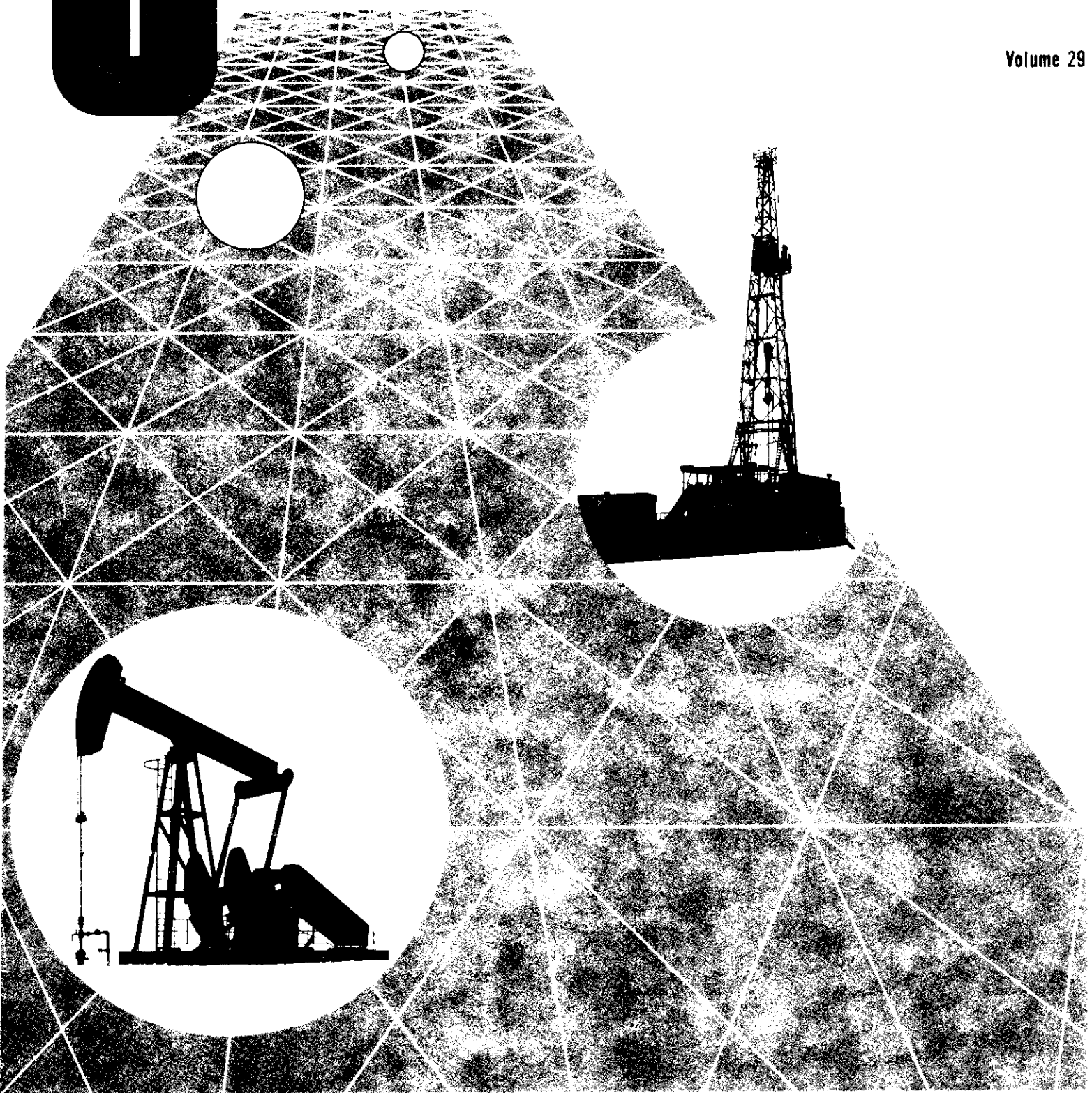


MONTANA

OIL & GAS

Annual
Review
1985

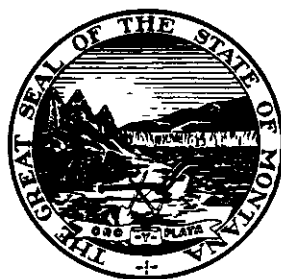
Volume 29



DEPARTMENT OF NATURAL RESOURCES AND CONSERVATION
OF THE STATE OF MONTANA

Oil and Gas Conservation Division

Ted Schwinden, Governor



ANNUAL REVIEW FOR THE YEAR 1985
Relating to
OIL AND GAS
Volume 29

BOARD OF OIL AND GAS CONSERVATION

R.A. CAMPBELL, Chairman
1222 North 27th Street
Billings, Montana 59101

JAMES C. NELSON, Vice-Chairman
P.O. Box 428
Cut Bank, Montana 59427

JOHN M. SHEEHY
P.O. Box 296
Big Sandy, Montana 59520

ROBERT I. PENNER
128 Crescent Drive,
Wolf Point, Montana 59201

DONALD D. CECIL
P.O. Box 1077
Billings, Montana 59103

GEORGE R. CROTTY
18 Sixth Street N., Suite 200
Great Falls, Montana 59401

ARNOLD G. HANSEN
820 Ninth Avenue, S.W.
Sidney, Montana 59270

TABLE OF CONTENTS

Administrator's Report	1
1985 Summary of Year Activities	2
Five Year Summary	3
Summary of Drilling by Counties	4
Crude Oil Production Graph	5
Natural Gas Production	6
Associated Gas Production	8
Refiner's Report	12
Crude Oil Production and Valuation	13
Miscellaneous Abandoned Fields	19
1985 Well Completions	20
Summary of Secondary Recovery Projects	34
Oil and Gas Field Summary	36
Map of Fields, Pipelines, and Refineries	In Back of Book
Summary of Producing Oil Fields	In Back of Book
Generalized Stratigraphic Correlation Chart	In Back of Book

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

CHARLES G. MAIO,
ADMINISTRATOR/PETR. GEOLOGIST
2535 ST. JOHN'S AVENUE
BILLINGS, MONTANA 59102

THOMAS P. RICHMOND
PETROLEUM ENGINEER
2535 ST. JOHN'S AVENUE
BILLINGS, MONTANA 59102

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

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

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

Annual Review for the Year 1985 Volume 29 ACTIVITY REVIEW—MONTANA 1985

In 1985, a total of 622 wells were drilled for oil and gas. This was 159 wells less than last year; however, this is an increase of 99 wells over 1983's 12-year low. Of 210 wildcats drilled, 16 were completed as oil and 2 as gas producers. Of 412 development wells, 227 were oil and 84 were gas completions.

Oil production slightly decreased this year to 29.85 million barrels as compared to 30.1 million barrels for 1984. Natural gas production at nearly 54 billion cubic feet continues to show a yearly increase and was up by 855 million cubic feet over 1984's withdrawals.

There were 154 companies active in Montana during the year, drilling in 41 of the 56 counties, and 28 geophysical companies, 10 less than last year, had seismic crews operating in the state.

Prospects are continually being defined for future drilling as evidenced by the increasing number of industry personnel studying and evaluating the data available at the Board's technical library in the Billings office, and the full cores taken from Montana wells that are stored at the USGS Core Library in Arvada, Colorado.

