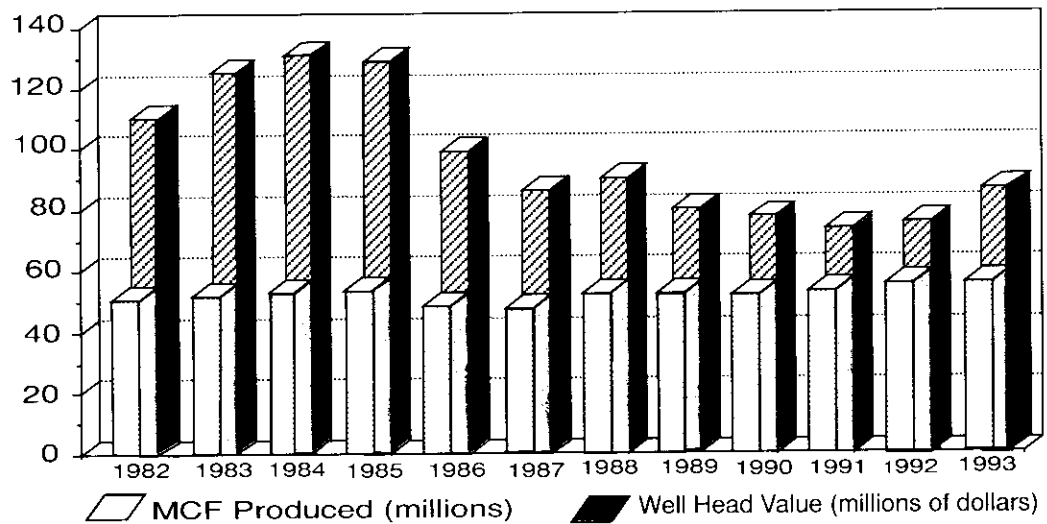


174 Active Gas Producers

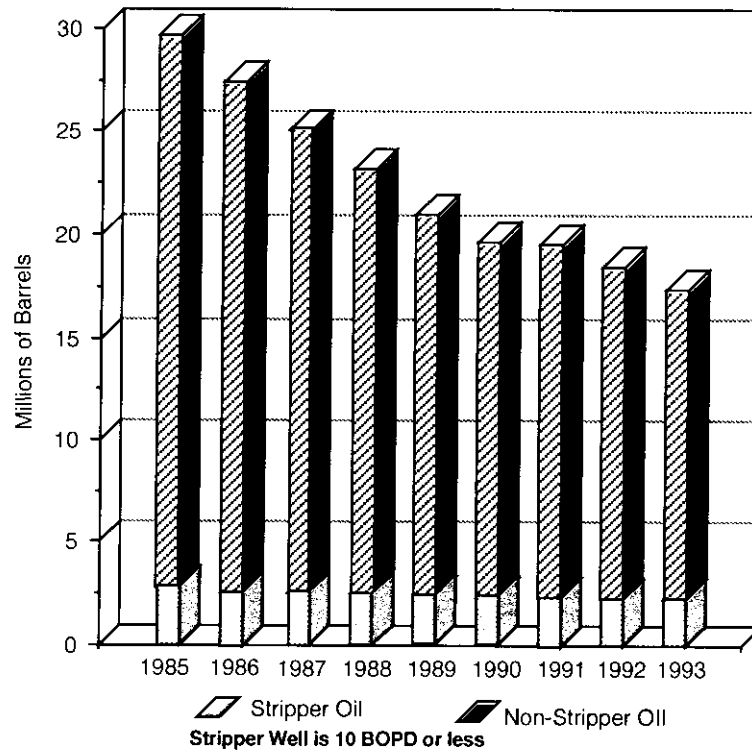
Oil Produced and Oil Value



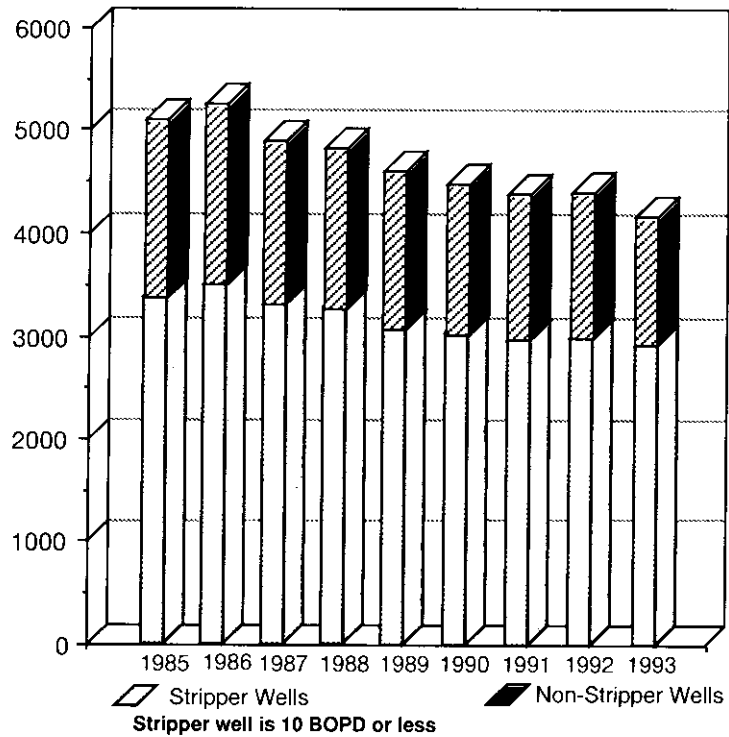
Gas Produced and Gas Value Natural and Associated Gas



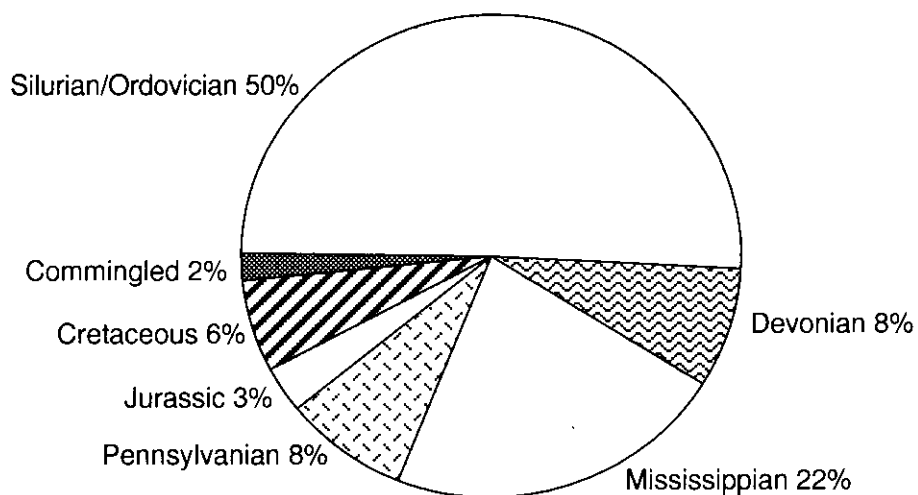
Stripper and Non-Stripper Oil Production



Stripper and Non-Stripper Number of Producing Wells



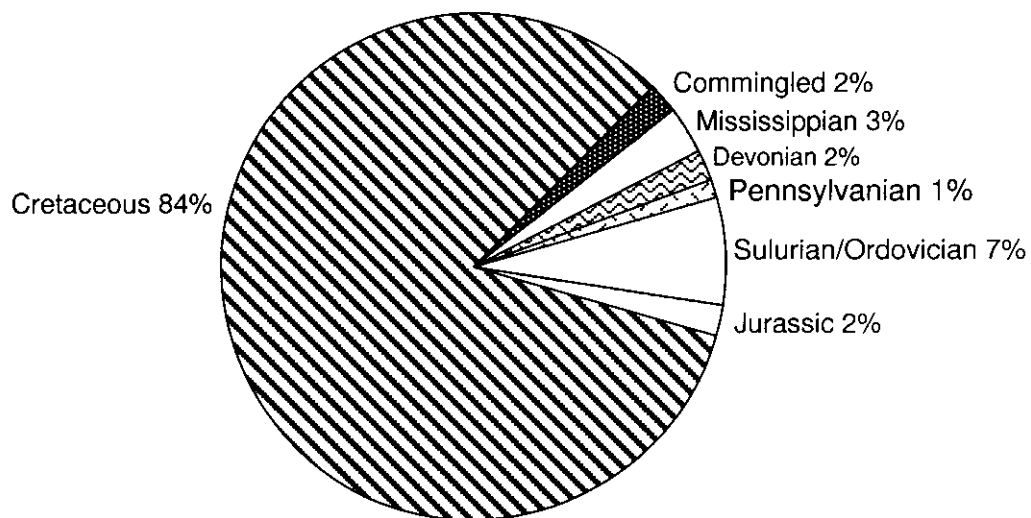
Oil Production By Geologic Period



17,395,561 Bbls

Gas Production By Geologic Period

Natural & Associated



55,764,675 Mcf Produced

OIL AND GAS FIELDS

Field, Formation	Oil	Gas	Shut-In	Spacing Regulations, Field Rules, and Remarks
ALMA				
Bow Island/Blackleaf	0	2	1	640-acre spacing units for gas production from 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	9	3	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	9	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).
Ratcliffe	2	0	1	
Red River	6	0	1	
Winnipegosis	1	0	0	
ARCH APEX				
Bow Island	0	40	3	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	0	1	2	
ASH CREEK				
Shannon	2	0	3	Spacing waived within unitized portion of field except no well may be drilled closer than 660' from unit boundary (Order 4-65). Waterflood initiated October 1964 (Orders 22-64, 15-66).
ASHFIELD				
Greenhorn/Phillips	0	26	0	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). Amend to allow 8 wells per spacing unit in 4 spacing units and reduce between-well distance to 990' with 150' topographic tolerance (Order 8-92).
Bowdoin-Greenhorn-Phillips	0	8	0	
Carlile	0	74	3	
Carlile/Greenhorn	0	4	0	
BADLANDS				
Eagle	0	8	5	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.
Winnipegosis	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	2	0	0	320-acre spacing units for Winnipegosis and Red River consisting of two governmental quarter sections located in either one or two governmental sections; wells to be located no closer than 660' to unit boundary and no closer than 1,650' to any well producing from the same formation (Order 84-79). 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). Single spacing unit for production from the Nisku Formation consisting of the SE 1/4 Sec. 10 and SW 1/4 Sec. 11, T28N, R58E (Order 61-92). Single spacing unit for production from the Madison consisting of NE 1/4 Sec. 3, T28N, R58E (Order 16-93).
Red River	3	0	0	
Winnipegosis	2	0	0	
Interlake	1	0	0	
Mission Canyon	1	0	0	
Nisku	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 Formation suspended in 1963.
Madison	6	0	4	
BATTLE CREEK				
Eagle	0	57	2	Originally delineated for production of gas from all formations from surface to top of Virgelle Formation with one well per producing horizon per section to be located no closer than 990' to section line but allowing additional wells in each section no closer than 1,320' to wells producing from same horizon (Order 40-86). Field rules amended to include Lower Eagle and Upper Colorado intervals in a portion of the field (Order 76-92).
Niobrara	0	2	0	
BEANBLOSSOM				
Tyler B	2	0	0	Three spacing units consisting of individual lots with one well per lot (Order 23-86). SWD approved EPA-87, 88.

OIL AND GAS FIELDS

Field, Formation	Oil	Gas	Shut-In	Spacing Regulations, Field Rules, and Remarks
BEARS DEN				
Bow Island	0	1	0	Statewide. Swift unit delineated (Order 5-89). Enhanced Recovery approved EPA-89.
Swift	7	2	0	
BELFRY				
Kootenai	0	0	1	Statewide.
BELL CREEK				
Muddy	46	0	236	Originally 40-acre spacing units with location 660' from unit boundary with 150' tolerance for topographic reasons only (Orders 37-67, 39-67, 50-67, 1-69, 17-70). Tertiary recovery program (Order 25-80). Dissolution of secondary and enhanced recovery units created under Orders 7-70, 23-70, 8-71, 26-71, 35-71, 25-80, 82-84, 111-84, 112-84 and consolidation of said units as the Bell Creek Consolidated (Muddy) Unit approved 12-12-91 (Order 71-91). South Bell Creek (Muddy) Unit approved 6-28-90 (Order 24-90). Ranch Creek enhanced recovery approved EPA-85. Bell Creek South enhanced recovery approved EPA-90.
BELL CREEK, SOUTHEAST				
Muddy	0	2	0	160-acre spacing units, wells 660' from spacing unit boundary (Order 31-72).
BENRUD				
(Non-productive)				160-acre spacing for Devonian with wells no closer than 990' from spacing unit boundaries (Orders 1-62 and 44-62). Field rules amended to allow drilling not closer than 660' from the spacing unit boundaries (Order 6-65). Field reduction (Order 66-84).
BENRUD, EAST				
Nisku	2	0	0	160-acre spacing units for Nisku with permitted location within a 1,320' square in center of quarter section (Order 6-65). Single Nisku Formation spacing unit consisting of Lots 3 and 4, Sec. 6, T30N, R48E (Orders 108-84 and 7-85). SWD approved EPA-87.
BENRUD, NORTHEAST				
Nisku	1	0	0	Same as East Benrud Field (Order 6-65). Field enlargement (Order 26-66).
BERTHELOTE				
Sunburst	1	0	2	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	0	5	0	Statewide except for single spacing unit for production of gas from the Morrison Formation consisting of Sec. 29, T4N R20E (Order 25-86).
Lakota	0	1	1	
Morrison	0	0	1	
BIG GULLY				
Tyler	2	0	0	Statewide.
BIG GULLY, NORTH				
Tyler	0	0	1	Statewide.
BIG MUDDY CREEK				
Mission Canyon	0	0	1	One well per 320-acre spacing unit for Interlake and Red River with wells no closer than 660' from boundary of four east-west units (Order 4-75).
Red River	1	0	0	
BIG ROCK GAS FIELD				
Blackleaf	0	26	0	640-acre spacing units for gas production from Blackleaf "A" Formation; location to be no closer than 990' to any governmental section line (Order 31-78). Amended to allow 2 wells per section in 5 sections (Order 64-85).
Bow Island	0	6	0	
Colorado	0	5	0	
BIG WALL				
Amsden	7	0	0	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. Enhanced recovery approved EPA-86. SWD approved EPA-88.
Tyler	9	0	0	
BILLS COULEE				
Kootenai	0	0	3	Field without restrictions except that no well may be drilled closer than 330' from the exterior boundary (Order 22-80).
Dakota	0	0	1	
Moulton	0	0	2	
Sunburst	0	0	1	
Madison	0	0	1	

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 gas production from the Eagle Sandstone consisting of either the N/2 and S/2 or E/2 and W/2 of the section with well location to be no closer than 990' from exterior field boundaries nor closer than 660' to the interior spacing unit boundaries (Order 134-80).
BLACK COULEE				
Eagle	0	7	4	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 enlargement (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). Portion of existing field delineated for production from Ratcliffe Formation (Order 32-89).
Duperow	1	0	0	
BLACK JACK				
Blackleaf	0	2	0	Delineated for Sunburst and Swift with one gas well per 160 acre spacing unit, with well no closer than 660' from spacing unit boundaries (Order 3-69). Order 3-69 amended to include Blackleaf Formation in spacing and field rules (Order 4-74).
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	0	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				
Sun River	0	0	0	Single 160-acre Madison spacing unit (Order 84-81).
BLACKLEAF UNIT				
Sun River	0	0	0	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	1	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	2	0	0	
Interlake	1	0	0	
BLUE MOUNTAIN				
Red River	1	0	0	Statewide.
BORDER				
Cut Bank	12	0	4	Oil: Unitized into New and Old Border fields; Unitized 6-1-73 (Orders 8-73, 9-73). Gas: Location no closer than 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 (Carfile)	0	377	26	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).
Greenhorn/Phillips				
BOWES				
Eagle	0	40	8	Eagle Sandstone gas wells to be located 660' from boundary of legal subdivision and 1,320' from other wells in same formation with 75' topographic tolerance (Order 23-54). Order 23-54 amended by establishing 160-acre Eagle spacing units in Sec. 5, 6, 7, 8, 17 and 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). SWD approved EPA-92,93. Pilot waterflood initiated in 1961 and expanded to fieldwide waterflood in 1965 utilizing water from Madison (Order 6-61).
Sawtooth	51	0	34	
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	1	0	
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		
Burwash	1	0	2	
BREED CREEK				
Tyler	12	0	4	Statewide. Enhanced recovery approved EPA-90. Breed Creek waterflood Unit approved (Order 12-92).
BROADVIEW				
Frontier	0	0	1	Single 640-acre Frontier spacing unit comprised of Sec. 35, T5N, R22E (Order 8-86).
BRORSON				
Madison	9	0	0	One well per 160-acre spacing unit, wells no closer than 660' from spacing unit boundary (Mission Canyon and Red River, Order 5-69). Field enlargement (Order 25-82). SWD approved EPA-86.
Red River	3	0	0	
BRORSON, SOUTH				
Madison/Bakken	6	0	0	Delineated for Red River production with one well per 160-acre spacing unit, no closer than 660' from spacing unit boundary (Order 26-68). Gas to Brorson Field Plant. Reduced Field Area (Order 26-77).
Red River	1	0	0	
BROWN'S COULEE				
Eagle	0	0	1	Delineated for Judith River and Eagle gas production. One well per 160-acre spacing unit, no closer than 660' to spacing 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	0	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	0	Statewide.
BUFFALO LAKE				
Madison	0	0	1	Statewide.
BULLWACKER				
Eagle	0	41	1	Delineated for Judith River and Virgelle/Eagle with one well per 320-acre spacing unit with well location no closer than 660' from internal spacing unit boundary and 990' from exterior 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	1	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. Field boundaries amended and some spacing units designated (Order 118-84). Waterflood of Siluro-Ordovician (Orders 5-59, 15-60, and 30-63). SWD approved EPA-84, 85, 88. Enhanced Recovery approved EPA-87, 88, 89, 90, 91, 92.
Silurian-Ordovician	96	0	13	
CAMP CREEK				
Eagle	0	1	0	Statewide.
CANADIAN COULEE & AREA				
Sawtooth	0	1	0	320-acre spacing units for Jurassic Sawtooth/Piper with well location no closer than 660' from interior unit boundary, and 990' from field boundaries (Order 18-76).
Firemoon	0	0	1	