Well samples, including core chips, from more than 11,400 wells are presently on file in the Billings office. To facilitate research and retrieval a catalogue will be published in 1986 listing all well samples available as of July 1, 1986. Newer well samples and core chips will continue to be boxed, indexed and filed on a current basis. Examination of these samples must take place in the Billings office.

A total of 114 applications for determination to qualify for a maximum lawful price as prescribed by the Natural Gas Policy Act of 1978 (NGPA) were received and processed during 1985. Total applications by category included: 27 for new onshore well—2.5 mile test (Category 102-2); 8 for new onshore reservoir (Category 102-4); 59 for new onshore production well (Category 103); and 20 for stripper well (Category 108).

The Board of Oil and Gas Conservation issued 90 Board Orders in 1985. The greater portion of these orders pertained to drilling and spacing units, pooling of interests, establishing field delineations and field spacing rules, exceptions to spacing rules, and the inclusion of shallower and deeper pay zones into existing field rules.

**1985
SUMMARY OF YEAR ACTIVITIES**

OIL

	BBLS	BBLS OF OIL PER DAY
Oil Produced	29,850,417	81,782
Oil Imported From:		
Canada	16,075,484	
North Dakota	10,400	
Wyoming	<u>17,258,434</u>	
Total	33,344,318	91,354
Oil Exported	22,000,000	60,274

GAS

	MCF	MCF/DAY
Gas Withdrawals:		
Natural	41,815,776	
Associated	<u>12,335,365</u>	
Total	54,151,141	148,359
Gas Imported From:		
Canada	8,042,186	
Dakotas	29,355,846	
Wyoming	<u>8,738, 417</u>	
Total	46,136,449	126,401
Gas Exported To:		
Canada	178,358	
Dakotas	7,904,200	
Wyoming	14,535,928	
Midwest	<u>11,808,587</u>	
Total	34,427,073	94,321

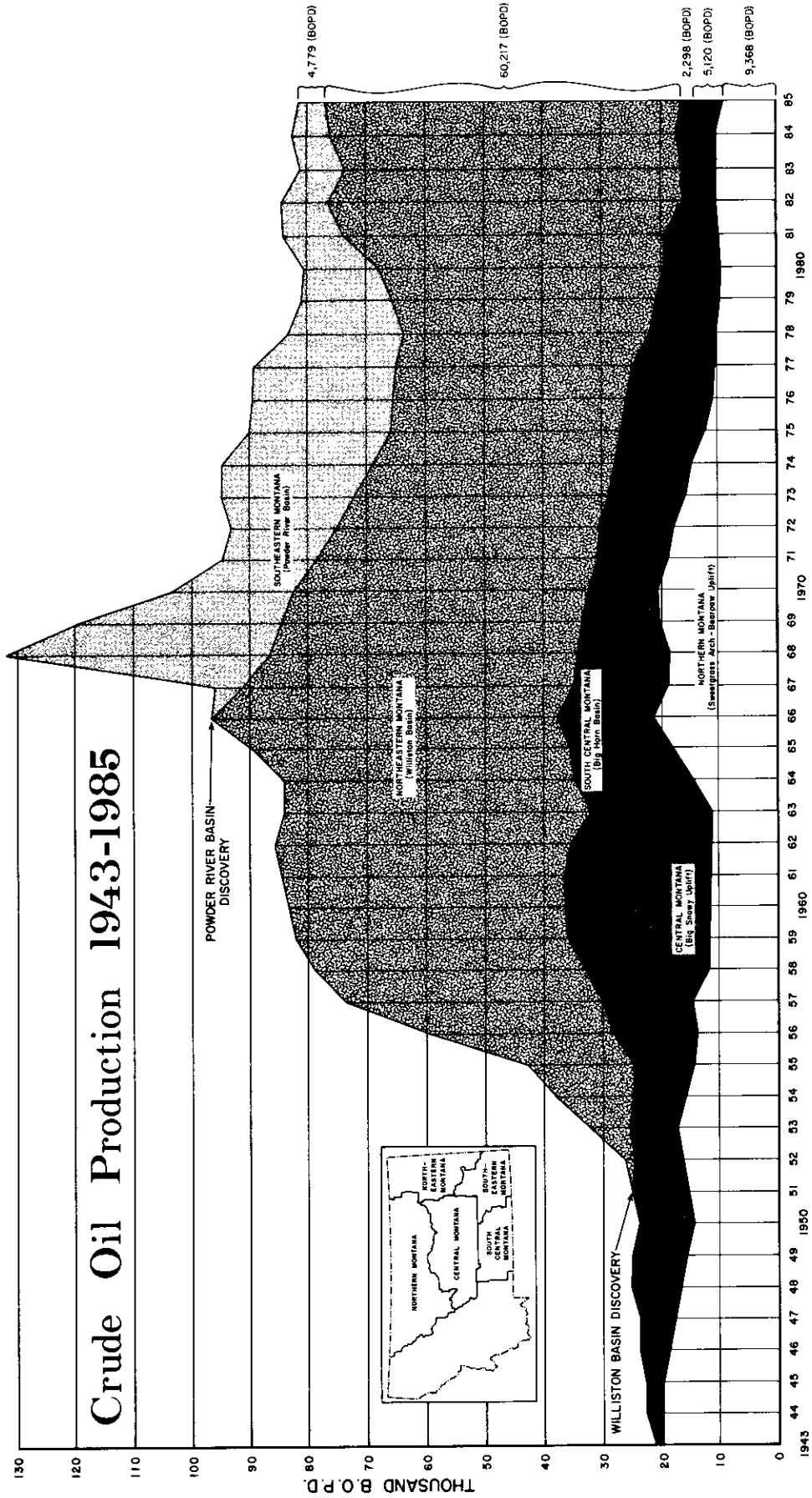
FIVE YEAR SUMMARY

	1981	1982	1983	1984	1985
PRODUCTION IN BARRELS					
Northern Montana	3,605,207	3,680,043	3,682,130	3,708,185	3,419,300
South Central	910,595	806,366	790,150	829,090	838,817
Central	2,583,690	1,496,895	1,467,855	1,709,653	1,868,780
Williston Basin	19,954,159	21,934,760	20,877,527	21,449,415	21,979,087
Powder River Basin	3,759,760	2,999,247	2,847,618	2,383,476	1,744,433
TOTAL	<u>30,813,411</u>	<u>30,917,311</u>	<u>29,665,280</u>	<u>30,079,819</u>	<u>29,850,417</u>
NUMBER OF PRODUCING WELLS					
Northern Montana	2,280	2,455	2,693	2,610	2,803
South Central	132	138	150	144	141
Central	354	249	287	294	417
Williston Basin	1,080	1,360	1,446	1,577	1,540
Powder River Basin	174	212	222	214	216
TOTAL	<u>4,020</u>	<u>4,414</u>	<u>4,798</u>	<u>4,839</u>	<u>5,117</u>
AVERAGE DAILY PRODUCTION/WELL					
Northern Montana	4.3	4.1	3.7	3.9	3.3
South Central	18.9	16.0	14.4	15.8	16.3
Central	20.0	16.5	14.0	15.9	12.3
Williston Basin	50.6	44.2	39.6	37.9	39.1
Powder River Basin	59.2	38.8	35.1	30.4	22.1
STATE AVERAGE	<u>21.0</u>	<u>19.2</u>	<u>16.9</u>	<u>17.0</u>	<u>16.0</u>
DEVELOPMENT WELLS DRILLED					
Oil Wells	276	263	160	327	227
Gas Wells	133	145	55	99	84
Dry Holes	188	120	88	87	90
Service Wells		19	10	20	18
TOTAL	<u>597</u>	<u>547</u>	<u>313</u>	<u>533</u>	<u>419</u>
EXPLORATORY WELLS DRILLED					
Oil Wells	126	64	25	33	16
Gas Wells	85	46	16	21	2
Dry Holes	341	248	156	189	192
Temporary Abandoned			23	25	11
TOTAL	<u>552</u>	<u>358</u>	<u>220</u>	<u>268</u>	<u>221</u>
TOTAL WELLS DRILLED	1,149	905	533	801	640
TOTAL FOOTAGE DRILLED	5,797,770	4,342,410	2,529,666	3,831,730	3,076,290
AVERAGE FOOTAGE DRILLED	5,046	4,798	4,746	4,783	4,806