OIL AND GAS FIELDS

Field, Formation	Oil	Gas	Shut-In	Spacing Regulations, Field Rules, and Remarks
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	0	0	320-acre Red River spacing units consisting of E 1/2 and W 1/2 of governmental section (Order 34-70). 160-acre Madison spacing units; wells located no closer than 660' to unit boundary with 150' topographic tolerance (Order 58-85).
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).
CAT CREEK, EAST DOME Ellis (Swift)	10	0	3	220' from lease or property line, 440' from every other well in same formation (Order 17-55). Three separate producing areas, East, Mosby, and West Domes. Field enlargement; upper and lower Brindley wells in Sec. 1, T15N, R28E are to be no closer than 350' from other Morrison wells in said section (Order 101-82). Three Kootenai, two Ellis, and one Amsden waterflood approved by Orders 17-56, 18-59, 13-62, 8-68, 38-70, 11-71 utilizing water from Third Cat Creek Sandstone. Waterflood modified (Order 29-74). Enhanced Recovery approved EPA-89.
CAT CREEK, MOSBY DOME Amsden	2	0	0	
Cat Creek 1 & 2	2	0	1	
Ellis (Swift)	3	0	4	
Rierdon	1	0	0	
CAT CREEK, WEST DOME Cat Creek 1 & 2	30	0	40	
Ellis (Swift)	1	0	0	
Morrison	3	0	0	
Mowry	2	0	0	
CATTAILS Ratcliffe	7	0	0	160-acre spacing units for Ratcliffe; wells no closer than 660' to unit boundaries (Order 31-88).
CATTAILS SOUTH Ratcliffe	4	0	0	160-acre spacing units for Ratcliffe; wells no closer than 660' to spacing unit boundaries. Horizontal wells may cross spacing unit boundaries (Order 70-91).
CEDAR CREEK Eagle	0	83	6	320-acre Eagle Formation spacing units for a portion of the area, with wells in center of NW 1/4 and SE 1/4 of each section with 200' topographic tolerance (Order 1-61). Delineation amendments (Order 23-76 and 32-86). Order 33-54 (original delineation) vacated, and a portion of the lands included in Order 1-61 removed by Order 32-86.
Eagle/Judith River	0	1	0	
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, oriented either east-west or north-south at option of operator; well 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	3	0	0	Two 160-acre spacing units for Duperow Formation (Order 47-87). Two 320-acre spacing units for Red River Formation (Order 38-88).
CHARLIE CREEK, NORTH (Non-productive)				Single Red River spacing unit (Order 37-82).
CHELSEA CREEK Nisku	0	0	1	Statewide.
CHINOOK, EAST Eagle	0	0	1	Statewide.
Sawtooth	0	0	2	

OIL AND GAS FIELDS

Field, Formation	Oil	Gas	Shut-In	Spacing Regulations, Field Rules, and Remarks
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	5	0	1	Statewide. SWD approved EPA-87.
Nisku	1	0	0	
Red River	7	0	0	
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 to be designated by the operator within certain sections; well to be located no closer than 990' to spacing unit boundary (Order 36-79).
COAL MINE COULEE Eagle	0	4	0	Delineated for Judith River and Eagle Formations with 4 wells per 640-acre spacing unit per formation with permitted well no closer than 990' to the exterior boundaries of the field and no closer than 660' to spacing unit boundaries with 150' topographic tolerance (Order 1-90).
Second White Specks	0	1	0	
COAL RIDGE Mission Canyon	0	0	0	Statewide. SWD approved EPA-89.
COLORED CANYON Red River	2	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).
Nisku	1	0	0	
COMERTOWN Nisku	1	0	1	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).
Nisku/Duperow	1	0	0	
Ratcliffe	4	0	0	
Red River	4	0	1	
COMERTOWN, SOUTH AND AREA Red River	2	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	3	0	1	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).
Sunburst	3	0	2	
COTTONWOOD Ratcliffe	2	0	0	Single 320-acre Red River spacing unit (Order 85-84). Amended to include Ratcliffe Formation (Order 54-92).
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).
CRANE Devonian	3	0	1	320-acre spacing units for Red River and Duperow Formations consisting of one half of a governmental section; well location to be no closer than 660' from unit boundary and no closer than 1,650' to any well drilling to or producing from the same pool (Order 40-79). SWD approved EPA-87, 88.
Silurian-Ordovician	2	0	0	
CROCKER SPRINGS, EAST Madison	0	0	1	Statewide (Order 68-82 which established 80-acre spacing units was vacated by Order 37-87).
CROOKED CREEK Dakota	0	0	0	Statewide.

OIL AND GAS FIELDS

Field, Formation	Oil	Gas	Shut-In	Spacing Regulations, Field Rules, and Remarks
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). SWD approved EPA-85, 86.
CUPTON SOUTH & AREA				
Red River	1	0	0	Statewide plus single Red River spacing unit (Order 14-85).
CUT BANK				
Dakota/Kootenai	1	1	0	(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 Special Spacing area); E 1/2 and W 1/2 spacing units with 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). NE 1/4 Sec. 26, T37N, R6W designated as spacing unit for Sunburst and Cut Bank Formation gas (Order 73-92). Additional wells in selected spacing units in Special Spacing area (Orders 14-93, 51-93). There are 17 waterfloods in progress utilizing water from Eagle and Madison, or produced. SCCBSU enhanced recovery approved EPA-84, 85, 87, 90, 91 and Order 88-85. SWD approved EPA-86, 89, 92. Two Medicine enhanced recovery approved EPA-88. Cut Bank-Airport Unit approved (Order 26-92). Airport Unit enhanced recovery approved EPA-93.
Bow Island/Sunburst	7	25	5	
Cut Bank	452	190	378	
Cut Bank/Madison	3	0	0	
Cut Bank/Bow Island/Dakota	0	7	0	
Madison	42	1	23	
Moulton	37	1	26	
Lander	3	2	1	
DAGMAR				
Red River	2	0	0	Statewide.
DEADMAN'S COULEE (Non- productive)				Enhanced Recovery approved EPA-92. Pilot Waterflood (Order 53-92)
DEAN DOME				
Greybull	0	0	7	Statewide.
DEER CREEK				
Charles	3	0	0	80-acre spacing units for Interlake and Red River consisting of any two adjacent quarter-quarter sections. Well location in NE 1/4 and SW 1/4 of each quarter section with 75' topographic tolerance (Orders 23-55 and 14-59). Well location amendment. (Order 10-86) Commingling of production in the Interlake, Stony Mountain, Red River, and Charles pay zones permitted upon approval of Board Petroleum Engineer (Order 18-63).
DELPHIA				
Amsden	3	0	0	Statewide.
DEVILS BASIN				
Heath	7	0	2	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).
DEVON				
Bow Island	0	22	8	160-acre spacing units for production of gas from all formations from surface to top of Kootenai Formation; wells located no closer than 330' to any quarter section line and 660' to exterior boundaries of field, 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	South Devon Unit drilled on statewide spacing and unitized for primary production (Order 28-71, corrected). South Devon Field delineated for gas production from all horizons above the top of the Kootenai with 320-acre spacing units; wells located no closer than 660' to unit boundaries (Order 24-84). Field enlarged (Order 11-87).
DIAMOND POINT				
Red River	1	0	0	320-acre spacing unit allowing two wells to produce from the Red River or from commercial production at any depth shallower (Order 20-80). SWD approved EPA-85.
Interlake	1	0	0	

OIL AND GAS FIELDS

Field, Formation	Oil	Gas	Shut-In	Spacing Regulations, Field Rules, and Remarks
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. SWD approved EPA 90.
Red River	3	0	0	
DOOLEY				
Ratcliffe	4	0	0	Statewide.
DRY CREEK				
Frontier	0	14	2	Field delineated for Frontier gas production with E 1/2 or W 1/2 of sections as spacing units (Order 8-70). West Dome gas storage project approved (Order 31-66). Enlarged (Order 69-92). Order 8-70 modified to allow N 1/2 or S 1/2 of section as spacing units (Order 31-76).
Greybull	0	2	0	
Judith River	0	4	0	
Virgelle/Eagle	0	3	0	
DRY CREEK, MIDDLE				
Frontier	1	2	0	320-acre spacing units for Frontier gas production consisting of two adjacent governmental quarter sections lying north-south or east-west at operator's option; permitted well no closer than 660' 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 Shale per spacing unit; location no closer than 660' to spacing unit boundaries (Order 54-76). Additional wells (Order 13-90).
DRY CREEK, SOUTHWEST				
Frontier	0	0	0	320-acre spacing units for Frontier Formation 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	33	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).
DWYER				
Madison	8	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). Waterflood (Order 20-68). Enhanced recovery approved EPA-88.
DWYER-NISKU				
Nisku	0	0	1	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).
Red River/Nisku	1	0	0	
DWYER-WINNIPEGOSIS				
Winnipegosis	0	0	1	Single 320-acre Winnipegosis spacing unit (Order 10-91).
EAGLE				
Duperow	1	0	0	Statewide.
Madison	10	0	0	
Red River	1	0	0	
EAGLE SPRING				
Bow Island-Sunburst-Swift	0	5	4	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). Enlargement (Order 20-93).

OIL AND GAS FIELDS

Field, Formation	Oil	Gas	Shut-In	Spacing Regulations, Field Rules, and Remarks
EAST GLACIER Green Horn	1	0	0	160-acre spacing units for Greenhorn (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 Frontier	13	0	12	Spacing waived within unit areas (Order 10-61). Frontier: Water injection (Order 1-72). Embar-Tensleep pressure maintenance by crestal gas injection. Waterflood approved in 1966 (Order 5-66). Madison: Water injection (Order 17-61). Enhanced recovery approved EPA-86.
Madison	14	0	16	
Tensleep	21	1	11	
ELK BASIN, NORTHWEST Frontier	0	0	11	Spacing waived within unitized portion except that bottom of hole be no closer than 330' from unit boundary and there be at least 1,320' surface distance between wells in same formation; 75' topographic tolerance (Orders 43-63, 28-64). Frontier waterflood in progress. Embar-Tensleep waterflood (Order 3-67, 6-74). Enhanced recovery approved EPA-88.
Madison	7	0	4	
Tensleep	0	0	1	
Cloverly	1	0	0	
ENID, NORTH Dawson Bay	1	0	0	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).
Red River	2	0	1	
ETHRIDGE Swift	0	8	1	320-acre spacing units; well locations no closer than 660' to unit boundaries, for Swift Formation (Order 4-90). Field enlarged (Order 4-92).
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 to remain a 640-acre spacing unit (Order 98-81). Designation of a 640-acre spacing unit for Third Bow Island Sand gas production (Order 66-93).
Bow Island	0	4	0	
FAIRVIEW Madison	6	0	0	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). Field area reduced (Order 119-84). Field enlarged (Order 16-87). Northwest part of field unitized for gas injection utilizing gas from Fairview and Brorson fields (Order 11-70).
Red River	11	0	1	
FAIRVIEW, EAST Red River	0	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.
Winnipegosis	1	0	0	
FAIRVIEW, WEST Madison	1	0	1	Statewide.
FERTILE PRAIRIE Red River	4	0	1	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).
FIDDLER CREEK Greybull	0	0	2	Statewide.
FISHHOOK Madison	1	0	0	Statewide.
Red River	2	0	0	
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 (Orders 113-84 and 2-92). Authorization to complete two Swift Formation gas wells in Sec. 10, T36N, R4W (Order 50-93).
Swift	0	1	0	
FLAT COULEE Bow Island	0	3	0	Bow Island Gas: 330' from boundary of legal subdivision and 1,320' from other wells in same reservoir (Orders 36-54, 16-55). Sawtooth/Swift oil: 40-acre spacing units; well in center of spacing unit with 150' topographic tolerance (Orders 16-62, 19-63). Dakota Gas: Statewide. Waterflood unit and redelineation approved for Swift sandstone (Orders 13-71, 17-A-71, 22-71).
Dakota	0	2	1	
Swift	20	1	1	
FLAT LAKE Madison	37	0	30	160-acre Madison spacing units; well location in center of NE 1/4 of quarter section with 200' topographic tolerance; wells no closer than 961' to North Dakota state line and no closer than 1,600' to Canadian line (Orders 10-65, amended; 43-65, 23-66, 33-66). Unit operation for eastern part of field (Order 7-71). Unit operation for western part of field (Order 32-74).
Nisku	1	0	0	

OIL AND GAS FIELDS

Field, Formation	Oil	Gas	Shut-In	Spacing Regulations, Field Rules, and Remarks
FLAT LAKE, EAST Madison	1	0	0	Single 160-acre Madison spacing unit (Order 103-84). SWD approved EPA-88.
FLAT LAKE, SOUTH Ratcliffe	3	0	1	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).
FLAXVILLE (Non-productive)				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	6	0	2	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).
Red River	2	0	0	
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	0	0	1	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	0	3	0	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. Several Sunburst A and B Sand waterflood units in field and area (Orders 13-70, 27-71, 40-80, 43-93, 44-93, 60-93, 64-93).
Sunburst/Swift	23	1	34	
FRESNO & AREA Eagle	0	3	4	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).
FROG COULEE Red River	0	0	1	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	0	40-acre Amsden spacing units; well location to be in center of each unit with a permitted tolerance of 150' for topographical or geological reasons (Order 120-80). Field enlargement (Order 44-81).
Cat Creek	1	0	0	
GALATA Bow Island	0	7	0	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	8	0	3	80-acre spacing units consisting of E 1/2 and W 1/2 of quarter sections; well location in NW 1/4 and SE 1/4 of quarter section; 150' topographic tolerance; spacing waived and statewide rules for Deviation, Commingling, and Dual Completion are waived in unitized portion of field (Order 29-62). Waterflood using produced water and Madison water (Order 16-69).
Madison	1	0	0	
Madison/Ordovician	1	0	0	
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	1	0	0	Statewide.
Red River	1	0	0	

OIL AND GAS FIELDS

Field, Formation	Oil	Gas	Shut-In	Spacing Regulations, Field Rules, and Remarks
GLENDIVE Silurian-Ordovician	15	0	3	80-acre spacing units consisting of any two adjacent quarter-quarter sections; wells located in center of NE 1/4 and SW 1/4 of each quarter section with 75' topographic tolerance (Orders 27-55, 19-62, 58-62, 20-66). Additional 80-acre spacing units; commingling of Red River and Madison formations (Order 95-84). Additional Red River Formation wells in specific spacing units (Orders 21-93, 22-93). SWD approved EPA-86, 88, 93.
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	0 0 0	5 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	24 1	0 0	10 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). SWD approved EPA-92. North Goose Lake Unit waterflood (Order 17-72). Unit production curtailment (Order 45-77). 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	0 0	Statewide.
GRABEN COULEE Cut Bank Sunburst	61 8	0 0	25 6	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). Waterflood of Cut Bank sands. (Order 61-83) SWD approved EPA-86, 87, 88, 89.
GRANDVIEW Bow Island Sawtooth	0 0	4 1	2 0	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	2	0	3	Statewide.
GRAY BLANKET Tensleep	1	0	0	40-acre spacing units for Tensleep Formation. Wells located no closer than 330' to spacing unit boundary with 150' tolerance upon administrative approval (Order 20-92).
GREBE Tyler	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	2	0	4	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	34	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).
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).