STATE OF MONTANA SUMMARY OF DRILLING BY COUNTIES—1985

County	Development			Wildcat			Service	Temp. Aband.	Total Wells	Footage Drilled	Average Depth
	Oil	Gas	Dry	Oil	Gas	Dry					
Big Horn						1		1	9,499	9,499	
Blaine		15	9	1		3		28	50,519	1,804	
Carbon		5	1			4		10	52,848	5,284	
Carter					1	3		4	16,657	4,164	
Cascade			1					1	2,374	2,374	
Chouteau			1					4	7,072	1,768	
Daniels				1		5	1	7	55,808	7,972	
Dawson			1			1	1	3	33,957	11,319	
Deer Lodge						1		1	6,701	6,701	
Fallon	42	4	2				14	63	424,461	6,737	
Fergus		1	6			1		8	19,416	2,427	
Flathead						1		1	3,500	3,500	
Gallatin						1		1	11,586	11,586	
Garfield	5		6			7	1	19	97,787	5,146	
Glacier	27	6	1			1		37	115,888	3,132	
Golden Valley	1							2	4,707	2,353	
Granite						2		2	4,192	2,096	
Hill		17	8			4		29	43,905	1,513	
Judith Basin						1		1	2,300	2,300	
Lewis and Clark						1		1	13,225	13,225	
Liberty		1	2					3	9,683	3,227	
McCone						11		11	80,863	7,351	
Musselshell	3		7			14	1	25	109,347	4,373	
Petroleum	8		5			7	2	23	88,612	3,852	
Phillips		3						3	4,424	1,474	
Pondera	14	3	3			1		21	45,635	2,173	
Powder River			3			41		44	316,205	7,186	
Powell						1		1	7,134	7,134	
Prairie						1		1	8,105	8,105	
Richland	7		1			10		19	214,555	11,292	
Roosevelt	5		2			11		21	206,183	9,818	
Rosebud	1		2			12		15	83,596	5,573	
Sheridan	11		5			11	1	30	296,231	9,874	
Stillwater		1				8		9	37,315	4,146	
Sweetgrass						1		1	2,871	2,871	
Teton	10	3	1			1		15	33,729	2,248	
Toole	66	23	16		1	6	1	117	201,231	1,719	
Treasure						2		2	13,428	6,714	
Valley	19	2	5			10	1	40	233,262	5,831	
Wibaux	4					1	1	6	55,844	9,307	
Yellowstone	4		2			3		10	51,638	5,163	
TOTALS	227	84	90	16	2	192	18	640	3,076,290	4,806	

Crude Oil Production 1943-1985



GAS PRODUCTION DATA—1985
14.73 PSIA @ 60° F

Field Natural Gas	County	Producing Formation	1985 Produced MCF
Alma	Liberty	Bow Island	6,539
Amanda	Toole	Swift, Bow Island, Sunburst	344,112
Antelope Coulee	Toole	Blackleaf	2,080
Arch Apex	Toole	Bow Island, Sunburst, Swift	230,142
Badlands	Hill	Eagle	367,729
Battle Creek	Blaine	Eagle	2,530,701
Bears Den	Liberty	Madison, Bow Island, Swift	52,563
Bell Creek, Southeast	Powder River	Muddy	80,691
Big Coulee	Golden Valley, Stillwater	Lakota, Morrison, Cat Creek 3	543,159
Big Rock	Glacier	Blackleaf, Bow Island, Madison	907,574
Bills Coulee	Teton	Sunburst, Moulton, Kootenai, Dakota	43,738
Black Butte	Hill	Eagle	224,583
Black Coulee	Blaine	Eagle	205,987
Blackfoot	Glacier	Dakota, Sunburst	149,933
Blackjack	Liberty	Second White Specks, Sunburst, Blackleaf, Bow Island	156,177
Blackleaf Canyon	Teton	Sun River	1,446,673
Border	Toole	Sunburst	7,904
Bowdoin and Area	Phillips, Valley	Bowdoin, Phillips, Carlile-Greenhorn	3,083,574
Bowes	Blaine	Eagle	525,835
Bradley	Glacier	Dakota	5,220
Browns Coulee, East	Hill	Eagle, Judith River	71,659
Buffalo Flats	Chouteau	Bow Island, Bow Island-Roberts	52,501
Bullwacker and Area	Blaine, Chouteau	Eagle	905,995
Camp Creek	Chouteau	Eagle	13,518
Canadian Coulee and Area	Hill	Sawtooth	862
Canadian Coulee, North	Hill, Liberty	Sawtooth	86,401
Cedar Creek	Fallon	Judith River, Eagle	165,835
Chain Lakes	Hill	Eagle	8,626
Charlie Creek, North	Richland	Red River	51,153
Chinook, East	Blaine	Eagle	7,606
Chip Creek	Chouteau	Eagle	10,380
Clarks Fork	Carbon	Greybull	18,717
Coal Coulee	Hill	Eagle	5,344
Cut Bank	Glacier, Toole	Cut Bank, Blackleaf, Moulton, Sunburst Bow Island	3,429,383
Dean Dome	Stillwater	Greybull	5,510
Devon, South	Toole	Bow Island	27,877
Dry Creek	Carbon	Virgelle, Frontier, Judith River, Greybull	967,684
Dry Creek, Middle	Carbon	Frontier	21,966
Dunkirk	Toole	Dakota, Bow Island	220,699
Dunkirk, North	Toole	Bow Island, Sunburst, Dakota, Kootenai	306,864
Eagle Springs	Toole	Bow Island, Sunburst, Swift	37,397
Ethridge Area	Toole	Swift	56,388
Ethridge, North	Toole	Swift	6,150
Fitzpatrick Lake	Toole	Bow Island	193,203
Flat Coulee	Liberty	Sawtooth, Bow Island, Dakota, Swift, Blackleaf	86,864
Fort Conrad	Toole, Pondera	Bow Island	231,645
Fred and George Creek	Toole	Sunburst, Bow Island	56,879
Fresno and Area	Hill	Eagle	44,460
Galata	Toole	Bow Island	83,551
Gilford, North	Hill	Sawtooth	13,274
Gold Butte	Toole	Bow Island	3,550
Golden Dome	Carbon	Greybull, Frontier	141,763
Grandview	Liberty	Bow Island, Sawtooth	34,333
Gypsy Basin	Pondera	Sunburst, Madison, Sawtooth, Swift, Moulton	1,277
Hammond	Carter	Muddy	35,980
Hardin	Big Horn	Frontier	13,972
Hardpan and Area	Pondera, Chouteau	Bow Island	196,696
Havre	Hill, Blaine	Eagle	325,287
Haystack Butte	Liberty	Bow Island	38,164
Keith, East	Liberty	Second White Specks, Sawtooth, Bow Island	925,092
Keith Area	Liberty	Second White Specks, Sawtooth, Bow Island	57,728