OIL AND GAS FIELDS

Field, Formation	Oil	Gas	Shut-In	Spacing Regulations, Field Rules, and Remarks
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). Allow 2 wells per spacing unit in Sections 15, 20 and 21, T27N, R3E (Order 72-92).
Swift	0	0	1	
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). SWD approved EPA-90.
Mission Canyon	1	0	0	
Red River	1	0	0	
HAYSTACK BUTTE				
Bow Island	0	5	3	640-acre spacing units; one well per producing horizon above Kootenai Formation; location no closer than 990' from spacing unit boundary (Order 85-76). Amended field boundary (Order 37-77).
HAYSTACK BUTTE, WEST				
Bow Island	0	7	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).
HELL COULEE				
Madison	1	0	0	Statewide.
HIAWATHA				
Tyler	2	0	1	Statewide.
HIBBARD				
Amsden	0	0	3	Statewide. Enhanced recovery approved EPA 91.
HIGH FIVE				
Stensvad	9	0	0	Statewide. Unitized & Polymer-Waterflood authorized (Order 110-80). Enhanced recovery approved EPA-88.
Tyler	5	0	0	
HIGHLINE				
Eagle	0	0	1	Single 640-acre spacing unit for Eagle and shallower horizons (Order 35-88).
HIGHVIEW				
Madison	7	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 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.
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). SWD approved EPA-85.

OIL AND GAS FIELDS

Field, Formation	Oil	Gas	Shut-In	Spacing Regulations, Field Rules, and Remarks
INTAKE (MISSION CANYON)				
Mission Canyon	2	0	0	320-acre spacing units consisting of E 1/2 Section 7 and W 1/2 Section 8, T22N, R58E. (Order 28-92)
IVANHOE				
Amsden	1	0	1	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). Waterflood of Tyler B and C sands discontinued.
Morrison	1	0	0	
Tyler	4	0	1	
Second Cat Creek	1	0	0	
JIM COULEE				
Tyler	8	0	7	Unitized, no well to be drilled closer than 330' from unit boundary (Order 18-72). Waterflood project approved in Tyler Sands. (Order 18-72)
JIM COULEE, NORTH (Non-productive)				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). SWD approved EPA-89.
Nesson	1	0	0	
Red River	5	0	0	
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).
Tyler	6	0	12	
KEG COULEE, NORTH				
Tyler	1	0	0	Statewide.
KEITH, EAST & AREA				
Bow Island	0	4	0	Statewide, except unitized portions spaced by Order 22-62.
Niobrara	0	1	0	
Sawtooth	0	2	0	
Second White Specks	0	13	1	
Bow Island/Sawtooth	0	4	0	
KELLEY				
Tyler	1	0	3	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 BOW ISLAND				
Bow Island	0	5	0	160-acre spacing units, one well no closer than 660' to spacing unit boundary per each producing zone, formation, or horizon from top of the Blackleaf to top of Dakota (Order 3-92).
Sunburst	0	1	1	
KEVIN, EAST GAS FIELD (Non-productive)				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	13	1	0	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).
Sunburst	0	1	0	
KEVIN-SOUTHWEST				
Bow Island-Dakota				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	0	27	1	

OIL AND GAS FIELDS

Field, Formation	Oil	Gas	Shut-In	Spacing Regulations, Field Rules, and Remarks
KEVIN SUNBURST				
Madison	839	8	708	Oil: 9 Wells per 40-acre tract; only 3 wells on any side of tract with set back at least 220' from line; Gas: Well to be no closer than 330' from the boundaries of any legal subdivision line, nor less than 2,400' from every other drilling or producible well on the same lease or unit (Orders 8-54, 28-55). Single spacing unit (Order 61-85). Field enlarged (Order 54-87). 160-acre Bow Island spacing units established (Orders 2-88, 17-88, and 60-88). Two 80-acre spacing units for production of gas from all formations from surface to base of Sunburst Sandstone (Order 40-92). There are three waterfloods in operation using Madison water (Orders 9-64, 17-64, 30-64, 36-65). H ₂ S, CO ₂ and produced water disposed into Madison (EPA-87). SWD approved EPA-84, 85, 86, 87, 88. Enhanced recovery approved EPA-88, 91, 92. Ferdig Swift Unit approved (Order 52-92).
Burwash	10	1	0	
Bow Island/Kootenai/Swift/				
Eagle/ Dakota	0	60	3	
Ellis/Madison/Sunburst	11	0	10	
Ellis	34	2	33	
Swift	30	9	0	
Nisku	1	1	2	
Sunburst	100	46	36	
KEVIN SUNBURST, BOW ISLAND				
Bow Island	0	7	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, WEST				
Tyler	6	0	0	Statewide. Enhanced recovery approved. EPA-88 and Order 46-88. Kincheloe Ranch Tyler "A" Unit. KR Tyler "A" Sand Unit approved. (Order 47-91)
KINYON COULEE AREA				
Bow Island	0	3	0	Statewide.
KINYON COULEE, SOUTH (Non-pructive)				Single Bow Island spacing unit with only one well allowed; location no closer than 990' from section line (Order 31-81).
KIPPEN AREA, EAST				
Madison-Swift	0	1	0	Statewide.
Sawtooth	0	0	1	
LAIRD CREEK (LAIRD CREEK U)				
Swift	7	1	2	Unitized and waterflood authorized in Swift for oil production (Order 25-74), commenced 2-25-77. Single 320-acre spacing unit for Swift gas production (Order 37-92).
LAKE BASIN				
Eagle/Virgelle/Frontier/ Telegraph Creek/Clagget	0	0	25	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).
LAKE BASIN, NORTH				
Eagle	0	0	1	640-acre spacing units consisting of one section for all productive horizons; locations 990' from section line (Orders 6-58, 3-74). 160-acre spacing units for Claggett and Eagle/Virgelle, wells located no closer than 660' from quarter section lines within restricted sections (Order 63-76).
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 (Non-productive)				Single Red River spacing unit (Order 101-84).
LANDSLIDE BUTTE				
Madison	10	0	7	Statewide. SWD approved EPA-86.
Sun River	1	0	2	
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).

OIL AND GAS FIELDS

Field, Formation	Oil	Gas	Shut-In	Spacing Regulations, Field Rules, and Remarks
LEDGER				
Bow Island	0	48	10	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	21	12	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). Exception location Sec. 20, T23N, R19E (Order 57-93).
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	0	3	640-acre Frontier spacing units; one well per section located no closer than 990' from spacing unit boundary (Order 27-86).
Lakota	0	0	1	
LITTLE BEAVER				
Silurian-Ordovician	29	2	10	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				
Mission Canyon	1	0	0	Same as for Little Beaver (Order 42-62). Waterflood of the Red River was commenced in April 1965. (Order 33-64)
Silurian-Ordovician	9	0	1	
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).
LITTLE ROCK				
Bow Island-Blackleaf	0	12	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). Enlarge for Lander gas production (Order 48-93).
LITTLE WALL CREEK				
Tyler	3	0	0	Statewide. 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-Stensvad	3	0	1	
LITTLE WALL, SOUTH AND UNITS				
Tyler	11	0	1	Statewide. South Little Wall Creek Unit waterflood (Order 85-83). Gunderson Tyler Sand Unit (Enhanced recovery approved EPA-87 and Order 39-87; unit area reduced by Order 21-92). Hamilton-Gunderson Tyler Sand Unit (Order 22-92).
LODGE GRASS				
Tensleep	2	0	0	Statewide.
LOHMAN				
Eagle	0	4	3	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	2	0	0	
LONETREE CREEK				
Red River	8	0	1	320-acre Red River spacing, wells 660' from spacing boundary, 2,000' between wells (Order 29-72). Field reduction (Orders 162-81 and 84-85). Ratcliffe and Mission Canyon delineation for S/2, Sec. 10, T24N, R57E (Order 45-93).
Mission Canyon	1	0	0	
LONETREE CREEK, WEST (Non-productive)				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.

OIL AND GAS FIELDS

Field, Formation	Oil	Gas	Shut-In	Spacing Regulations, Field Rules, and Remarks
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 Silurian-Ordovician	4 42	0 0	4 7	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). Waterflood of Silurian-Ordovician approved in 1966 (Order 35-66). Water from Minnelusa. Enhanced recovery approved EPA-87, 93. SWD approved EPA-88.
LOOKOUT BUTTE, EAST Red River Madison/Ordovician	9 1	0 0	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, 49-90, and 77-92). Pilot waterflood expansion and approval of horizontal wells (Order 35-93).
LORING FIELD Greenhorn-Phillips-Carlile	0	195	2	640-acre spacing units with 2 wells per formation (Order 79-82 and 12-89). Earlier orders amended to allow 4 wells per formation per spacing unit, no closer than 660' to section boundaries, 1,320' between wells producing from same formation 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	94	4	160-acre spacing units; where discrete gas formations (Bowdoin, Greenhorn and Phillips) exist, a well may be drilled to each discrete formation and may be located no closer than 660' from the spacing unit boundaries (Order 60-82).
LORING, WEST Carlile Greenhorn/Phillips	0 0	2 1	0 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	0	320-acre Red River spacing units consisting of two contiguous governmental quarter sections which may lie in either one or two governmental sections; wells to be located no closer than 660' 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	42	0	7	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). 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	0	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 Muddy	0 4 1	0 0 0	3 10 0	80-acre First Cat Creek Sand spacing units consisting of one half of a quarter section lying in either east-west or north-south direction; well location in center of the NE and SW quarter-quarter sections of each quarter section with 75' topographic tolerance (Order 35-78). Amend Order 35-78 for certain lots designated as spacing units (Order 66-78). Field enlargement (Order 16-79). SWD approved EPA-85. Enhanced recovery approved (EPA-88, Orders 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.

OIL AND GAS FIELDS

Field, Formation	Oil	Gas	Shut-In	Spacing Regulations, Field Rules, and Remarks
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	5	0	0	Delineated for formations from the base of the Winnipeg to the base of the Last Charles Salt; 320-acre spacing units comprised of any two contiguous governmental quarter sections in either one or two governmental sections; wells to be located no closer than 660' from unit boundary nor closer than 1,650' to any well producing from the same formation (Order 50-79). SWD approved EPA-86.
Duperow	1	0	0	
Winnipegosis	1	0	0	
Nisku	1	0	0	
MELSTONE				
Tyler	7	0	5	Statewide. Enhanced recovery approved EPA-86.
MIDDLE BUTTE				
Bow Island	0	3	2	Orders 3-60, 21-75 amended to delineate field extension and 320-acre spacing units for Bow Island consisting of the E 1/2 and W 1/2 of each section; well location no closer than 990' from the section line and 660' from the interior boundary (Order 47-77). Enlarge (Order 25-93).
Blackleaf	0	1	0	
Second White Specks	0	1	0	
MIDFORK				
Charles C	3	0	0	Statewide. Also a single 80-acre Charles Formation spacing unit (Order 46-92). SWD approved EPA-86.
Nisku	1	0	0	
Madison/Nisku	1	0	0	
MINERAL BENCH (Non-productive)				Statewide. SWD approved EPA-86
MINERS COULEE				
Bow Island	0	12	3	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	
Bow Island/Sawtooth	0	1	0	
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). Waterflood initiated 12-1-73 (Order 23-73). SWD approved EPA-92.
Silurian-Ordovician	16	0	6	
MONDAK, WEST				
Duperow	1	0	0	320-acre spacing units for Silurian and Ordovician pools; Spacing units to consist of either N 1/2 and S 1/2, or E 1/2 and W 1/2; well location to be no closer than 660' to unit boundary or closer than 1,650' to any well drilling to or producing from same pool (Order 42-77). 320-acre spacing units for interval below Last Charles Salt and above the Devonian; units to consist of either N 1/2 and S 1/2, or E 1/2 and W 1/2 of the section; well location to be no closer than 660' from a quarter section line or section line and no closer than 1,650' to any well drilling to or producing from same pool (Order 23-77). Madison Formation delineation (Order 51-79 as amended by Order 95-83). SWD approved EPA-86.
Madison	18	0	1	
Silurian/Ordovician	8	0	1	
Madison/Ordovician	1	0	0	
MOSSER DOME				
Mosser Sand	23	0	1	Spacing waived. Future development requires administrative approval (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	
MUD CREEK				
Amsden				640-acre spacing units; wells located no closer than 1320' to section lines (Order 9-63). Amended to allow production from two wells in Sec. 12,T6N,R17E (Order 49-92).
MUSSELSHELL				
Tyler	1	0	1	Statewide.

OIL AND GAS FIELDS

Field, Formation	Oil	Gas	Shut-In	Spacing Regulations, Field Rules, and Remarks
MUSTANG				
Bakken	0	0	0	Statewide.
Red River	2	0	0	
Madison	1	0	0	
NEISER CREEK				
Red River	1	0	0	Single 160-acre Red River spacing unit (Order 78-82).
NIELSEN COULEE				
Madison	2	0	0	Statewide.
NINEMILE				
Nisku	2	0	0	Statewide.
NOHLY				
Nisku	4	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). SWD approved EPA-92.
Red River	1	0	0	
Nisku/Madison	1	0	0	
NOHLY (RATCLIFFE/MISSION CANYON)				
Ratcliffe	2	0	0	160-acre spacing units, wells located no closer than 660' to the unit boundary; commingling approved (Order 70-92).
Mission Canyon	2	0	0	
Madison	3	0	0	
NORTH FORK				
Madison	4	0	0	Statewide.
O'BRIENS COULEE				
Blackleaf	0	1	1	Statewide.
Bow Island	0	11	4	
Bow Island-Spike	0	2	0	
Second White Specks	0	1	0	
OLD SHELBY AND AREA				
Bow Island	0	4	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, 53-89 and 29-92). Amended to allow two wells per zone in each spacing unit in designated sections (Orders 39-90 and 48-92). 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	85	1	
OLJE				
Mission Canyon	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 with the permitted well for each spacing unit to be located no closer than 660' from the spacing unit boundary (Order 73-80).
OTIS CREEK				
Red River	1	0	0	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 with new spacing units to consist of quarter sections; well location no closer than 660' from spacing unit boundary or 1,650' from producing well with 150' tolerance (Order 73-81).
OUTLET				
McGowan	1	0	0	Delineated for production from Madison Group with 160-acre spacing units and a 660' setback from spacing unit boundaries (Order 11-94).

OIL AND GAS FIELDS

Field, Formation	Oil	Gas	Shut-In	Spacing Regulations, Field Rules, and Remarks
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	0	
Gunton	1	0	0	
OUTLOOK, SOUTH (Non-productive)				160-acre spacing for Siluro-Devonian; permitted wells in either SW 1/4 or NE 1/4 of quarter section; 175' topographic tolerance (Order 19-59A). Red River and Siluro-Devonian commingling permitted in single spacing unit (Order 45-64).
OUTLOOK, WEST Winnipegosis	1	0	0	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).
OXBOW Red River	1	0	0	320-acre spacing units consisting of two contiguous governmental quarter sections which may be in one or two governmental sections lying east-west or north-south at operator's option; location to be no closer than 660' to the unit boundary or closer than 1,650' to a well producing from same pool (formations below 11,000) (Order 7-78). Field enlargement (Order 137-80).
OXBOW II Nisku	1	0	0	320-acre spacing units for Red River consisting of two contiguous quarter sections which may cross section lines; wells located no closer than 660' to spacing unit boundaries (Order 50-84).
Red River	1	0	0	
PALOMINO Nisku	5	0	0	Statewide. SWD approved EPA-86, 93.
PARK CITY Virgelle	0	0	1	Statewide.
PELICAN (Non-productive)				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	173	0	31	Field originally delineated with 80-acre spacing units consisting of E 1/2 and W 1/2 of quarter section; wells located in center of SE 1/4 and NW 1/4 of quarter sections with 150' topographic tolerance (Order 15-61). 80-acre spacing units on west side and 160-acre spacing units on east side of pool wells to be located in SE 1/4 and NW 1/4 of each quarter section (80 acres) and in SE 1/4 of each quarter section on 160-acre spacing (Orders 1-56, 8-56, 15-61, 20-62, 4-63, 7-63). Spacing rules waived within unitized area (Order 24-68). Commingling approved (Order 59-62). Waterflood for Siluro-Ordovician 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: wells with projected depths greater than 6,000' to be located no closer than 660' to the unit boundary; those with projected depths less than 6,000' to be located no closer than 330' to the unit boundary; formations between surface and top Rierdon included (Order 48-77).
PHANTOM, WEST Sunburst	0	2	0	Delineated for Sunburst Sandstone gas production with one well per spacing unit to be located no closer than 660' to the exterior boundaries of the three designated spacing units (Order 65-78).
PINE Madison	1	0	3	Statewide spacing rules are waived within the Pine Unit. 80-acre spacing units outside of unit area; well location in NW 1/4 and SE 1/4 of quarter section; 150' topographic tolerance (Order 37-62). A waterflood program for the south area was started in 1959. A waterflood of the north area was approved in 1967 (Orders 13-68, 1-60, 8-62, 32-67). Brine and CO ₂ injection test (Order 70-83). Enhanced recovery approved EPA-85, 90.
Silurian-Ordovician	100	0	33	
POLICE COULEE Bow Island	0	7	2	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). Field enlargements (Orders 24-77, 20-79, and 46-79).

OIL AND GAS FIELDS

Field, Formation	Oil	Gas	Shut-In	Spacing Regulations, Field Rules, and Remarks
PONDERA				
Madison	354	0	67	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). SWD approved EPA-86, 87, 88, 89, and 90.
Sun River	14	0	0	
PONDERA COULEE				
Madison	3	0	1	330' from legal subdivision lines or upon a 10-acre spacing pattern; 75' topographic tolerance (Order 5-62).
Sun River	5	0	0	
POPLAR, EAST				
Heath	1	0	1	Statewide spacing; field delineated (Order 7-55). Redelineation of field (Order 25-76). Horizontal well exception and removal of production restrictions for horizontal wells (Order 67-93). Unitized in 1955 (Order 7-55). SWD approved EPA-86, 87.
Madison	46	0	18	
Nisku	0	0	1	
POPLAR, NORTHWEST AND AREA				
Charles	27	0	3	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 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). SWD approved EPA-85, 86.
POTTER GAS FIELD (Non-productive)				Single section delineated for production of gas from all formations between the surface and the top of the Jurassic Rierdon Formation with one designated well for the spacing unit (Order 8-93).
PRAIRIE DELL				
Bow Island-Dakota-Sunburst-Swift	0	105	5	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 from the same zone and 660' to the spacing unit boundary (Order 21-88, 3-91, 35-92, 48-92 and 51-92). Two 160-acre spacing units (Order 3-89).
PRAIRIE DELL, WEST				
Swift	0	1	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).
Blackleaf	0	3	0	
PRAIRIE ELK (Non-productive)				Statewide.
PRICHARD CREEK				
Bow Island	0	0	1	Sunburst/Swift spacing rules waived with locations subject to administrative approval. Unitized for Sunburst waterflood (Order 7-73).
Sunburst	1	0	5	
Swift	1	0	0	
PRONGHORN				
Red River	1	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	9	0	0	Statewide, except for single spacing unit consisting of portions of Sections 15 and 16, T23N, R57E for production from all formations between 6,000 to 11,000 feet (Order 2-84 as amended by Order 11-85). Single Mission Canyon Formation spacing unit consisting of E/2 NE/4, Sec. 32 and W/2 NW/4, Sec. 33, T23N, R57E (Order 18-93). SWD approved EPA-90.
Red River-Interlake	6	0	0	
Bakken	1	0	0	

OIL AND GAS FIELDS

Field, Formation	Oil	Gas	Shut-In	Spacing Regulations, Field Rules, and Remarks
RABBIT HILLS Sawtooth	3	0	0	Statewide.
RABBIT HILLS, NORTHEAST, AND AREA Sawtooth	11	0	1	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). Allow 4 wells in NW 1/4 Section 24, T34N, R19E (Order 78-92). NE 1/4, Sec. 23 downspaced to 40-acre spacing units (Order 3-93).
RAGGED POINT Tyler	4	0	5	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).
RAINBOW Red River	1	0	0	Single 160-acre Red River spacing unit (Order 69-82).
RAPELJE Eagle-Virgelle-Clagget	0	0	11	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	Rattler Butte (Tyler "A") Unit approved (Order 39-92). Enhanced Recovery approved EPA-93.
RATTLESNAKE BUTTE Amsden	5	0	1	Statewide. SWD approved EPA 86, 87.
Cat Creek	3	0	1	
RATTLESNAKE COULEE Bow Island	0	0	2	Statewide.
Sunburst	0	1	0	
RAYMOND Duperow	1	1	0	320-acre spacing units for Red River, Winnipegosis, Duperow, and Nisku formations. Wells 660' from spacing unit boundary (Order 38-72). Gas Storage (Order 50-78 and amended by Order 60-79). Mississippian pool delineation with 40-acre spacing units, wells no closer than 330' to spacing unit boundary (Order 35-79). Field enlargement for Mississippian pool (Orders 31-80 and 128-80). Field reduction for Nisku pool (Order 135-81). Nisku Formation rules suspended for unit except for 660' setback distance from external unit boundaries (Order 3-86). Authorization to inject Duperow gas into the Nisku Formation (Order 135-81).
Mississippian	3	0	4	
Nisku	2	1	0	
Red River	2	0	0	
Winnipegosis	1	0	0	
REAGAN Madison	50	2	15	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	9	0	1	Statewide. Produced water disposed into the Dakota Formation. (Order 10-A-82) SWD approved EPA-90.
Red River	1	0	1	
RED BANK, SOUTH Red River	1	0	0	Statewide.
RED CREEK Cut Bank-Madison	11	0	8	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.

OIL AND GAS FIELDS

Field, Formation	Oil	Gas	Shut-In	Spacing Regulations, Field Rules, and Remarks
RED FOX Nisku	0	0	1	Field consists of one 160-acre spacing unit for Nisku production which straddles the section line (Order 20-67).
RED ROCK Eagle	0	6	4	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).
Judith River	0	0	3	
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).
REDSTONE Winneposis	0	0	1	160-acre spacing units for Winneposis; wells located no closer than 660' from unit boundary (Order 30-67).
REFUGE Red River	1	0	0	Statewide.
REPEAT Red River	1	0	0	Statewide.
RESERVE AND RESERVE SOUTH Red River	1	0	0	Delineated for Red River, Silurian, and Winneposis 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). SWD approved EPA-85.
Winneposis	1	0	0	
RESERVE II Red River	1	0	0	Single 160-acre spacing unit for Red River (Order 44-87). Single 160-acre spacing unit for Winneposis, Interlake and Gunton (Order 55-88).
Red River/Interlake	1	0	0	
RICHEY AND AREA Charles	1	0	3	Statewide, original 80-acre spacing revoked (Order 11-73).
RICHEY, SOUTHWEST Interlake	2	0	0	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	5	0	1	160-acre Duperow spacing units; wells no closer than 660' to spacing unit boundary with 150' topographic tolerance (Order 18-89). Ridgelawn Duperow Unit approved for secondary recovery (Orders 49-89, 55-89 and 11-90). SWD approved EPA 86. Unit injection approved EPA 90.
Madison	16	0	0	
Red River	3	0	0	
RIDGELAWN, NORTH Ratcliffe/Mission Canyon	1	0	0	Single 640-acre spacing unit (Order 11-92).
Madison				
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	4	1	Statewide.
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	0	Statewide. Rosebud "Tyler B" waterflood unit approved (Order 30-91). Injection, EPA-91.

OIL AND GAS FIELDS

Field, Formation	Oil	Gas	Shut-In	Spacing Regulations, Field Rules, and Remarks
ROYALS Dawson Bay	1	0	0	Statewide.
RUDYARD Eagle Sawtooth	0 2	2 2	0 1	640-acre spacing units consisting of regular sections for Sawtooth gas production; well location in center of NW 1/4 of section with 75' topographic tolerance (Order 2-58). Field boundaries reduced (Order 39-76). Allow two wells per 640-acre spacing unit with a 990' setback from spacing unit boundaries and a minimum of 1320' between wells in the same spacing unit (Order 15-93).
RUNAWAY Madison	0	0	1	Statewide.
RUSH MOUNTAIN Devonian/Ordovician Red River	1 0	0 0	0 1	Statewide. Dual zone completion in discovery well. Commingling of Gunton and Winnipegosis in Hoffelt #2 well approved (Order 17-85). SWD approved EPA-87.
SAGE CREEK Blackleaf Bow Island Second White Specks	0 0 0	3 1 13	0 0 5	640-acre spacing for horizons above the Kootenai, one producing well per section per formation to be located no closer than 990' from section line (Order 38-77). Amended field boundary (Order 86-79). Field enlargement (Orders 33-81, 65-83 and 36-84).
SALT LAKE Nisku Gunton Red River	2 1 2	0 0 0	1 0 0	Four 160-acre spacing units for Red River Formation with production allocation by stipulated agreement (Order 48-89). SWD approved EPA-88.
SALT LAKE, WEST Ratcliffe	1	0	0	Single 160-acre spacing unit for Ratcliffe oil and gas production (Order 47-92).
SANDWICH Swift	0	1	0	320-acre spacing units for production of gas from Swift; wells to be located no closer than 990' to spacing unit boundaries (Order 17-77).
SATURN Ratcliffe	0	0	1	Statewide. SWD approved EPA-88.
SAWTOOTH MOUNTAIN & AREA Eagle Judith River	0 0	31 3	2 3	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).
SECOND CREEK Duperow Red River Mission Canyon	0 3 1	0 0 0	1 0 0	303.1-acre Red River spacing unit (Order 34-78). 160-acre Duperow spacing units; well locations for each unit to be as specified (Order 119-80).
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 Burwash	0 0	2 1	0 0	Statewide.
SHELBY, EAST (Non-productive)				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 AND AREA Eagle Judith River/Eagle	0 0	38 2	41 4	640-acre Eagle spacing units; 990' setback from section line (Order 1-74). 160-acre Eagle spacing units for Section 8, T25N, R17E; wells to be located no closer than 990' from section line, 660' from quarter section line (Order 7-77). Enlarged field boundary with well locations no closer than 660' from quarter section line in enlarged area (Order 4-83). 320-acre Eagle gas spacing units for Sections 19 and 30, T26N, R17E; wells located no closer than 990' to unit boundaries (Order 24-87).
SHOTGUN CREEK Ratcliffe	3	0	0	Statewide.

OIL AND GAS FIELDS

Field, Formation	Oil	Gas	Shut-In	Spacing Regulations, Field Rules, and Remarks
SIDNEY				
Madison	13	0	2	160-acre spacing units for Madison group with one well per spacing unit to be located no closer than 660' from unit boundary and no closer than 1,650' to well producing from the same formation (Order 5-79). Field enlargement (Order 99-80). SWD approved EPA-86.
Red River	2	0	0	
SIDNEY, EAST				
Madison	8	0	0	Statewide.
SINGLETREE				
Nisku	1	0	0	Single spacing unit for production from Winnipegosis (Order 78-84). Amended to include Nisku Formation (Order 33-92).
Red River	0	0	1	
Winnipegosis	0	0	1	
SIOUX PASS				
Red River	4	0	0	320-acre spacing units for Interlake and Red River consisting of two adjacent governmental quarter sections lying north-south or east-west at operator's option; permitted well no closer than 660' from unit boundary; 160-acre spacing units for Mission Canyon with well no closer than 660' from unit boundary; commingling of Interlake and Red River production authorized (Orders 10-75, 15-77). Amended field boundary (Order 15-77). Field reduction (Order 89-81). SWD approved EPA-86.
Interlake/Red River	3	0	0	
SIOUX PASS, EAST				
Red River	0	0	1	Statewide.
SIOUX PASS, MIDDLE				
Red River	5	0	0	320-acre spacing units for Red River Formation to consist of two contiguous governmental quarter sections at operator's option; location to be no closer than 660' from exterior boundary of unit and no closer than 1,650' from well producing from same formation; commingling permissible with Administrative approval (Order 55-76). Exception location (Order 39-81).
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). Two 320-acre spacing units for Duperow (Orders 107-80, 74-82). SWD approved EPA-90.
Ratcliffe	2	0	0	
Red River	9	0	0	
Red River/Nisku	1	0	0	
Madison/Ordovician	1	0	0	
SIOUX PASS, SOUTH				
Red River	2	0	0	Statewide.
SIXSHOOTER DOME				
Eagle	0	1	1	160-acre spacing units for gas production at a depth from 969' to 1500'; wells no closer than 660' to spacing unit boundary with 75' topographic tolerance (Order 18-92).
Lakota	0	3	1	
SNOOSE COULEE				
Bow Island	0	8	1	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).
Sunburst	1	0	0	
SNYDER				
Tensleep	3	0	1	10-acre spacing units with center 5-spot permitted; 150' topographic tolerance (Order 45-62).
SOAP CREEK				
Madison-Amsden	22	0	3	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).
Tensleep	9	0	1	
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	1	0	0	Statewide. SWD approved EPA-87.
Red River	2	0	0	
SPRING COULEE				
Sawtooth	0	0	2	Statewide.
2nd White Specks	0	0	1	
SPRING LAKE				
Bakken	3	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).
Red River	1	0		

OIL AND GAS FIELDS

Field, Formation	Oil	Gas	Shut-In	Spacing Regulations, Field Rules, and Remarks
SPRING LAKE, WEST				
Bakken	1	0	0	Single 160-acre Duperow spacing unit (Order 42-82).
STAMPEDE				
Bakken	1	0	0	320-acre specified spacing units for the Red River Formation; 160-acre spacing units for the Duperow Formation with well location to be no closer than 660' from a spacing unit boundary line (Order 19-82).
Red River	1	0	0	
STENSVAAD				
Tyler	7	0	8	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). Field enlarged (Order 22-59). Waterflood area enlarged (Order 9-67). SWD approved EPA-86.
Tyler/Stensvad	1	0	0	
STRAWBERRY CREEK AREA				
Bow Island	0	1	0	Statewide.
Burwash	0	1	0	
Sunburst	0	1	1	
STUDHORSE				
Tyler	1	0	4	Statewide.
SUMATRA				
Amsden-Tyler	60	0	39	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 9-79 and 32-80). Seven waterflood units using Madison water (Orders 48-67, 6-69, 19-69, 23-69, 5-75, 21-78, and 43-80). Convert 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. Enhanced recovery approved. (EPA-91, 92)
Heath	1	0	0	
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).
Red River	1	0	0	
SUNNYHILL, WEST				
Madison/Ordovician	1	0	0	Single 320-acre spacing unit consisting of S/2, Sec. 14, T31N, R57E, with designated well (Order 55-93). SWD approved EPA-85.
SWANSON CREEK				
Carlile	0	1	0	320-acre spacing units (Order 36-75), amended to enlarge field and provide that spacing units may run north-south or east-west with permitted wells to be no closer than 990' to section or quarter section lines (Order 11-78). Field boundaries extended by Orders 32-78, 92-79, 66-80 and 55-81. All previous Swanson Creek orders are amended to allow one additional well in each existing 320-acre spacing unit that shall be drilled in a manner that there be no more than one well per quarter section and located no closer than 660' to the quarter section boundaries (Order 28-82).
Greenhorn-Phillips	0	61	0	
SWEETGRASS				
Sunburst	0	2	0	Single Sunburst gas spacing unit (Order 121-82).
TARGET				
Madison	3	0	7	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	0	0	1	
Nisku	1	0	0	
THIRTY MILE				
Sawtooth	1	0	1	Statewide.
THREE BUTTES				
Red River	2	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).
Bakken	1	0	0	
THREE MILE				
Eagle	0	2	4	Statewide.
TIBER				
Bow Island	0	1	2	Two wells per each gas producing horizon per section, from the surface down 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).