GAS PRODUCTION DATA—1985 (CONTINUED)

14.73 PSIA @ 60° F

Field	County	Producing Formation	1985 Produced MCF
Kevin-Sunburst	Toole	Dakota, Eagle, Madison, Swift, Nisku, Bow Island, Sunburst, Kootenai	1,010,196
Kevin-Sunburst Nisku	Toole	Swift	39,406
Kevin, Southwest	Toole	Bow Island, Sunburst, Swift	218,811
Kicking Horse	Toole	Bow Island, Sunburst, Sawtooth	147,362
Kinyon Coulee Area	Toole	Bow Island	30,951
Kinyon Coulee, South	Toole	Bow Island	2,258
Lake Basin	Stillwater	Claggett, Eagle-Virgelle, Telegraph Creek, Frontier, Eagle	224,771
Lake Basin, North	Stillwater	Eagle	25,690
Laredo	Hill	Eagle	24,182
Ledger	Pondera	Bow Island	362,167
Leroy	Blaine	Eagle	790,864
Liscom Creek	Custer	Shannon	68,291
Little Creek Area	Chouteau	Eagle-Virgelle	46,162
Little Rock	Glacier	Bow Island, Blackleaf	90,233
Lohman and Area	Blaine	Eagle	203,584
Loring, East	Phillips	Phillips, Bowdoin, Carlile-Greenhorn	1,796,764
Marias River	Toole, Pondera	Bow Island	85,317
Middle Butte	Toole, Liberty	Bow Island, Dakota, Second White Specks	36,452
Miners Coulee	Toole	Sunburst, Bow Island, Sawtooth	187,022
Mount Lily	Liberty	Madison, Swift, Bow Island	37,151
O'Briens Coulee	Liberty	Bow Island, Second White Specks, Blackleaf, Greenhorn	256,992
Old Shelby	Toole	Bow Island, Sunburst, Swift	280,981
Phantom	Toole	Sunburst	24,406
Phantom, West	Toole	Sunburst	118,997
Police Coulee	Toole	Bow Island	39,415
Prairie Dell	Toole	Bow Island, Swift, Dakota, Sunburst	785,096
Prairie Dell, West	Toole	Sunburst, Swift	30,326
Rapelje	Stillwater	Eagle, Eagle-Virgelle, Claggett	78,108
Rattlesnake Coulee	Toole	Bow Island, Sunburst	3,113
Red Rock Area	Hill	Eagle, Judith River	100,981
Rocky Boy	Hill	Eagle	61,418
Rudyard	Hill	Sawtooth, Eagle	196,098
Sage Creek	Liberty	Blackleaf, Second White Specks, Bow Island	267,933
Sandwich	Liberty	Swift	1,958
Sawtooth Mountain	Blaine	Judith River, Eagle	670,396
Shelby Area	Toole	Sunburst	18,843
Sherard and Area	Blaine, Chouteau	Eagle	530,672
Snoose Coulee	Liberty	Bow Island	36,923
Soberup Coulee	Pondera	Bow Island	2,752
Spring Coulee	Hill	Sawtooth	269,717
Strawberry Creek	Toole	Bow Island	1,946
Swanson Creek	Phillips, Valley	Phillips, Bow Island, Greenhorn	744,403
Sweetgrass	Toole	Sunburst	2,338
Three Mile	Blaine	Eagle	311,080
Tiber and Area	Toole	Bow Island	197,394
Tiger Ridge and Area	Blaine, Hill	Eagle	9,997,022
Tiger Ridge, North	Blaine	Eagle	2,180
Trail Creek	Liberty, Toole	Bow Island, Sunburst, Swift	167,748
Two Forks	Blaine	Judith River, Eagle	332
Utopia	Liberty	Sawtooth, Bow Island, Swift	95,206
Vandalia	Valley	Carlile-Greenhorn, Bowdoin, Phillips	57,591
West Butte	Toole	Bow Island, Sunburst, Swift	21,076
West Butte Shallow Gas	Toole	Bow Island, Dakota	31,109
Whitewater, East	Phillips	Bowdoin, Phillips, Greenhorn	201,961
Whitlash	Liberty	Dakota, Swift, Bow Island	428,101
Whitelash, West	Toole	Sunburst, Bow Island, Swift	21,334
Williams	Pondera	Bow Island	179,815
Willow Ridge	Toole	Bow Island, Swift, Dakota, Duperow, Sunburst	260,426
Wildcat Pondera			2,563
Wildcat Toole			12,245