OIL AND GAS FIELDS

Field, Formation	Oil	Gas	Shut-In	Spacing Regulations, Field Rules, and Remarks
TIGER RIDGE & AREA				
Eagle	0	294	107	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). SWD approved EPA-87.
Judith River	0	1	3	
TIGER RIDGE, NORTH				
Eagle	0	1	0	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 (Non-productive)				320-acre Sunburst Sandstone spacing units consisting of two contiguous quarter sections oriented either North-South or East West; locations no closer than 660' to internal spacing unit boundaries, or 990' to external boundaries (Order 24-75).
TIMBER CREEK, WEST				
Sunburst	0	1	0	Single 640-acre spacing unit for Sunburst Sandstone production in Sec. 6, T35N, R1E (Order 91-76).
TINDER BOX				
Tyler	1	0	0	Statewide.
TIPPY BUTTES				
Tyler	0	0	1	Statewide. Water injection into lower Tyler Formation (Order 57-82).
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	2	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). SWD approved EPA 86, 92.
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). 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).
TWO FORKS				
Eagle	0	0	1	Statewide.
Judith River	0	0	1	
TWO WATERS				
Bakken	3	0	0	Statewide.
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	22	0	5	
VALIER				
Blackleaf	0	0	2	320-acre spacing units for production of gas from all formations from the top of the Kootenai Formation to the surface; one well per spacing unit per formation, wells no closer than 660' to spacing unit boundaries and 990' to field boundaries (Order 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; wells to be located no closer than 660' to the spacing unit boundaries (Order 61-82).
Green Horn	0	0	1	
VAUX				
Interlake	1	0	0	Single spacing unit with commingling approved for Madison group (Order 63-83). Single spacing unit for Mississippian Bakken formation (Order 20-86). Single 160-acre spacing unit for Mission Canyon Formation (Order 25-87).
Madison	19	0	1	
Red River	2	0	0	
Stonewall	1	0	0	
Bakken	2	0	0	

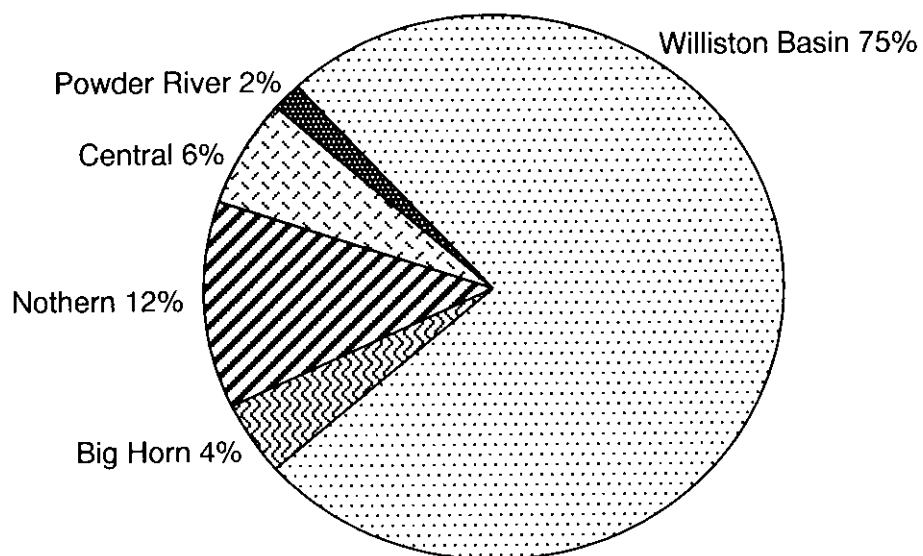
OIL AND GAS FIELDS

Field, Formation	Oil	Gas	Shut-In	Spacing Regulations, Field Rules, and Remarks
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). SWD approved EPA-87.
Nisku	4	0	1	
WAKEA				
Red River	3	0	0	Two 320-acre spacing units (Order 84-83). Field enlarged; wells located no closer than 660' to spacing unit boundaries. Delineation includes Red River, Nisku, Duperow, Winnipegosis, Interlake and Gunton formations (Order 34-84). Commingling of production from Nisku and Duperow formations approved for one well (Order 59-91).
Winnipegosis	2	0	0	
Nisku	2	0	0	
Nisku/Duperow	1	0	0	
WEED CREEK				
Amsden	2	0	0	Statewide.
WEST BUTTE				
Bow Island	0	3	1	Sawtooth-Madison gas commingled, unitized; no well closer than 330' from unit boundary (Order 5-72).
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	3	0	1	Statewide.
WHITEWATER FIELD				
Bowdoin/Greenhorn/Phillips	0	129	2	640-acre spacing units with 2 wells per formation (Orders 41-82 and 14-89). Amend to allow 4 wells per formation per spacing unit no closer than 660' to spacing unit boundaries, 1,320' between wells producing from the same formation with 150' of tolerance for geologic or topographic reasons (Order 15-89). Pilot infill drilling program approved for a portion of the field with up to 8 wells per spacing unit with between-well distance reduced to 990' (Order 15-91). Expand pilot infill drilling program (Order 6-92).
Carlile	0	99	2	
Carlile/Greenhorn	0	19	0	
WHITEWATER, EAST				
Bowdoin-Greenhorn-Phillips	0	15	0	640-acre spacing units with two wells allowed per formation to be located anywhere within the spacing unit but not closer than 990' to spacing unit boundary (Order 100-83). Amend to allow 4 wells per formation per spacing unit no closer than 1,320' to another well producing from the same formation with 150' tolerance for geologic or topographic reasons (Order 65-89). Pilot infill drilling program in Section 31, T33N, R34E allowing up to 8 wells with 990' between wells, 150' tolerance and 660' setbacks (Order 7-92).
Carlile	0	8	0	
WHITLASH				
Bow Island-Dakota-Spike	5	29	6	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	40	8	42	
Amsden/Tyler	6	0	4	
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	4	8	
WILLIAMS				
Bow Island	0	16	2	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	1	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	1	
Swift	0	1	0	
WILLOW RIDGE, SOUTH				
Sunburst	0	1	2	Statewide.

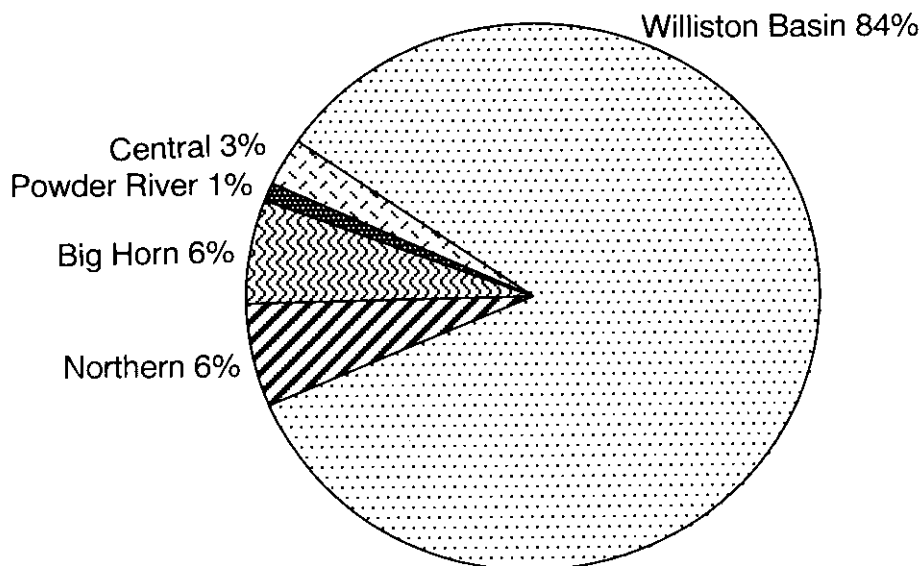
OIL AND GAS FIELDS

Field, Formation	Oil	Gas	Shut-In	Spacing Regulations, Field Rules, and Remarks
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	2	0	1	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 to be designated as W 1/2 and E 1/2 of quarter-quarter section, no closer than 120' to the boundary of a spacing unit (Order 57-76). Certain lands bound by Order 57-76 vacated by Order 41-77. A waterflood operation commenced October 1, 1977 into Tyler Formation. (Order 41-77)
WOLF SPRINGS & AREA Amsden	6	0	1	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	2	0	7	80-acre spacing units for Amsden comprised of W 1/2 or E 1/2 of quarter section; wells located center of NW 1/4 or SE 1/4 of quarter section with 150' topographic tolerance (Order 57-84). Field enlargement (Order 8-85). South Wolf Springs Amsden Unit approved (Order 23-92).
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).
Charles/Interlake	1	0	0	
Interlake/Stoney Mountain	0	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	6	0	1	80-acre spacing units for Muddy Sandstone production consisting of N 1/2 and S 1/2 of quarter section with locations in NW 1/4 and SE 1/4 of each quarter section with 200' tolerance (Order 27-69). Field area reduction (Order 69-76). SWD approved EPA-87, 89.
YATES Ratcliffe	0	0	0	320-acre spacing units; well locations as specified for the Duperow and Red River formations that may be dually completed (Order 92-81). Single 320-acre spacing unit for Ratcliffe/Mission Canyon formations (Order 22-86).

1993 Oil Production by Region
(17,395,561 Barrels)



1993 Oil Reserves by Region
(139 Million Barrels)



SUMMARY OF PRODUCING OIL F

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	M BBLs
											PRIM.	SECD.		
1	Anvil	Nisku	Roosevelt	1981	10900	40.0	1.50	14	17	34	53	0	320	2600
2	Anvil	Ratcliffe	Roosevelt	1982	8990	36.0	1.35	22	11	50	10	0	320	2225
3	Anvil	Red River	Roosevelt	1978	12600	47.0	1.63	26	14	32	11	0	2560	30159
4	Ash Creek	Shannon	Big Horn	1952	4500	34.0	1.00	14	22	42	26	5	200	2772
5	Bainville	Ratcliffe/Nisku	Roosevelt	1988	8630	38.0	0.00	16	0	0	0	0	320	0
6	Bainville	Siluro/Ord.	Roosevelt	1969	12402	44.0	0.00	8	25	31	0	0	1920	0
7	Bainville II	Red River	Roosevelt	1981	12700	42.0	1.20	40	10	35	5	0	960	16137
8	Bainville, North	Nisku	Roosevelt	1992	10832	43.4	0.00	8	0	0	0	0	160	0
9	Bainville, North	Ratcliffe	Roosevelt	1980	8800	30.0	0.00	13	14	52	0	0	480	0
10	Bainville, North	Red River/Interlake	Roosevelt	1979	12400	43.0	1.55	40	9	32	6	0	2240	27446
11	Bainville, North	Winnipegosis	Roosevelt	1979	11400	44.0	1.60	35	7	20	14	0	960	9123
12	Bainville, West	Red River	Roosevelt	1978	8500	34.0	1.50	12	6	45	12	0	960	1966
13	Beanblossom	Lower Tyler	Garfield	1985	4562	32.0	1.05	22	21	35	5	0	480	10650
14	Bears Den	Swift	Liberty	1924	2300	39.0	1.08	20	9	35	27	0	360	3026
15	Bell Creek Total	Muddy	Powder River	1967	4400	36.0	1.11	10	26	23	29	28	16000	223878
16	Benrud, East	Nisku	Roosevelt	1962	7500	46.0	1.37	22	15	30	38	0	640	8372
17	Benrud, Northeast	Nisku	Roosevelt	1964	7400	46.0	1.40	23	16	30	46	0	160	2284
18	Big Muddy Creek	Red River	Roosevelt	1975	11900	48.0	1.72	11	14	36	22	0	1280	5690
19	Big Wall	Amsden	Musselshell	1953	2500	19.0	1.01	17	16	35	28	0	320	4346
20	Big Wall	Lower Tyler Unit	Musselshell	1948	3000	31.0	1.02	22	17	40	34	1	1220	20822
21	Big Wall	Upper Tyler Unit	Musselshell	1948	3000	30.8	1.03	16	17	32	3	0	480	6687
22	Blackfoot	Devonian/Madison	Glacier	1957	3500	30.0	1.10	15	15	35	20	22	360	3713
23	Bloomfield	Dawson Bay	Dawson	1984	10500	41.0	1.38	15	2	25	42	0	320	405
24	Bloomfield	Interlake/Red River	Dawson	1983	10650	43.0	1.32	13	4	0	20	0	640	1956
25	Bowes Sawtooth Unit	Sawtooth	Blaine	1949	3300	19.0	1.02	32	12	31	15	0	3760	75774
26	Brady	Sunburst	Pondera	1942	1500	34.0	1.01	10	12	30	5	0	680	4387
27	Breed Creek	Tyler	Roosevelt	1976	4900	32.0	1.15	20	15	37	35	0	480	6120
28	Brorson	Madison	Richland	1954	9600	32.0	1.40	40	5	40	15	0	1760	11703
29	Brorson	Red River	Richland	1968	12600	48.0	1.70	20	10	35	45	0	960	5695
30	Brorson, South	Bakken/Madison	Richland	1990	10400	42.0	0.00	24	0	4	0	0	480	0
31	Brorson, South	Madison	Richland	1978	9000	42.0	0.00	52	0	0	0	0	480	0
32	Brorson, South	Red River	Richland	1968	12600	48.0	1.70	20	12	30	6	0	960	7360
33	Brush Lake	Red River	Sheridan	1969	11400	40.0	1.50	30	14	35	9	0	2240	31628
34	Burget, East	Madison	Roosevelt	1981	9000	0.0	0.00	36	0	0	0	0	640	0
35	Cabin Creek Unit 1	Siluro/Ord.	Fallon	1953	9000	33.0	1.20	50	13	30	16	11	15,360	451826
36	Cabin Creek Unit 2	Madison	Fallon	1956	7300	33.0	1.13	25	11	30	51	0	2260	29868
37	Canal	Madison	Richland	1977	9200	33.0	1.30	47	2	41	28	0	640	2118
38	Canal	Red River	Richland	1970	12700	47.0	2.07	58	8	40	23	0	320	3339
39	Carlyle	Red River	Wibaux	1978	10700	37.0	1.30	12	12	27	9	0	640	4015
40	Cat Creek East Dome	Ellis	Petroleum	1920	1200	52.0	1.10	6	22	40	33	8	880	4915
41	Cat Creek Mosby Unit	Swift	Petroleum	1945	1700	52.0	1.10	25	18	40	11	1	880	16757
42	Cat Creek West Dome	1st and 2nd Cat	Petroleum	1920	1100	52.0	1.10	51	21	19	17	5	1480	90551
43	Cattails	Ratcliffe	Richland	1987	8975	31.6	0.00	0	0	0	0	0	1120	0
44	Cattails, South	Ratcliffe	Richland	1991	9445	0.0	0.00	0	0	0	0	0	640	0
45	Charlie Creek	Duperow/Nisku	Richland	1976	9900	42.0	1.60	12	6	35	52	0	640	1452
46	Charlie Creek, East	Red River	Richland	1980	11900	45.0	0.00	27	0	0	0	0	960	0
47	Clear Lake	Madison	Sheridan	1978	7600	33.0	1.15	10	5	30	37	0	960	2267
48	Clear Lake	Nisku	Sheridan	1979	9000	43.0	1.53	31	11	27	3	0	320	4039
49	Clear Lake	Red River	Sheridan	1977	11200	42.0	1.65	32	18	35	7	0	2240	39432
50	Clear Lake, South	Red River	Sheridan	1984	11500	38.0	1.39	10	23	21	4	0	640	6490
51	Colored Canyon	Red River	Sheridan	1978	11300	40.0	1.40	18	13	28	5	0	1920	17926
52	Comertown	Duperow/Nisku	Sheridan	1983	10672	36.0	1.30	13	17	39	12	0	640	5149
53	Comertown	Ratcliffe	Sheridan	1981	6807	30.0	1.20	16	26	0	1	0	480	12909
54	Comertown	Red River	Sheridan	1980	10500	30.0	1.30	19	10	38	37	0	800	5624
55	Comertown, South	Red River	Sheridan	1984	11000	38.0	1.08	17	12	50	5	0	960	7034
56	Cottonwood	Ratcliffe	Richland	1992	8805	0.0	0.00	12	0	0	0	0	320	0
57	Cottonwood, East	Ratcliffe	Richland	1990	8842	31.5	0.00	36	0	46	0	0	160	0
58	Cow Creek, East	Kibby	McCone	1971	6300	35.0	1.05	15	15	0	11	0	1600	26599
59	Crane	Devonian	Richland	1979	11900	47.0	1.65	20	12	35	22	0	960	7041
60	Crane	Siluro/Ord.	Richland	1979	12700	44.4	1.50	8	12	18	31	0	960	3909
61	Cuption	Red River	Fallon	1955	9600	38.0	1.25	40	12	16	5	0	2240	56054
62	Cut Bank	Total Production	Glacier/Toole	1932	2900	31.0	1.09	18	15	35	22	6	49000	612063
63	Dagmar	Red River	Sheridan	1976	11300	37.0	1.65	22	16	35	5	0	1280	13770
64	Dagmar, North	Madison	Sheridan	1983	7952	0.0	0.00	24	0	0	0	0	160	0
65	Deer Creek	Charles	Dawson	1990	7870	30.2	1.00	10	13	50	9	0	480	2420
66	Diamond Point	Red River	Roosevelt	1976	11900	47.0	0.00	26	0	0	0	0	640	0