SUBTOTAL NATURAL GAS

41,815,776

**ASSOCIATED PRODUCED
GAS PRODUCTION DATA—1985**

**1985
Produced
MCF**

Field Associated Gas	County	Producing Formation	1985 Produced MCF
Alkali Coulee	Sheridan	Red River	825
Anvil	Roosevelt	Nisku, Ratcliffe, Red River	394,389
Bainville	Roosevelt	Red River, Gunton, Interlake	51,504
Bainville, North	Roosevelt	Ratcliffe, Red River, Winnipegosis	105,591
Bainville, West	Roosevelt	Red River, Madison	20,772
Bainville II	Roosevelt	Red River	54,794
Belfry	Carbon	Kootenai	7,965
Bell Creek	Carter, Powder River	Muddy	3,309
Benrud Area	Roosevelt	Nisku, Madison	13,134
Benrud, East	Roosevelt	Nisku	10,007
Benrud, Northeast	Roosevelt	Nisku	4,327
Big Muddy Creek	Roosevelt	Mission Canyon, Red River	27,290
Bloomfield	Dawson	Interlake, Dawson Bay, Red River	49,207
Blue Hill	Richland	Red River	5,645
Blue Mountain	Wibaux	Red River	18,104
Box Canyon	Richland	Red River	24,674
Breed Creek	Rosebud	Tyler	1,392
Brorson	Richland	Mission Canyon, Madison, Red River, Bakken, Ratcliffe	77,217
Brorson, South	Richland	Red River, Ratcliffe, Mission Canyon	71,244
Brush Lake	Sheridan	Red River	57,819
Burns Creek	Dawson, Richland	Duperow, Red River	5,393
Cabin Creek	Fallon	Madison, Siluro-Ord, Red River	603,520
Canal	Richland	Madison, Red River, Mission Canyon	66,015
Cannon Ball	Fallon	Red River	4,199
Carlyle	Wibaux	Siluro-Ord	10,927
Charlie Creek	Richland	Nisku, Duperow	4,982
Charlie Creek, East	Richland	Red River	25,112
Charlie Creek, North	Richland	Bakken, Madison	2,728
Clear Lake	Sheridan	Madison, Nisku, Red River, Ratcliffe	133,832
Clear Lake, South	Sheridan	Red River	28,350
Colored Canyon	Sheridan	Red River	67,590
Comertown	Sheridan	Nisku, Ratcliffe, Red River	90,380
Comertown, South	Sheridan	Nisku, Red River	22,464
Corner Pocket	Richland	Red River	9,123
Cottonwood	Richland	Red River	32,578
Crane	Richland	Devonian, Siluro-Ord	139,462
Cuption	Fallon	Red River	32,949
Cuption Area	Fallon	Red River	1,028
Cut Bank	Pondera, Glacier, Toole	Madison, Moulton	45,361
Dagmar	Sheridan	Red River	52,251
Dagmar, North	Sheridan	Red River, Madison	7,676
Deer Creek	Dawson	Interlake	2,010
Diamond Point	Roosevelt	Red River	59,751
Divide	Sheridan	Madison, Mission Canyon, Ratcliffe	49,822
Dry Creek	Carbon	Greybull, Virgelle, Eagle	112,365
Dwyer	Sheridan	Charles, Ratcliffe, Red River, Interlake	148,054
Eagle	Richland	Mission Canyon, Madison, Red River, Duperow, Ratcliffe, Devonian	98,660
Elk Basin	Carbon	Madison, Tensleep	441,887
Enid, North	Richland	Red River, Bakken	34,954
Fairview	Richland	Mission Canyon, Interlake, Madison, Red River, Ratcliffe	393,283
Fairview, East	Richland	Red River	35,962
Fairview, West	Richland	Ratcliffe	10,318
Fertile Prairie	Fallon	Red River	12,136
Fishhook	Sheridan	Red River, Madison	73,421
Flat Coulee (Swift SU)	Liberty	Swift	11,841
Flat Lake	Sheridan	Nisku, Ratcliffe	96,935
Flat Lake, East	Sheridan	Red River	3,562
Flat Lake, South	Sheridan	Ratcliffe	3,455

**ASSOCIATED PRODUCED
GAS PRODUCTION DATA—1985 (CONTINUED)**

Field	County	Producing Formation	1985 Produced MCF
Flaxville	Daniels	Mission Canyon	5,463
Fort Gilbert	Richland	Madison, Red River, Mission Canyon, Duperow	124,674
Four Mile Creek	Richland	Red River	10,273
Fox Creek	Richland	Stonewall, Red River	5,579
Fox Creek, North	Richland	Madison	261
Frannie	Carbon	Tensleep	70
Frog Coulee	Richland	Red River	1,811
Froid, South	Roosevelt	Red River	4,323
Gas City	Dawson	Red River, Madison, Siluro-Ord	9,957
Girard	Richland	Red River	33,324
Glendive	Dawson	Siluro-Ord, Red River, Interlake	15,192
Golden Dome	Carbon	Greybull	42,044
Goose Lake	Sheridan	Ratcliffe, Red River	62,957
Goose Lake, West	Sheridan	Red River	25,790
Gossett	Richland	Mission Canyon, Stoney Mountain, Red River, Madison	21,342
Gumbo Ridge	Rosebud	Tyler	1,147
Gypsy Basin	Pondera, Teton	Madison	472
Hardscable Creek	Richland	Red River	10,342
Hay Creek	Richland	Interlake, Mission Canyon, Red River	25,906
Hiawatha	Musselshell	Tyler, Stensvad	1,726
High Five	Rosebud	Stensvad	6,861
Highview	Teton, Pondera	Mississippian, Madison	2,777
Honker	Sheridan	Red River	12,718
Intake II	Richland	Red River, Madison, Mission Canyon	106,346
Jim Coulee	Musselshell	Tyler	5,998
Jim Coulee, North	Musselshell	Tyler	367
Katy Lake	Sheridan	Red River	13,692
Katy Lake, North	Sheridan	Red River, Mission Canyon, Nesson	228,520
Keg Coulee	Musselshell	Tyler	89
Kelley Unit	Musselshell	Tyler	2,210
Kevin-Sunburst	Toole	Madison, Nisku	356,185
Kevin, East Nisku Oil	Toole	Nisku	33,952
Kincheloe Ranch, West	Rosebud	Tyler	17,276
Laird Creek	Liberty	Swift	767
Lambert	Richland	Red River	50,288
Lambert, North	Richland	Red River	29
Landslide Butte	Glacier	Madison	96,322
Leary	Powder River	Muddy	24,644
Little Beaver	Fallon	Red River, Siluro-Ord	33,725
Little Beaver, East	Fallon	Red River	30,064
Little Wall Creek	Musselshell	Tyler, Lower Tyler, Stensvad	19,906
Little Wall Creek, South	Musselshell	Tyler	40,023
Lone Butte	Richland	Red River	27,320
Lonetree Creek	Richland	Red River	135,158
Lookout Butte	Fallon	Siluro-Ord, Madison	95,891
Lowell	Sheridan	Red River	11,224
Lustre	Valley	Madison, Charles, Mission Canyon, Ratcliffe	137,723
Mason Lake	Musselshell	Amsden	4,607
McCabe	Roosevelt	Ratcliffe	24,655
McCabe, East	Roosevelt	Winnipegosis	7,139
McCabe, West	Roosevelt	Red River	14,270
McCoy Creek	Sheridan	Red River	9,611
Medicine Lake	Sheridan	Winnipegosis, Red River, Gunton, Mission Canyon, Interlake	237,175
Melstone	Musselshell	Tyler	69,981
Miner's Coulee	Toole	Sunburst, Bow Island	509
Missouri Breaks	Richland	Red River	21,807
Mona	Richland	Red River	478,916
Monarch	Fallon	Siluro-Ord, Red River	13,116
Mondak, West	Richland	Devonian, Madison, Red River, Mission Canyon, Ratcliffe, Siluro-Ord, Stoney Mountain	6,672

**ASSOCIATED PRODUCED
GAS PRODUCTION DATA—1985 (CONTINUED)**

Field	County	Producing Formation	1985 Produced MCF
Mustang	Richland	Red River	44,570
Neisser Creek	Sheridan	Red River	28,816
Ninemile	Toole	Nisku	5,560
Nohly	Richland	Red River, Nisku, Ratcliffe	332,160
Nohly, South	Richland	Red River	48,850
North Fork	Richland	Madison, Red River, Mission Canyon	39,807
Olje	Sheridan	Red River	7,219
Ollie	Fallon	Duperow, Red River	2,120
Otis Creek	Richland	Red River	19,287
Otis Creek, South	Richland	Red River	36,755
Outlook	Sheridan	Duperow, Siluro-Ord, Winnipegosis, Nisku, Interlake	35,787
Outlook, West	Sheridan	Winnipegosis	2,160
Oxbow	Roosevelt	Winnipegosis, Red River	28,988
Oxbow II	Roosevelt	Red River	4,857
Palomino	Roosevelt	Nisku	3,216
Pelican	Sheridan	Red River	14,355
Pennel	Fallon	Stoney Mountain, Siluro-Ord, Red River	717,049
Pine	Fallon, Wibaux, Prairie, Dawson	Red River, Siluro-Ord, Stoney Mountain, Madison	358,947
Plentywood	Sheridan	Red River	823
Poplar, East	Roosevelt	Charles, Nisku	47,600
Poplar, Northwest	Roosevelt	Charles C, Madison	303,320
Prichard Creek	Toole	Sunburst	937
Pronghorn	Sheridan	Red River	43,720
Putnam	Richland	Bakken, Madison, Red River	75,690
Rainbow	Richland	Red River	15,602
Rattler Butte	Rosebud	Tyler	860
Raymond	Sheridan	Mississippian, Red River, Devonian, Winnipegosis, Nisku	265,094
Raymond, North	Sheridan	Red River	7,436
Reagan	Glacier	Madison	378,540
Red Bank	Roosevelt	Ratcliffe, Red River, Midale, Mission Canyon	35,945
Red Bank, South	Roosevelt	Red River	44,422
Red Creek Unit	Glacier	Cut Bank, Madison	52,810
Red Fox	Roosevelt	Nisku	271
Red Water	Richland	Duperow	57,519
Red Water, East	Richland	Red River	20,762
Redstone	Sheridan	Winnipegosis	1,327
Refuge	Sheridan	Red River	15,063
Reserve	Sheridan	Red River, Winnipegosis	26,257
Richey, Southwest	McCone	Interlake	2,001
Ridgelawn	Richland	Madison, Red River, Ratcliffe, Duperow Mission Canyon	526,797
River Bend	Richland	Red River	42,654
Rocky Point	Roosevelt	Red River	121,433
Rosebud	Rosebud	Tyler	1,384
Royals	Dawson	Dawson Bay	103,182
Rush Mountain	Sheridan	Red River, Gunton	28,149
Sand Creek	Dawson	Interlake	6,502
Saturn	Daniels	Ratcliffe	1,919
Second Creek	Richland	Red River	30,475
Shotgun Creek	Roosevelt	Red River, Ratcliffe	24,764
Sidney	Richland	Madison, Red River, Mission Canyon, Ratcliffe	135,696
Sidney, East	Richland	Madison	36,035
Singletree	Roosevelt	Winnipegosis	66,884
Sioux Pass	Richland	Red River, Mission Canyon	84,460
Sioux Pass, East	Richland	Red River	1,617
Sioux Pass, Middle	Richland	Red River	70,747
Sioux Pass, North	Richland	Nisku, Madison, Ratcliffe, Mission Canyon, Red River	245,505

**ASSOCIATED PRODUCED
GAS PRODUCTION DATA—1985 (CONTINUED)**

Field	County	Producing Formation	1985 Produced MCF
Sioux Pass, South	Richland	Red River	30,650
South Fork	Richland	Red River	26,455
Spring Lake	Richland	Bakken, Red River	17,365
Spring Lake, South	Richland	Red River	32,717
Spring Lake, West	Richland	Bakken	1,875
Stampede	Richland	Red River, Duperow	51,553
Studhorse	Garfield	Stensvad	2,118
Sumatra	Rosebud	Tyler	8,199
Sunny Hill	Sheridan	Madison, Red River	3,306
Sunny Hill, West	Sheridan	Red River	29,274
Three Buttes	Richland	Gunton, Red River	37,401
Tippy Buttes	Musselshell	Tyler	2,639
Tule Creek	Roosevelt	Nisku, Devonian	47,118
Tule Creek, East	Roosevelt	Nisku	8,183
Tule Creek, South	Roosevelt	Dakota, Nisku	3,642
Two Waters	Richland	Bakken	3,098
Vaux	Richland	Ratcliffe, Madison, Interlake, Mission Canyon, Red River, Stonewall, Midale	199,830
Wagon Trail	Musselshell	Red River	1,546
Wakea	Sheridan	Red River, Interlake, Winnipegosis	146,606
Weed Creek	Yellowstone	Amsden	688
Whitlash	Liberty	Swift, Sunburst	82,977
Wills Creek, South	Fallon	Siluro-Ord	4,888
Wolf Springs	Yellowstone	Amsden	17,185
Woodrow	Dawson	Interlake, Charles C	2,250
Wrangler	Sheridan	Red River	34,238
Wrangler, North	Sheridan	Red River	8,484
Wright Creek	Powder River	Muddy	2,743
Wildcat	Daniels		419
Wildcat	Fallon		1,595
Wildcat	Richland		9,559
Wildcat	Roosevelt		30,681
Wildcat	Sheridan		18,705
Wildcat	Toole		57,942
SUBTOTAL ASSOCIATED GAS PRODUCED			12,335,365
SUBTOTAL NATURAL GAS PRODUCED			41,815,776
TOTAL GAS			54,151,141

NATURAL GAS IMPORTED MMCF

Canada	8,042
Dakotas	29,356
Wyoming	<u>8,738</u>
	46,136

NATURAL GAS EXPORTED MMCF

Canada	178
Dakotas	7,904
Wyoming	14,536
Midwest	<u>11,809</u>
	34,427

REFINERS' YEARLY TOTAL—1985

COMPANY	BEGINNING STORAGE	MONTANA OIL	N. DAKOTA OIL	WYOMING OIL	CANADA OIL	REFINED	ENDING STORAGE
CONTINENTAL OIL CO.	154,318	1,810,358	—	4,720,996	8,642,200	15,183,486	144,383
EXXON COMPANY	270,915	1,126,782	—	10,202,781	1,603,757	13,029,877	174,358
FARMERS UNION	247,506	1,918,112	—	2,334,657	5,829,527	10,111,854	208,978
FLYING J OIL	5,614	—	—	—	—	—	5,614
KENCO REFINING	9,491	863,143	10,400	—	—	885,696	—
MONTANA REFINING CO.	6,796	2,085,993	—	—	—	2,085,172	7,617
TOTALS	694,640	7,804,388	10,400	17,258,434	16,075,484	41,296,085	540,950

PERCENTAGE OF CRUDE OIL REFINED

YEAR	MONTANA	CANADA	N. DAKOTA	WYOMING
1981	22.40	30.40	.04	47.16
1982	21.40	36.47	.00	42.13
1983	16.98	37.16	.11	45.75
1984	18.21	33.80	.13	47.86
1985	18.97	39.06	.03	41.94

AVERAGE BARRELS PER DAY

YEAR	MONTANA	CANADA	N. DAKOTA	WYOMING	TOTAL
1981	23,812	32,320	40	50,133	106,305
1982	24,763	42,198	—	48,749	115,710
1983	19,507	42,696	124	52,555	114,882
1984	21,369	39,662	151	56,153	117,335
1985	21,382	44,043	28	47,283	112,736

REFINING FIVE YEAR COMPARISON

1981	1982	1983	1984	1985
38,801,346	42,234,413	41,932,061	42,944,663	41,296,085

BOARD OF OIL AND GAS CONSERVATION OF THE STATE OF MONTANA
STATEMENT OF CRUDE OIL PRODUCTION AND VALUATION—ALL MONTANA FIELDS