OF PRODUCING OIL FIELDS—1993

% WATER	RECOVERY FACTOR %		PRO-DUCTIVE AREA ACRES	OOIP		ULTIMATE RECOVERY					1993 PRODUCTION		CUMUL. PROD. 1-94 (M BBLs)	RE-SERVES (M BBLs)	LINE NO.
	PRIM.	SECND.		M BBLs	BBLs/AC.	PRIM. (M BBLs)	SECOND. (M BBLs)	TOTAL (M BBLs)	BBLs/ ACRE	BBLs/ ACRE FT.	BBLs	BOPD			
34	53	0	320	2600	8125	1380	0	1380	4313	308	50602	139	1012	368	1
50	10	0	320	2225	6953	230	0	230	719	33	11107	30	205	25	2
32	11	0	2560	30159	11780	3380	0	3380	1320	51	78111	214	2978	402	3
42	26	5	200	2772	13860	710	180	890	4450	318	5239	14	854	36	4
0	0	0	320	0	0	0	0	0	0	0	25806	71	63	86	5
31	0	0	1920	0	0	0	0	0	0	0	27902	76	522	195	6
35	5	0	960	16137	16809	830	0	830	865	22	33699	92	606	224	7
0	0	0	160	0	0	0	0	0	0	0	42902	118	80	165	8
52	0	0	480	0	0	0	0	0	0	0	49160	135	182	323	9
32	6	0	2240	27446	12252	1520	0	1520	679	17	102763	282	1012	508	10
20	14	0	960	9123	9503	1250	0	1250	1302	37	59922	164	819	431	11
45	12	0	960	1966	2047	240	0	240	250	21	5645	15	225	15	12
35	5	0	480	10650	22187	550	0	550	1146	52	25916	71	436	114	13
35	27	0	360	3026	8405	820	0	820	2278	114	29379	80	576	244	14
23	29	28	16000	223878	13992	64870	67650	132520	8283	828	253780	695	131764	756	15
30	38	0	640	8372	13081	3210	0	3210	5016	228	25785	71	2893	317	16
30	46	0	160	2284	14275	1040	0	1040	6500	283	5384	15	1007	33	17
36	22	0	1280	5690	4445	1250	0	1250	977	89	9053	25	1234	16	18
35	28	0	320	4346	13581	1220	0	1220	3813	224	30715	84	1106	114	19
40	34	1	1220	20822	17067	7020	230	7250	5943	270	35996	99	6809	441	20
32	3	0	480	6687	13931	190	0	190	396	25	11789	32	84	106	21
35	20	22	360	3713	10313	750	1100	1850	5139	343	34568	95	1640	210	22
25	42	0	320	405	1265	170	0	170	531	35	4705	13	166	4	23
0	20	0	640	1956	3056	400	0	400	625	48	13841	38	367	33	24
31	15	0	3760	75774	20152	11130	0	11130	2960	93	149285	409	10262	868	25
30	5	0	680	4387	6451	220	0	220	324	32	6360	17	206	14	26
37	35	0	480	6120	12750	2170	0	2170	4521	226	81466	223	1522	648	27
40	15	0	1760	11703	6649	1770	0	1770	1006	25	58362	160	1432	338	28
35	45	0	960	5695	5932	2560	0	2560	2667	133	32635	89	2430	130	29
4	0	0	480	0	0	0	0	0	0	0	58887	161	146	190	30
0	0	0	480	0	0	0	0	0	0	0	30410	83	162	208	31
30	6	0	960	7360	7666	430	0	430	448	22	6869	19	418	12	32
35	9	0	2240	31628	14119	2940	0	2940	1313	44	40903	112	2782	158	33
0	0	0	640	0	0	0	0	0	0	0	14359	39	217	73	34
30	16	11	15,360	451826	29415	72240	25600	97840	6370	127	1348811	3695	81777	16063	35
30	51	0	2260	29868	13215	15210	0	15210	6730	269	33258	91	14927	283	36
41	28	0	640	2118	3309	590	0	590	922	20	18421	50	510	80	37
40	23	0	320	3339	10434	760	0	760	2375	41	12034	33	685	75	38
27	9	0	640	4015	6273	360	0	360	563	47	7000	19	315	45	39
40	33	8	880	4915	5585	1620	200	1820	2068	345	6269	17	1777	43	40
40	11	1	880	16757	19042	1910	100	2010	2284	91	5779	16	1973	37	41
19	17	5	1480	90551	61183	15300	3760	19060	12878	253	33932	93	18697	363	42
0	0	0	1120	0	0	0	0	0	0	0	68081	187	635	281	43
0	0	0	640	0	0	0	0	0	0	0	31411	86	102	152	44
35	52	0	640	1452	2268	760	0	760	1188	99	8828	24	731	29	45
0	0	0	960	0	0	0	0	0	0	0	61371	168	522	391	46
30	37	0	960	2267	2361	830	0	830	865	87	39236	107	615	215	47
27	3	0	320	4039	12621	120	0	120	375	12	4073	11	103	17	48
35	7	0	2240	39432	17603	2930	0	2930	1308	41	84656	232	2498	432	49
21	4	0	640	6490	10140	240	0	240	375	38	9249	25	186	54	50
28	5	0	1920	17926	9336	850	0	850	443	25	10388	28	836	14	51
39	12	0	640	5149	8045	620	0	620	969	75	20819	57	547	73	52
0	1	0	480	12909	26893	160	0	160	333	21	7765	21	148	12	53
38	37	0	800	5624	7030	2090	0	2090	2613	138	67024	184	1750	340	54
50	5	0	960	7034	7327	360	0	360	375	22	21921	60	261	99	55
0	0	0	320	0	0	0	0	0	0	0	38353	105	58	138	56
46	0	0	160	0	0	0	0	0	0	0	11840	32	48	63	57
0	11	0	1600	26599	16624	2880	0	2880	1800	120	36180	99	2566	314	58
35	22	0	960	7041	7334	1550	0	1550	1615	81	32401	89	1398	152	59
18	31	0	960	3909	4071	1210	0	1210	1260	158	74249	203	985	225	60
16	5	0	2240	56054	25024	2870	0	2870	1281	32	56682	155	2453	417	61
35	22	6	49000	612063	12491	132060	34440	166500	3398	189	641074	1756	164046	2454	62
35	5	0	1280	13770	10757	660	0	660	516	23	14803	41	599	61	63
0	0	0	160	0	0	0	0	0	0	0	3459	9	49	14	64
50	9	0	480	2420	5041	220	0	220	458	46	19846	54	43	177	65
0	0	0	640	0	0	0	0	0	0	0	65639	180	920	207	66

SUMMARY OF PRO

LINE NO.	PRODUCING FIELD	FORMATION	COUNTY	YEAR OF DISCOVERY	DEPTH	GRAVITY ° API	F.V.F.	NET PAY FT.	PORO-SITY (%)	% WATER
67	Divide	Mission Canyon/Rat.	Sheridan	1979	7900	33.0	1.35	25	7	42
68	Divide	Red River	Sheridan	1987	11398	0.0	0.00	0	0	0
69	Dooley	Ratcliffe	Sheridan	1987	6451	28.0	0.00	0	0	0
70	Dutch John Coulee	Sunburst	Toole	1985	2040	48.0	1.20	12	21	30
71	Dwyer	Red River	Sheridan	1982	11552	35.0	0.00	0	0	0
72	Dwyer Non Unit	Ratcliffe	Sheridan	1960	8000	0.0	0.00	0	0	0
73	Dwyer Unit	Charles	Sheridan	1960	8000	37.0	1.32	38	11	56
74	Eagle	Duperow/Bakken	Richland	1980	10696	40.0	0.00	24	0	0
75	Eagle	Madison	Richland	1977	8900	32.0	1.22	15	9	35
76	Elk Basin	Frontier	Carbon	1915	1400	0.0	0.00	0	0	0
77	Elk Basin	Madison	Carbon	1942	5300	28.0	1.12	224	12	9
78	Elk Basin	Tensleep	Carbon	1942	5000	29.0	1.16	124	11	10
79	Elk Basin, NW	Madison/Tensleep	Carbon	1964	6000	37.0	1.15	27	12	22
80	Enid, North	Red River	Richland	1979	11800	47.0	1.75	8	7	34
81	Fairview	Madison	Richland	1981	9520	34.0	1.60	45	4	51
82	Fairview NW Unit	Red River	Richland	1965	12700	0.0	0.00	0	0	0
83	Fairview Non Unit	Red River	Richland	1965	12700	47.0	1.70	35	11	28
84	Fairview, East	Winnipegosis	Richland	1990	11590	36.8	0.00	7	8	30
85	Fairview, West	Madison	Richland	1980	9200	37.0	0.00	60	3	0
86	Fertile Praise	Red River	Fallon	1952	9300	29.0	1.20	6	14	27
87	Fishhook	Red River	Sheridan	1980	11200	41.0	1.28	10	10	31
88	Flat Coulee Unit	Swift	Liberty	1933	2900	37.0	1.10	18	21	35
89	Flat Lake	Total Prod Ratcliffe	Sheridan	1964	6500	33.0	1.26	14	15	45
90	Flat Lake, East	Red River	Sheridan	1984	6523	28.0	0.00	0	0	0
91	Flat Lake, South	Ratcliffe	Sheridan	1966	6500	32.0	1.26	9	12	45
92	Fort Gilbert	Madison	Richland	1981	9200	35.0	1.30	30	6	55
93	Fort Gilbert	Red River	Richland	1970	12500	48.0	1.89	42	12	20
94	Four Mile Creek	Red River	Richland	1975	12500	47.0	1.50	35	15	35
95	Four Mile Creek, W.	Red River	Richland	1976	12500	45.0	1.30	15	13	40
96	Fred & George Creek	Sunburst Total Prod.	Toole	1963	2600	39.0	1.20	31	27	30
97	Gas City Total Prod.	Red River/Madison	Dawson	1955	8900	38.0	1.28	25	12	35
98	Girard	Red River	Richland	1985	11850	43.6	0.00	8	0	9
99	Glendive	Siluro/Ord.	Dawson	1952	8900	38.0	1.24	147	8	35
100	Goose Lake	Red River	Sheridan	1980	11063	0.0	0.00	0	0	0
101	Goose Lake	Total Oil Ratcliffe	Sheridan	1962	7000	34.0	1.20	40	16	55
102	Goose Lake, SE	Mission Canyon	Sheridan	1988	7028	29.3	1.07	20	12	70
103	Goose Lake, West	Red River	Sheridan	1981	11500	39.0	0.00	29	0	0
104	Gossett	Madison	Richland	1979	9550	31.0	0.00	0	0	0
105	Gossett	Red River	Richland	1983	12331	0.0	0.00	11	0	0
106	Gray Blanket	Tensleep	Big Horn	1991	6115	22.0	1.05	9	18	18
107	Green Coulee	Red River	Sheridan	1981	11100	32.0	1.40	18	15	56
108	Gunsight	Madison	Roosevelt	1980	9550	36.0	0.00	0	0	0
109	Hardscrabble Creek	Red River	Richland	1981	12550	46.0	1.36	7	15	30
110	Hay Creek	Mission Canyon	Richland	1969	9600	39.0	1.15	40	5	0
111	Hay Creek	Siluro/Ord.	Richland	1969	12600	46.0	1.90	53	12	30
112	Hiawatha	Tyler	Musselshell	1967	5000	33.0	1.15	34	12	25
113	High Five	Tyler	Rosebud	1976	5600	33.0	1.15	20	20	0
114	Intake II	Ratcliffe	Richland	1982	9200	32.3	0.00	10	13	43
115	Intake II	Red River	Richland	1981	12400	43.0	1.20	20	13	30
116	Ivanhoe	Morrison	Musselshell	1960	4135	33.0	1.10	11	15	40
117	Ivanhoe	Tyler	Musselshell	1956	4100	33.0	1.08	29	15	20
118	Jim Coulee Unit	Tyler	Musselshell	1971	3700	33.0	1.10	37	15	33
119	Katy Lake	Red River	Sheridan	1984	11523	0.0	0.00	11	0	0
120	Katy Lake, North	Mission Canyon	Sheridan	1981	8056	35.0	1.34	18	18	57
121	Katy Lake, North	Nesson	Sheridan	1981	7798	34.0	1.50	20	12	31
122	Katy Lake, North	Red River	Sheridan	1979	11300	46.0	1.42	19	15	30
123	Keg Coulee Tyler SU	Tyler	Musselshell	1960	4600	33.0	1.00	19	14	32
124	Kelley	Tyler	Musselshell	1966	4400	33.0	1.15	50	13	30
125	Kevin East Nisku Oil	Nisku	Toole	1984	3000	39.0	1.10	7	9	30
126	Kincheloe Ranch, W.	Tyler Non Unit	Rosebud	1980	5344	38.0	0.00	18	0	0
127	Kincheloe Ranch, W.	Tyler Unit	Rosebud	1979	5500	32.1	1.10	8	13	40
128	Lambert	Red River	Richland	1980	12200	44.0	0.00	7	13	40
129	Landslide Butte	Madison/Sun River	Glacier	1967	4700	41.0	0.00	24	0	0
130	Leary	Muddy	Powder River	1969	5800	41.0	1.15	7	17	33
131	Little Beaver Unit	Red River	Fallon	1952	8300	29.0	1.29	37	12	35
132	Little Beaver, East	Red River	Fallon	1954	8300	30.0	1.50	24	13	35
133	Little Wall Creek	Tyler/Stensvad	Musselshell	1970	3700	33.0	1.10	40	15	33

SUMMARY OF PRODUCING OIL FIELDS—1993

F.V.F.	NET PAY FT.	PORO- SITY (%)	% WATER	RECOVERY FACTOR %		PRO- DUCTIVE AREA ACRES	OOIP		ULTIMATE RECOVERY					1993 PRODUCTION		CUMUL. PROD. 1-94 (M BBLs)	RE- SERVES (M BBLs)	LINE NO.
				PRIM.	SECD.		M BBLs	BBLs/AC.	PRIM. (M BBLs)	SECD. (M BBLs)	TOTAL (M BBLs)	BBLs/ ACRE	BBLs/ ACRE FT.	BBLs	BOPD			
1.35	25	7	42	19	0	2240	13066	5833	2450	0	2450	1094	44	66821	183	1890	560	67
0.00	0	0	0	0	0	960	0	0	0	0	0	0	0	44187	121	500	113	68
0.00	0	0	0	0	0	640	0	0	0	0	0	0	0	25686	70	247	71	69
1.20	12	21	30	8	0	200	2281	11405	190	0	190	950	79	6096	17	183	7	70
0.00	0	0	0	0	0	1600	0	0	0	0	0	0	0	67863	186	1412	400	71
0.00	0	0	0	0	0	1440	0	0	0	0	0	0	0	10912	30	534	56	72
1.32	38	11	56	14	5	2960	31996	10809	4460	2700	7160	2419	64	49184	135	6493	667	73
0.00	24	0	0	0	0	320	0	0	0	0	0	0	0	8618	24	143	36	74
1.22	15	9	35	10	0	3040	16963	5579	1620	0	1620	533	36	41986	115	1478	142	75
0.00	0	0	0	0	0	520	0	0	0	0	0	0	0	8498	23	1794	12	76
1.12	224	12	9	3	0	1080	182989	169434	5420	0	5420	5019	22	230703	632	3107	2313	77
1.16	124	11	10	26	0	1400	114941	82100	29910	0	29910	21364	172	326083	893	24241	5669	78
1.15	27	12	22	6	3	2080	35461	17048	2010	300	2310	1111	41	89661	246	2026	284	79
1.75	8	7	34	27	0	960	1573	1638	420	0	420	438	55	21445	59	336	84	80
1.60	45	4	51	13	0	960	4106	4277	550	0	550	573	13	33768	93	520	30	81
0.00	0	0	0	0	0	1920	0	0	0	0	0	0	0	65278	179	515	251	82
1.70	35	11	28	21	0	2880	36432	12650	7830	0	7830	2719	78	36444	100	7765	65	83
0.00	7	8	30	0	0	320	0	0	0	0	0	0	0	8234	23	39	43	84
0.00	60	3	0	0	0	320	0	0	0	0	0	0	0	14374	39	229	60	85
1.20	6	14	27	37	0	640	2537	3964	950	0	950	1484	247	26848	74	768	182	86
1.28	10	10	31	19	0	1280	5353	4182	1030	0	1030	805	81	18051	49	939	91	87
1.10	18	21	35	17	0	640	11090	17328	1860	0	1860	2906	161	79263	217	777	1083	88
1.26	14	15	45	25	0	9600	68270	7111	16940	0	16940	1765	126	179381	491	16008	932	89
0.00	0	0	0	0	0	160	0	0	0	0	0	0	0	11756	32	99	151	90
1.26	9	12	45	31	0	1120	4096	3657	1270	0	1270	1134	126	10599	29	1236	34	91
1.30	30	6	55	8	0	2240	10828	4833	920	0	920	411	14	19829	54	847	73	92
1.89	42	12	20	7	0	1280	21185	16550	1540	0	1540	1203	29	16080	44	1443	97	93
1.50	35	15	35	8	0	320	5648	17650	430	0	430	1344	38	7232	20	393	37	94
1.30	15	13	40	11	0	640	4469	6982	510	0	510	797	53	26704	73	332	178	95
1.20	31	27	30	15	14	1480	56060	37878	8660	4800	13460	9095	293	48733	134	13237	223	96
1.28	25	12	35	27	5	2800	33093	11818	8950	1760	10710	3825	153	77696	213	10197	513	97
0.00	8	0	9	0	0	320	0	0	0	0	0	0	0	16921	46	80	191	98
1.24	147	8	35	12	0	2400	114778	47824	14310	0	14310	5963	41	128738	353	13303	1007	99
0.00	0	0	0	0	0	320	0	0	0	0	0	0	0	30680	84	217	262	100
1.20	40	16	55	5	3	6880	128100	18619	6130	3580	9710	1411	35	101433	278	9114	596	101
1.07	20	12	70	10	0	160	835	5218	80	0	80	500	25	5026	14	45	35	102
0.00	29	0	0	0	0	960	0	0	0	0	0	0	0	16349	45	564	119	103
0.00	0	0	0	0	0	320	0	0	0	0	0	0	0	4136	11	66	12	104
0.00	11	0	0	0	0	640	0	0	0	0	0	0	0	14008	38	231	84	105
1.05	9	18	18	10	0	160	1570	9812	160	0	160	1000	111	41871	115	105	55	106
1.40	18	15	56	5	0	640	4213	6582	210	0	210	328	18	5653	15	189	21	107
0.00	0	0	0	0	0	480	0	0	0	0	0	0	0	21180	58	278	69	108
1.36	7	15	30	5	0	640	2683	4192	140	0	140	219	31	5100	14	128	12	109
1.15	40	5	0	8	0	320	4317	13490	330	0	330	1031	26	6816	19	296	34	110
1.90	53	12	30	7	0	960	17451	18178	1220	0	1220	1271	24	13507	37	1113	107	111
1.15	34	12	25	21	0	400	8257	20642	1710	0	1710	4275	126	12680	35	1619	91	112
1.15	20	20	0	12	0	960	25905	26984	3230	0	3230	3365	168	73337	201	2561	669	113
0.00	10	13	43	0	0	320	0	0	0	0	0	0	0	41673	114	125	111	114
1.20	20	13	30	6	0	960	11296	11766	720	0	720	750	38	2795	8	689	31	115
1.10	11	15	40	5	0	80	559	6987	30	0	30	375	34	2349	6	17	13	116
1.08	29	15	20	31	0	600	14999	24998	4610	0	4610	7683	265	13347	37	4538	72	117
1.10	37	15	33	3	13	1920	50353	26225	1350	2880	4230	2203	60	27549	75	4072	158	118
0.00	11	0	0	0	0	320	0	0	0	0	0	0	0	7798	21	168	35	119
1.34	18	18	57	24	0	800	6453	8066	1530	0	1530	1913	106	56311	154	1268	262	120
1.50	20	12	31	9	0	160	1370	8562	120	0	120	750	38	5302	15	78	42	121
1.42	19	15	30	21	0	1920	20927	10899	4300	0	4300	2240	118	139418	382	3441	859	122
1.00	19	14	32	27	3	1520	21330	14032	5690	550	6240	4105	216	20106	55	6133	107	123
1.15	50	13	30	14	0	240	7367	30695	1030	0	1030	4292	86	3056	8	1020	10	124
1.10	7	9	30	35	0	560	1742	3110	610	0	610	1089	156	42106	115	424	186	125
0.00	18	0	0	0	0	80	0	0	0	0	0	0	0	6231	17	177	50	126
1.10	8	13	40	91	0	200	880	4400	800	0	800	4000	500	21134	58	724	76	127
0.00	7	13	40	0	0	1280	0	0	0	0	0	0	0	16942	46	481	91	128
0.00	24	0	0	0	0	520	0	0	0	0	0	0	0	38830	106	458	187	129
1.15	7	17	33	33	0	400	2151	5377	700	0	700	1750	250	9109	25	651	49	130
1.29	37	12	35	7	23	4960	86087	17356	6350	8850	15200	3065	83	268591	736	11265	3935	131
1.50	24	13	35	41	0	1600	16782	10488	6920	0	6920	4325	180	84109	230	6016	904	132
1.10	40	15	33	18	0	1120	31754	28351	5610	0	5610	5009	125	148246	406	4560	1050	133

SUMMARY OF PRODUCING OIL

LINE NO.	PRODUCING FIELD	FORMATION	COUNTY	YEAR OF DISCOVERY	DEPTH	GRAVITY °API	F.V.F.	NET PAY FT.	POROSITY (%)	% WATER	RECOVERY FACTOR %		PP DUCT ARI ACFT
											PRIM.	SECD.	
134	Lodge Grass	Tensleep	Big Horn	1964	6520	22.0	1.16	15	15	34	6	0	64
135	Lone Butte	Richland	Richland	1987	9146	0.0	0.00	13	0	0	0	0	64
136	Lone Butte	Red River	Richland	1974	12544	45.0	1.70	14	11	30	15	0	98
137	Lonetree Creek	Mission Canyon	Richland	1991	9147	35.1	0.00	0	0	50	0	0	48
138	Lonetree Creek	Red River/Gunton	Richland	1970	12500	47.0	1.86	19	11	30	21	0	320
139	Long Creek, West	Nisku	Roosevelt	1977	7700	39.0	1.25	24	16	20	16	0	32
140	Lookout Butte	Total Production	Fallon	1961	8900	33.0	1.15	15	15	25	29	19	1024
141	Lowell	Red River	Sheridan	1979	11300	35.0	0.00	7	8	45	0	0	96
142	Lustre	Madison	Valley	1982	7200	33.0	1.19	27	16	45	5	0	800
143	Lustre, North	Ratcliffe	Valley	1983	6150	39.0	1.22	43	6	33	1	0	96
144	Mason Lake	Amsden/Cat Creek	Musselshell	1964	4200	47.0	1.10	12	15	43	13	0	104
145	McCabe	Ratcliffe	Roosevelt	1973	8700	37.0	1.50	20	13	40	7	0	48
146	Medicine Lake	Duperow	Sheridan	1980	10300	44.0	0.00	11	0	49	0	0	48
147	Medicine Lake	Siluro/Ord.	Sheridan	1984	11319	43.5	1.55	38	9	35	10	0	160
148	Melstone Total Oil	Tyler	Musselshell	1948	4400	34.0	1.09	25	15	30	27	0	80
149	Midfork	Charles	Valley	1985	7174	0.0	0.00	0	0	0	0	0	64
150	Midfork	Nisku	Valley	1990	7200	45.6	0.00	4	0	0	0	0	16
151	Missouri Breaks	Red River	Roosevelt	1982	12000	45.0	1.74	15	15	30	17	0	32
152	Mona	Red River	Richland	1982	11300	60.0	2.30	18	14	33	7	0	32
153	Monarch Non Unit	Siluro/Ord.	Fallon	1958	8400	0.0	0.00	0	0	0	0	0	192
154	Monarch Unit	Siluro/Ord.	Fallon	1958	8400	32.0	1.00	31	7	35	3	4	272
155	Mondak West	Devonian	Richland	1979	10600	41.4	1.50	8	10	25	31	0	32
156	Mondak West	Madison	Richland	1976	9200	30.0	1.30	100	4	60	5	0	1088
157	Mondak West	Siluro/Ord.	Richland	1976	12200	48.0	1.64	45	10	43	19	0	320
158	Mosser Dome	Kootenai	Yellowstone	1936	1000	22.0	1.01	15	24	30	2	0	96
159	Mustang	Madison	Richland	1988	9200	33.7	0.00	0	0	0	0	0	16
160	Mustang	Red River	Richland	1979	12500	47.0	1.41	17	12	0	8	0	96
161	Neisser Creek	Red River	Sheridan	1982	10900	46.0	2.00	15	17	21	15	0	32
162	Nielsen Coulee	Madison	Daniels	1992	6266	39.5	0.00	15	12	0	0	0	32
163	Nohly	Nisku	Richland	1983	10700	38.0	1.30	15	11	39	73	0	80
164	Nohly	Red River	Richland	1972	12900	46.0	1.43	27	10	40	23	0	96
165	Nohly Area	Ratcliffe	Richland	1984	9444	32.0	1.23	17	10	57	40	0	160
166	North Fork	Madison	Richland	1977	9500	35.0	1.37	18	3	70	44	0	96
167	Ollie	Red River	Fallon	1980	10200	36.0	0.00	56	10	35	0	0	16
168	Otis/So. Otis Creek	Red River	Richland	1970	12700	48.0	1.76	23	12	35	9	0	160
169	Outlook	Duperow	Sheridan	1964	8200	39.0	1.50	15	10	25	48	0	64
170	Outlook	Interlake	Sheridan	1956	9000	38.0	1.12	20	8	30	80	0	96
171	Outlook, West	Winnipegosis	Sheridan	1958	9100	39.0	1.12	16	8	30	35	0	48
172	Oxbow	Red River	Roosevelt	1978	12600	47.0	1.50	18	12	45	26	0	32
173	Palomino	Nisku	Roosevelt	1980	7500	48.0	1.15	39	16	20	11	0	80
174	Pennel	Siluro/Ord.	Fallon	1955	7000	31.0	1.10	38	3	30	55	9	2896
175	Pine Total Oil	Red River	Fallon/Wibaux	1952	8400	34.0	1.17	32	12	30	24	23	1648
176	Pondera	Madison/Sun River	Pondera	1927	2100	34.0	1.20	15	16	31	17	0	1560
177	Poplar, East	Heath	Roosevelt	1969	4900	38.0	1.10	8	11	50	26	0	48
178	Poplar, East	Madison	Roosevelt	1952	5500	40.0	1.10	25	11	30	19	0	180
179	Poplar, Northwest	Madison	Roosevelt	1952	6300	40.0	1.10	16	10	45	13	0	54
180	Pronghorn	Red River	Sheridan	1983	10580	40.0	1.30	17	13	54	5	0	128
181	Putnam	Interlake	Richland	1969	11900	41.0	1.75	16	9	30	13	0	128
182	Putnam	Madison	Richland	1978	9500	34.0	1.42	92	6	35	2	0	160
183	Putnam	Red River	Richland	1969	11900	41.0	1.75	16	9	30	21	0	416
184	Rabbit Hills	Sawtooth	Blaine	1972	4000	21.0	1.15	12	18	16	24	0	80
185	Ragged Point	Tyler Total Oil	Musselshell	1956	3600	32.0	1.11	13	14	32	25	10	144
186	Rainbow	Red River	Richland	1982	12500	46.0	2.20	28	14	45	8	0	32
187	Rattler Butte	Tyler	Rosebud	1975	5300	35.0	1.10	25	12	60	54	0	24
188	Rattlesnake Butte	Cat Creek/Amsden	Petroleum	1984	2732	27.7	1.10	26	21	70	18	0	32
189	Raymond	Duperow	Sheridan	1979	8360	40.0	1.15	40	7	15	9	0	16
190	Raymond	Nisku	Sheridan	1972	7900	50.0	1.40	22	9	0	14	0	64
191	Raymond	Red River	Sheridan	1972	10000	39.0	1.42	33	12	10	6	0	96
192	Raymond	Winnipegosis	Sheridan	1972	9300	42.0	1.17	40	5	27	18	0	96
193	Reagan	Madison	Glacier	1947	3700	38.0	1.10	11	12	30	45	14	260
194	Red Bank	Madison	Roosevelt	1980	13000	31.0	2.00	16	14	11	5	0	512
195	Red Bank, South	Red River	Roosevelt	1981	13000	44.0	1.60	17	17	30	12	0	32
196	Red Creek Unit	Cut Bank/Madison	Glacier	1958	2600	31.0	1.08	20	19	30	23	2	144
197	Red Water	Duperow	Richland	1991	9990	0.0	0.00	22	0	0	0	0	16

OF PRODUCING OIL FIELDS—1993

PRO- DUC- TIVE AREA ACRES	% WATER	RECOVERY FACTOR %		PRO- DUCTIVE AREA ACRES	OOIP		ULTIMATE RECOVERY					1993 PRODUCTION		CUMUL. PROD. 1-94 (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			
15	34	6	0	640	6356	9931	360	0	360	563	38	7419	20	338	22	134
0	0	0	0	640	0	0	0	0	0	0	0	17042	47	56	43	135
11	30	15	0	960	4723	4919	710	0	710	740	53	17540	48	643	67	136
0	50	0	0	480	0	0	0	0	0	0	0	14840	41	48	22	137
11	30	21	0	3200	19527	6102	4080	0	4080	1275	67	77557	212	3723	357	138
16	20	16	0	320	6101	19065	980	0	980	3063	128	25696	70	729	251	139
15	25	29	19	10240	116572	11383	34140	1300	35440	3461	231	592250	1623	26338	9102	140
8	45	0	0	960	0	0	0	0	0	0	0	8925	24	92	52	141
16	45	5	0	8000	123919	15489	5770	0	5770	721	27	203445	557	4971	799	142
6	33	1	0	960	10553	10992	150	0	150	156	4	11575	32	107	43	143
15	43	13	0	1040	7526	7236	990	0	990	952	79	6841	19	980	10	144
13	40	7	0	480	3873	8068	290	0	290	604	30	5177	14	249	41	145
0	49	0	0	480	0	0	0	0	0	0	0	29128	80	171	91	146
9	35	10	0	1600	17802	11126	1800	0	1800	1125	30	70230	192	1389	411	147
15	30	27	0	800	14947	18683	4000	0	4000	5000	200	42028	115	3794	206	148
0	0	0	0	640	0	0	0	0	0	0	0	49539	136	266	138	149
0	0	0	0	160	0	0	0	0	0	0	0	13326	37	26	38	150
15	30	17	0	320	2247	7021	380	0	380	1188	79	10351	28	341	39	151
14	33	7	0	320	1822	5693	130	0	130	406	23	8724	24	125	5	152
0	0	0	0	1920	0	0	0	0	0	0	0	82868	227	791	532	153
7	35	3	4	2720	29764	10942	870	960	1830	673	22	26416	72	1568	262	154
10	25	31	0	320	993	3103	310	0	310	969	121	29256	80	203	107	155
4	60	5	0	10880	103886	9548	5500	0	5500	506	5	97573	267	5144	356	156
10	43	19	0	3200	38828	12133	7400	0	7400	2313	51	228803	627	4563	2837	157
24	30	2	0	960	18582	19356	410	0	410	427	28	6532	18	401	9	158
0	0	0	0	160	0	0	0	0	0	0	0	7112	19	45	41	159
12	0	8	0	960	10775	11223	900	0	900	938	55	39882	109	615	285	160
17	21	15	0	320	2501	7815	380	0	380	1188	79	15286	42	285	95	161
12	0	0	0	320	0	0	0	0	0	0	0	81931	224	95	307	162
11	39	73	0	800	4805	6006	3490	0	3490	4363	291	147427	404	2902	588	163
10	40	23	0	960	8437	8788	1920	0	1920	2000	74	35074	96	1771	149	164
10	57	40	0	1600	7377	4610	2960	0	2960	1850	109	213558	585	860	2100	165
3	70	44	0	960	881	917	390	0	390	406	23	10343	28	364	26	166
10	35	0	0	160	0	0	0	0	0	0	0	5424	15	143	18	167
12	35	9	0	1600	12653	7908	1110	0	1110	694	30	7080	19	1097	13	168
10	25	48	0	640	3724	5818	1790	0	1790	2797	186	18698	51	1728	62	169
8	30	80	0	960	7448	7758	5940	0	5940	6188	309	8005	22	5925	15	170
8	30	35	0	480	2979	6206	1050	0	1050	2188	137	24905	68	836	214	171
12	45	26	0	320	1966	6143	520	0	520	1625	90	18153	50	441	79	172
16	20	11	0	800	26941	33676	2990	0	2990	3738	96	149436	409	2092	898	173
3	30	55	9	28960	162989	5628	89240	25600	114840	3965	104	2454794	6725	85725	29115	174
12	30	24	23	16480	293731	17823	70560	54000	124560	7558	236	1043042	2858	111121	13439	175
16	31	17	0	15600	167014	10706	27690	0	27690	1775	118	279171	765	26408	1282	176
11	50	26	0	480	1490	3104	390	0	390	813	102	9810	27	327	63	177
11	30	19	0	18070	245327	13576	46870	0	46870	2594	104	141472	388	45391	1479	178
10	45	13	0	5440	33763	6206	4460	0	4460	820	51	121100	332	3827	633	179
13	54	5	0	1280	7765	6066	350	0	350	273	16	11352	31	301	49	180
9	30	13	0	1280	5720	4468	730	0	730	570	36	47524	130	626	104	181
6	35	2	0	1600	31364	19602	700	0	700	438	5	55947	153	550	150	182
9	30	21	0	4160	18589	4468	3970	0	3970	954	60	13375	37	3922	48	183
18	16	24	0	800	9792	12240	2360	0	2360	2950	246	137701	377	1374	986	184
14	32	25	10	1440	12456	8650	3080	1210	4290	2979	229	47470	130	4095	195	185
14	45	8	0	320	2433	7603	190	0	190	594	21	6661	18	165	25	186
12	60	54	0	240	2031	8462	1090	0	1090	4542	182	19014	52	1005	85	187
21	70	18	0	320	3697	11553	660	0	660	2063	79	25042	69	540	120	188
7	15	9	0	160	2569	16056	240	0	240	1500	38	9708	27	123	117	189
9	0	14	0	640	7022	10971	950	0	950	1484	67	16789	46	855	95	190
12	10	6	0	960	18693	19471	1080	0	1080	1125	34	17581	48	982	98	191
5	27	18	0	960	9294	9681	1680	0	1680	1750	44	32073	88	1528	152	192
12	30	45	14	2600	16943	6516	7650	2300	9950	3827	348	116620	320	9173	777	193
14	11	5	0	5120	39594	7733	2010	0	2010	393	25	61492	168	1539	471	194
17	30	12	0	320	3139	9809	380	0	380	1188	70	9084	25	352	28	195
19	30	23	2	1410	26942	19107	6170	300	6470	4589	229	54324	149	6335	135	196
0	0	0	0	160	0	0	0	0	0	0	0	4873	13	19	14	197