YEAR 1985 AND ACCUMULATED TOTALS FROM DISCOVERY DATE

FIELD	COUNTY	PRODUCTION YEAR 1985			CUMULATIVE TO DECEMBER 31, 1985	
		BARRELS	VALUE	AVERAGE PRICE*	BARRELS	VALUE
Alkali Coulee	Sheridan	460	11,509	25.02	19,546	635,465
Anvil	Roosevelt	431,933	11,070,442	25.63	2,179,521	61,518,697
Ash Creek	Big Horn	4,478	117,144	26.16	811,644	3,105,914
Bainville	Roosevelt	67,353	1,669,680	24.79	401,443	4,644,520
Bainville, North	Roosevelt	136,874	3,394,475	24.80	926,014	29,267,601
Bainville, West	Roosevelt	16,215	400,672	24.71	172,528	5,198,240
Bainville II	Roosevelt	131,922	3,253,196	24.66	246,558	6,778,122
Bannatyne	Teton	11,711	283,991	24.25	318,578	3,072,746
Bear's Den	Liberty	6,512	165,665	25.44	491,704	3,139,502
Belfry	Carbon	1,686	36,417	21.60	100,096	484,721
Bell Creek	Powder River	1,689,666	42,292,339	25.03	126,328,717	1,130,484,781
Benrud	Roosevelt	18,095	450,384	24.89	267,107	2,070,609
Benrud, East	Roosevelt	36,943	926,899	25.09	2,627,614	16,394,903
Benrud, Northeast	Roosevelt	10,178	254,755	25.03	950,582	4,081,346
Berthelote	Toole	558	11,450	20.52	56,831	292,826
Big Gully	Musselshell	2,417	62,116	25.70	97,370	1,446,588
Big Gully, North	Musselshell	2,694	69,235	25.70	23,893	535,154
Big Muddy Creek	Roosevelt	31,935	792,946	24.83	1,150,863	19,464,882
Big Rock	Glacier	3,949	104,332	26.42	7,883	219,442
Big Wall	Musselshell	66,187	1,737,408	26.25	7,364,837	32,793,893
Black Diamond	Wibaux	13,298	308,912	23.23	108,179	3,292,945
Blackfoot	Glacier	48,736	1,237,894	25.40	1,345,118	10,446,798
Blackleaf Canyon	Teton	7,953	172,500	21.69	28,890	772,111
Bloomfield	Dawson	68,348	1,671,792	24.46	195,244	5,116,418
Blue Hill	Richland	5,079	119,965	23.62	159,796	3,075,172
Blue Mountain	Wibaux	12,276	319,912	26.06	31,027	844,377
Border	Toole	2,255	55,022	24.40	1,379,878	4,595,674
Boulder	Richland	15,790	395,065	25.02	156,754	2,530,800
Bowes	Blaine	138,434	2,727,149	19.70	9,251,075	37,590,715
Box Canyon	Richland	26,065	681,339	26.14	169,662	5,587,913
Bradley	Glacier	2,896	68,316	23.59	243,549	1,540,577
Brady	Pondera	7,893	194,641	24.66	145,120	2,853,105
Breed Creek	Rosebud	106,627	2,653,946	24.89	926,149	20,018,230
Brorson-Madison	Richland	68,316	1,668,276	24.42	742,135	10,207,940
Brorson-Red River	Richland	35,374	870,554	24.61	2,098,249	13,285,224
Brorson, South	Richland	50,748	1,256,013	24.75	1,501,256	15,726,158
Brush Lake	Sheridan	79,873	2,096,666	26.25	2,309,135	20,824,264
Buffalo Flats	Chouteau	90	2,251	25.02	469	13,102
Burget, East	Roosevelt	24,470	587,280	24.00	112,255	3,253,301
Burns Creek	Dawson, Richland	5,781	144,062	24.92	234,697	2,799,319
Burns Creek, South	Richland	14,609	356,021	24.37	78,531	2,260,891
Cabin Creek	Fallon	1,787,953	46,021,910	25.74	85,490,462	470,253,198
Canadian Coulee	Hill	629	13,460	21.40	1,150	27,573
Canal	Richland	64,560	1,582,365	24.51	895,719	13,826,640
Cannonball	Fallon	3,977	99,464	25.01	53,183	1,774,363
Carlyle	Wibaux	19,081	479,696	25.14	248,076	5,932,282
Cat Creek	Petroleum, Garfield	63,272	1,621,028	25.62	23,317,462	66,410,180
Charlie Creek	Richland	16,983	413,875	24.37	575,459	10,386,071
Charlie Creek, East	Richland	35,202	916,660	26.04	248,358	8,070,931
Charlie Creek, North	Richland	5,025	122,358	24.35	36,753	1,079,133
Chelsea Creek	Roosevelt	23,146	579,112	25.02	38,367	726,822
Clark's Fork	Carbon	677	16,945	25.03	87,409	378,376
Clear Lake	Sheridan	195,913	5,038,882	25.72	1,692,869	43,216,430