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.
198	Red Water, East	Red River	Richland	1983	12025	47.0	1.40	20	11	40	9	0
199	Refuge	Red River	Sheridan	1979	11300	44.0	1.69	13	5	30	36	0
200	Reserve	Red River	Sheridan	1966	11100	39.0	1.30	18	6	30	23	0
201	Reserve II	Red River/Interlake	Sheridan	1987	11283	42.1	1.36	12	12	28	5	0
202	Ridgelawn	Duperow	Richland	1984	11314	46.6	1.60	27	10	20	8	0
203	Ridgelawn	Madison	Richland	1977	8900	35.0	1.18	54	3	50	15	0
204	Ridgelawn	Red River	Richland	1980	12500	49.0	1.90	15	12	35	37	0
205	Ridgelawn, North	Madison	Richland	1991	12038	36.0	0.00	0	0	0	0	0
206	RipRap Coulee	Ratcliffe	Roosevelt	1975	8800	34.0	1.30	14	14	45	18	0
207	Riverbend	Red River	Richland	1981	12000	44.0	1.42	12	12	30	17	0
208	Rocky Point	Red River	Roosevelt	1978	11800	49.0	1.80	19	14	47	14	0
209	Rosebud	Tyler	Musselshell	1974	5000	34.0	1.24	32	14	48	19	0
210	Royals	Dawson Bay	Dawson	1980	11700	43.0	1.93	46	5	32	18	0
211	Rush Mountain	Winnepigosis/Gunton	Sheridan	1968	12000	39.0	1.62	14	10	33	44	0
212	Salt Lake	Nisku/Ratcliffe	Sheridan	1970	7900	43.0	1.50	23	11	35	9	0
213	Salt Lake	Ratcliffe	Sheridan	1992	6520	33.7	0.00	36	0	92	0	0
214	Salt Lake	Red River/Gunton	Sheridan	1987	10554	34.7	1.30	13	10	25	30	0
215	Second Creek	Red River	Richland	1972	12700	46.0	1.50	30	7	40	14	0
216	Shotgun Creek	Ratcliffe	Roosevelt	1984	9234	0.0	0.00	20	0	0	0	0
217	Sidney	Madison	Richland	1976	9000	34.0	1.30	60	4	50	6	0
218	Sidney	Red River	Richland	1981	12500	41.0	1.70	30	11	45	7	0
219	Singletree	Nisku	Roosevelt	1992	9750	37.5	0.00	0	0	0	0	0
220	Sioux Pass	Madison	Richland	1982	9182	36.0	0.00	0	0	0	0	0
221	Sioux Pass	Siluro/Ord.	Richland	1973	12700	47.0	1.70	40	9	35	15	0
222	Sioux Pass, Middle	Red River	Richland	1976	12600	45.0	1.40	17	16	25	8	0
223	Sioux Pass, North	Madison	Richland	1974	12000	45.0	1.60	44	12	40	2	0
224	Sioux Pass, North	Red River	Richland	1974	12000	45.0	1.60	44	12	40	6	0
225	Sioux Pass, South	Red River	Richland	1982	12700	46.0	1.75	14	12	30	10	0
226	Soap Creek	Tensleep	Big Horn	1952	1900	20.0	1.05	20	15	35	18	0
227	Soap Creek, East	Tensleep	Big Horn	1977	3400	17.0	1.02	15	15	35	18	0
228	South Fork	Mission Canyon	Richland	1986	9100	29.8	1.50	6	7	51	47	0
229	South Fork	Red River	Richland	1976	12400	46.0	1.00	41	11	0	1	0
230	Spring Lake	Bakken	Richland	1982	10800	42.0	1.50	17	8	20	12	0
231	Spring Lake, West	Bakken	Richland	1980	11660	0.0	0.00	0	0	0	0	0
232	Stampede	Red River	Richland	1980	11800	45.0	1.31	40	8	40	6	0
233	Stensvad	Tyler	Musselshell	1958	5500	33.0	1.17	25	14	20	40	14
234	Sumatra Total Oil	Tyler	Rosebud	1949	4500	32.0	1.16	30	19	35	27	7
235	Target	Madison	Roosevelt	1981	10500	34.5	1.20	16	8	35	8	0
236	Three Buttes	Red River/Gunton	Richland	1978	12400	43.0	0.00	12	0	0	0	0
237	Tule Creek	Nisku	Roosevelt	1960	7500	46.0	1.41	25	15	30	46	0
238	Tule Creek, East	Nisku	Roosevelt	1964	7500	43.0	1.91	30	18	30	42	0
239	Tule Creek, South	Duperow/Nisku	Roosevelt	1964	7600	43.0	1.40	8	12	30	55	0
240	Utopia	Swift	Liberty	1977	2300	33.0	1.15	17	16	40	9	0
241	Vaux	Interlake/Stonewall	Richland	1981	12100	45.0	0.00	0	0	25	0	0
242	Vaux	Madison	Richland	1977	8800	34.0	1.20	40	4	43	12	0
243	Vaux	Red River	Richland	1976	12400	48.0	1.60	24	14	45	9	0
244	Volt	Nisku	Roosevelt	1964	7300	47.0	1.40	14	20	30	50	0
245	Wakea	Nisku	Sheridan	1988	9906	41.0	1.40	4	13	32	53	0
246	Wakea	Red River	Sheridan	1983	11133	42.1	1.57	6	14	31	51	0
247	Wakea	Winnepigosis	Sheridan	1985	10179	43.6	1.42	12	14	30	47	0
248	Weygand	Sawtooth	Blaine	1991	4200	0.0	0.00	6	0	0	0	0
249	Whitlash	Swift	Liberty	1927	2600	38.0	1.13	15	16	20	13	0
250	Willow Creek, North	Tyler	Musselshell	1970	4000	32.0	1.20	12	13	54	54	0
251	Wills Creek, South	Red River	Fallon	1964	8700	33.0	1.20	12	18	35	28	0
252	Winnett Junction	Tyler	Musselshell	1973	2500	28.0	1.10	12	18	30	16	26
253	Wolf Springs	Amsden	Yellowstone	1955	6200	30.0	1.07	11	6	23	63	0
254	Wolf Springs, South	Amsden	Yellowstone	1984	6100	30.0	1.05	15	8	40	18	0
255	Woodrow	* Charles	Dawson	1952	9600	42.0	1.30	25	14	35	18	0
256	Wrangler	Red River	Sheridan	1979	11200	30.0	1.00	6	10	0	29	0
257	Wrangler, North	Red River	Sheridan	1979	10000	41.0	1.40	18	16	45	5	0
258	MISCELLANEOUS SMALL FIELDS											
259	STATE TOTAL											

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.

RY OF PRODUCING OIL FIELDS—1993

NET DEPTH Y. FT.	PORO- SITY (%)	% WATER	RECOVERY FACTOR %		PRO- DUCTIVE AREA ACRES	OOIP		ULTIMATE RECOVERY					1993 PRODUCTION		CUMUL. PROD. 1-94 (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	11	40	9	0	320	2341	7315	200	0	200	625	31	8004	22	168	32	198
3	5	30	36	0	320	668	2087	240	0	240	750	58	7083	19	218	22	199
8	6	30	23	0	1600	7219	4511	1690	0	1690	1056	59	6258	17	1681	9	200
2	12	28	5	0	640	3785	5914	200	0	200	313	26	8928	24	192	8	201
7	10	20	8	0	1600	16757	10473	1330	0	1330	831	31	134969	370	483	847	202
4	3	50	15	0	4480	23858	5325	3460	0	3460	772	14	77041	211	3193	267	203
5	12	35	37	0	1600	7644	4777	2830	0	2830	1769	118	59510	163	2578	252	204
0	0	0	0	0	320	0	0	0	0	0	0	0	36762	101	86	210	205
4	14	45	18	0	800	5147	6433	950	0	950	1188	85	36186	99	672	278	206
2	12	30	17	0	320	1762	5506	300	0	300	938	78	11371	31	255	45	207
9	14	47	14	0	640	3889	6076	550	0	550	859	45	13009	36	513	37	208
2	14	48	19	0	200	2915	14575	560	0	560	2800	88	13974	38	496	64	209
6	5	32	18	0	320	2012	6287	360	0	360	1125	24	8758	24	320	40	210
4	10	33	44	0	320	1437	4490	630	0	630	1969	141	8916	24	610	20	211
3	11	35	9	0	640	5443	8504	490	0	490	766	33	7079	19	457	33	212
6	0	92	0	0	160	0	0	0	0	0	0	0	33532	92	73	219	213
3	10	25	30	0	480	2793	5818	850	0	850	1771	136	53514	147	408	442	214
0	7	40	14	0	1600	10427	6516	1440	0	1440	900	30	24092	66	1297	143	215
0	0	0	0	0	480	0	0	0	0	0	0	0	16032	44	347	33	216
0	4	50	6	0	7040	50415	7161	3030	0	3030	430	7	42093	115	2961	69	217
0	11	45	7	0	640	5301	8282	360	0	360	563	19	12152	33	328	32	218
0	0	0	0	0	160	0	0	0	0	0	0	0	19015	52	44	95	219
0	0	0	0	0	160	0	0	0	0	0	0	0	16537	45	170	103	220
0	9	35	15	0	2560	27337	10678	3990	0	3990	1559	39	65864	180	3449	541	221
7	16	25	8	0	1920	21705	11304	1750	0	1750	911	54	37227	102	1539	211	222
4	12	40	2	0	1920	29493	15360	670	0	670	349	8	43691	120	494	176	223
4	12	40	6	0	4480	68817	15360	4370	0	4370	975	22	107758	295	3684	686	224
4	12	30	10	0	640	3337	5214	350	0	350	547	39	15365	42	287	63	225
0	15	35	18	0	1240	17866	14408	3180	0	3180	2565	128	41494	114	2718	462	226
5	15	35	18	0	120	1335	11125	240	0	240	2000	133	7668	21	169	71	227
6	7	51	47	0	160	170	1062	80	0	80	500	83	7227	20	23	57	228
1	11	0	1	0	960	33589	34988	250	0	250	260	6	9508	26	210	40	229
7	8	20	12	0	480	2701	5627	330	0	330	688	40	20258	56	226	104	230
0	0	0	0	0	320	0	0	0	0	0	0	0	4306	12	49	8	231
0	8	40	6	0	640	7277	11370	420	0	420	656	16	14644	40	316	104	232
5	14	20	40	14	960	17824	18566	7130	3080	10210	10635	425	16366	45	10202	8	233
0	19	35	27	7	5520	136779	24778	37150	9540	46690	8458	282	278422	763	44862	1828	234
6	8	35	8	0	1760	9467	5378	730	0	730	415	26	12831	35	695	35	235
2	0	0	0	0	640	0	0	0	0	0	0	0	14242	39	406	60	236
5	15	30	46	0	1280	18487	14442	8470	0	8470	6617	265	34189	94	8230	240	237
0	18	30	42	0	320	4913	15353	2060	0	2060	6438	215	4265	12	2035	25	238
8	12	30	55	0	480	1787	3722	990	0	990	2063	258	11321	31	853	137	239
7	16	40	9	0	960	10569	11009	900	0	900	938	55	26011	71	696	204	240
0	0	25	0	0	960	0	0	0	0	0	0	0	33375	91	638	112	241
0	4	43	12	0	3360	19811	5896	2380	0	2380	708	18	113752	312	2011	369	242
4	14	45	9	0	2240	20071	8960	1850	0	1850	826	34	27560	76	1701	149	243
4	20	30	50	0	800	8689	10861	4380	0	4380	5475	391	72008	197	3361	1019	244
4	13	32	53	0	480	941	1960	500	0	500	1042	261	56545	155	252	248	245
6	14	31	51	0	960	2749	2863	1400	0	1400	1458	243	42180	116	1139	261	246
2	14	30	47	0	320	2056	6425	970	0	970	3031	253	12359	34	955	15	247
6	0	0	0	0	120	0	0	0	0	0	0	0	13106	36	301	55	248
5	16	20	13	0	3120	41127	13181	5460	0	5460	1750	117	35167	96	5428	32	249
2	13	54	54	0	160	742	4637	400	0	400	2500	208	8183	22	386	14	250
2	18	35	28	0	480	4357	9077	1210	0	1210	2521	210	11033	30	1166	44	251
2	18	30	16	26	240	2559	10662	400	670	1070	4458	372	19942	55	920	150	252
1	6	23	63	0	2080	7664	3684	4820	0	4820	2317	211	17409	48	4775	45	253
5	8	40	18	0	960	5107	5319	900	0	900	938	63	13249	36	852	48	254
5	14	35	18	0	560	7603	13576	1360	0	1360	2429	97	14679	40	1238	122	255
6	10	0	29	0	640	2979	4654	850	0	850	1328	221	26930	74	606	244	256
8	16	45	5	0	320	2809	8778	150	0	150	469	26	4652	13	129	21	257
													765427	2097	13		258
													17,396M	47,659	138,961		259

Interpolated from computer

ERA	PERIOD	SOUTHWEST MONTANA (GENERALIZED)	CRAZY MOUNTAINS BASIN	CENTRAL MONTANA		BIG HORN BASIN		
CENOZOIC	TERTIARY	5 KMILE CREEK FM ROALMAN GP RENOVA FM SPHINX CGL	TONQUE RIVER MBR LEBO MBR TULLOCK MBR			LONGUE RIVER MBR LEBO MBR TULLOCK MBR		
MESOZOIC	CRETACEOUS	UPPER E. HORN MOUNTAINS VOLCANICS BEAVERHEAD CGL MONTANA GP UNDIVIDED EAGLE FM TELEGRAPH CK CODY SH FRONTIER FM COLORADO GP UNDIVIDED MOWRY SH MUDDY SS THERMOPOLIS SH (HUSKY HILL MBR) KOOTENAI FM	UPPER HELL CREEK FM LENNEP FM BEARPAW FM JUDITH RIVER FM CLAGGET FM EAGLE FM (VIRGILLI MBR) TELEGRAPH CK FM NIOBRARA FM CAHILL FM FRONTIER FM GREENHORN FM BELL F FOURCHE FM BIG LICK SS MOWRY FM MUDDY SS SKULL CK SH DAKOTA SILT DAKOTA FM KOOTENAI FM	UPPER HELL CREEK FM FOX HILLS FM BEARPAW FM JUDITH RIVER FM CLAGGET FM EAGLE FM (VIRGILLI SS) TELEGRAPH CK FM NIOBRARA FM CAHILL FM FRONTIER FM GREENHORN FM BELL F FOURCHE FM BIG LICK SS MOWRY FM MUDDY SS SKULL CK SH DAKOTA SILT DAKOTA FM KOOTENAI FM (2nd CAT CREEK) (3rd CAT CREEK)		UPPER LANCE FM LENNET FM MULTITELLUS FM JUDITH RIVER FM PARKMAN SS CLAGGET FM EAGLE FM (VIRGILLI 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		
		LOWER						
		JURASSIC	ELLS GP MORRISON FM SWIFT FM RIERDON FM SAWTOOTH FM	ELLS GP MORRISON FM SWIFT FM RIERDON FM PIPER FM	ELLS GP MORRISON FM SWIFT FM RIERDON FM PIPER FM		MORRISON FM SUNDANCE FM UPPER MBR LOWER MBR GY-SUM SPRINGS FM	
		TRIASSIC	THAYNES FM WOODSIDE FM DINWOODY FM	CHUGWATER 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 • FLK BASIN	
MISSISSIPPIAN		BIG SNOWY GP MISSION CANYON LS LODGEPOLE LS SALTININGTON MBR THREE FORKS FM JEFFERSON FM MAYWOOD FM	BIG SNOWY GP CHARLES FM MISSION CANYON LS LODGEPOLE LS SAPPINGTON MBR THREE FORKS FM JEFFERSON FM MAYWOOD FM	BIG SNOWY GP HILATH FM OTTER FM KIBBEY FM CHARLES FM MISSION CANYON LS QUICK POINT LS HARKINS FM		MADISON GROUP	• ELK BASIN, NW ELK BASIN, FRANNIE	
DEVONIAN						THREE FORKS FM JEFFERSON FM	• ELK BASIN	
SILURIAN						BLAFTOOTH BUTTE FM		
ORDOVICIAN		BIG HORN FM	BIG HORN FM	BIG RIVER FM WARRIOR FM		LEIGHT LOD BIG HORN FM LANDER MBR	• ELK BASIN	
CAMBRIAN		HALD LION FM HASKINS FM SILVER HILL FM FLATHEAD SS	SNOWY RANGE FM PILGRIM FM PARK SH MEAGHER LS WOLFSEY SH FLATHEAD SS	SNOWY RANGE FM PILGRIM FM PARK SH MEAGHER LS WOLFSEY SH FLATHEAD SS		SNOWY RANGE FM PILGRIM FM GHOS VENTRE GP FLATHEAD SS		
PRECAMBRIAN	PROTEROZOIC	BELT SUPERGROUP	BELT SUPERGROUP	BELT SUPERGROUP		BELT SUPERGROUP		
	ARCHEAN	PRE-BELT METAMORPHIC AND IGNEOUS ROCKS				PRE-BELT ROCKS		
		SOUTHWEST MONTANA (GENERALIZED)	CRAZY MOUNTAINS BASIN	CENTRAL MONTANA		BIG HORN BASIN		

GENERALIZED STRATIGRAPHIC C

[illegible]

*SOME FIELDS OMITTED DUE TO SPACE LIMITATIONS

- OIL ☀ GAS

PACE LIMITATIONS