PRODUCTION YEAR 1985

CUMULATIVE TO
DECEMBER 31, 1985

FIELD	COUNTY	BARRELS	VALUE	AVERAGE PRICE*	BARRELS	VALUE
Clear Lake, South	Sheridan	50,635	1,295,243	25.58	69,074	1,814,669
Coal Ridge	Sheridan	211	5,319	25.21	21,019	772,283
Colored Canyon	Sheridan	75,125	1,951,747	25.98	650,204	17,695,102
Comertown	Sheridan	235,502	6,066,531	25.76	1,431,979	44,042,228
Comertown, South	Sheridan	81,846	2,059,245	25.16	100,060	2,583,626
Conrad, South	Pondera	1,589	42,585	26.80	144,345	904,070
Corner Pocket	Richland	8,451	197,668	23.39	13,264	332,287
Cottonwood	Richland	62,698	1,552,402	24.76	88,285	2,268,070
Cow Creek	McCone	2,802	66,743	23.82	126,702	1,288,507
Cow Creek, East	McCone	51,949	1,299,244	25.01	2,231,138	25,367,594
Crane	Richland	115,378	2,883,296	24.99	1,020,423	32,249,584
Crocker Springs, East	Pondera	137	3,340	24.38	1,408	40,828
Crooked Creek	Yellowstone	8,494	221,608	26.09	8,494	221,608
Cupton	Fallon	80,604	2,119,079	26.29	1,940,869	24,900,947
Cut Bank	Glacier, Toole	1,073,094	27,020,506	25.18	158,328,764	659,616,633
Dagmar	Sheridan	49,439	1,273,548	25.76	463,668	10,752,855
Dagmar, North	Sheridan	4,353	109,434	25.14	49,003	1,555,939
Deadman's Coulee	Roosevelt	29,962	749,349	25.01	252,115	7,875,944
Dean Dome	Stillwater	13,654	213,958	15.67	90,415	1,514,890
Deer Creek	Dawson	4,829	131,928	27.32	2,298,556	6,437,664
Delphia	Musselshell	3,152	79,304	25.16	317,788	1,416,126
Devil's Basin	Musselshell	867	21,163	24.41	101,852	1,571,786
Devil's Pocket	Golden Valley	13,867	321,991	23.22	21,641	534,298
Diamond Point	Roosevelt	67,191	1,543,377	22.97	557,563	13,188,300
Divide	Sheridan	149,265	3,600,271	24.12	1,186,812	35,002,071
Dry Creek	Carbon	7,609	192,203	25.26	4,126,855	9,712,398
Dry Creek, Middle	Carbon	217	5,351	24.66	447	12,021
Dugout Creek	Richland	230	5,664	24.63	66,740	2,205,099
Dutch John Coulee	Toole	36,477	963,357	26.41	36,477	963,357
Dwyer	Sheridan	302,722	7,740,601	25.57	7,347,811	53,982,390
Eagle	Richland	161,864	4,276,446	26.42	1,201,664	31,688,592
East Glacier	Glacier	841	21,403	25.45	19,402	630,252
Elk Basin	Carbon	680,582	17,327,617	25.46	79,930,890	314,262,948
Elk Basin, Northwest	Carbon	249	6,488	26.06	1,217,696	5,337,118
Enid, North	Richland	21,694	539,963	24.89	221,126	6,356,484
Fairview	Richland	262,912	6,635,898	25.24	7,556,032	70,263,326
Fairview, East	Richland	19,272	482,763	25.05	311,389	9,790,310
Fairview, West	Richland	25,070	611,958	24.41	129,907	3,847,761
Fertile Prairie	Fallon	28,882	743,711	25.75	600,402	5,950,722
Fiddler Creek	Stillwater	410	6,072	14.81	2,422	48,107
Fishhook	Sheridan	116,978	2,946,675	25.19	779,454	24,060,531
Flat Coulee	Liberty	142,505	3,740,756	26.25	4,261,555	43,651,630
Flat Lake	Sheridan	390,468	9,718,748	24.89	14,082,271	110,645,654
Flat Lake, East	Sheridan	6,816	167,809	24.62	9,337	245,541
Flat Lake, South	Sheridan	39,583	979,283	24.74	1,087,457	11,946,855
Flaxville	Daniels	4,411	103,790	23.53	46,003	1,235,631
Fort Gilbert	Richland	106,390	2,727,839	25.64	1,788,483	25,381,958
Four Mile Creek	Richland	14,177	347,194	24.49	323,885	6,173,366
Four Mile Creek, West	Richland	7,850	192,246	24.49	229,156	5,307,174
Fox Creek	Richland	7,419	183,323	24.71	189,882	4,482,347
Fox Creek, North	Richland	2,954	75,031	25.40	63,927	1,700,094
Frannie	Carbon	5,993	146,468	24.44	752,300	2,663,509
Fred & George Creek	Toole	123,422	3,263,277	26.44	12,690,249	77,511,188

PRODUCTION YEAR 1985

**CUMULATIVE TO
DECEMBER 31, 1985**

FIELD	COUNTY	PRODUCTION YEAR 1985			CUMULATIVE TO DECEMBER 31, 1985	
		BARRELS	VALUE	AVERAGE PRICE*	BARRELS	VALUE
Frog Coulee	Richland	9,284	238,320	25.67	132,027	4,138,739
Froid, South	Roosevelt	5,410	133,140	24.61	202,208	1,948,009
Gage	Musselshell	7,911	205,211	25.94	621,560	2,959,484
Gas City	Dawson	114,563	2,941,977	25.68	9,650,927	49,134,797
Girard	Richland	46,258	1,147,660	24.81	274,699	2,496,979
Glendive	Dawson	154,162	4,091,459	26.54	12,070,855	56,668,804
Glendive, South	Dawson	77	1,757	22.82	68,936	2,009,079
Golden Dome	Carbon	4,969	117,665	23.68	65,303	877,165
Goose Lake	Sheridan	191,441	4,741,993	24.77	8,287,676	57,674,960
Goose Lake, West	Sheridan	61,524	1,523,949	24.77	318,965	9,329,370
Gossett	Richland	47,628	1,150,216	24.15	160,335	4,410,376
Graben Coulee	Glacier	74,830	1,810,886	24.20	1,775,643	20,444,033
Grandview, East	Liberty	3,868	94,224	24.36	32,543	872,436
Grebe	Rosebud	95	2,460	25.90	890	25,371
Green Coulee	Sheridan	20,287	525,636	25.91	111,098	3,388,471
Green Coulee, East	Sheridan	19,630	511,754	26.07	58,508	1,668,738
Gumbo Ridge	Rosebud	27,554	700,698	25.43	559,247	10,868,673
Gunsight	Roosevelt	34,037	828,800	24.35	123,347	3,432,339
Gypsy Basin	Pondera	17,281	419,755	24.29	408,959	6,542,562
Hardpan	Pondera	423	10,088	23.85	1,430	40,944
Hardscrabble Creek	Richland	22,536	563,850	25.02	80,010	2,247,456
Hawk Creek	Musselshell	507	13,055	25.75	9,738	111,783
Hawk Haven	Richland	121	3,027	25.02	7,392	236,689
Hay Creek	Richland	29,460	741,508	25.17	1,179,213	9,239,168
Hiawatha	Musselshell	19,092	494,291	25.89	1,472,844	8,651,183
Hibbard	Rosebud	2,387	59,722	25.02	215,860	1,977,971
High Five	Rosebud	146,400	3,872,280	26.45	1,863,945	41,487,125
Highview	Pondera	7,919	193,461	24.43	44,137	1,199,679
Honker	Sheridan	11,278	284,995	25.27	79,979	2,521,534
Horse Creek	Liberty	526	13,097	24.90	9,393	189,654
Howard Coulee	Musselshell	3,206	80,214	25.02	121,715	1,822,879
Injun Creek	Rosebud	5,495	142,045	25.85	110,692	2,789,273
Intake II	Richland	81,030	2,137,571	26.38	547,223	16,690,776
Ivanhoe	Musselshell	10,110	269,937	26.70	4,487,995	14,133,134
Jim Coulee	Musselshell	81,643	2,088,427	25.58	3,975,610	39,854,297
Katy Lake	Sheridan	17,656	442,812	25.08	32,342	836,728
Katy Lake, North	Sheridan	335,366	8,410,979	25.08	2,544,561	80,878,760
Keg Coulee	Musselshell	115,299	3,023,139	26.22	5,291,094	31,099,456
Keg Coulee, North	Musselshell	8,003	211,999	26.49	427,762	4,678,586
Kelley	Musselshell	16,339	421,872	25.82	956,387	5,463,386
Kevin-Sunburst	Toole	661,729	16,139,570	24.39	76,588,302	254,336,246
Kevin Nisku Oil, East	Toole	50,214	1,263,384	25.16	75,200	1,973,819
Kicking Horse	Toole	94	2,351	25.02	1,443	47,446
Kincheloe Ranch, West	Rosebud	62,136	1,649,089	26.54	432,948	13,279,111
Laird Creek	Liberty	6,762	176,826	26.15	558,965	4,417,120
Lambert	Richland	31,564	808,038	25.60	315,624	9,774,683
Lambert, North	Richland	1,090	27,904	25.60	36,552	1,221,300
Lamesteer Creek	Wibaux	6,847	168,573	24.62	12,473	329,757
Landslide Butte	Glacier	44,193	1,135,760	25.70	136,374	2,861,871
Leary	Powder River	32,927	833,053	25.30	570,888	8,464,497
Little Beaver	Fallon	399,024	10,011,512	25.09	11,191,600	89,824,611
Little Beaver, East	Fallon	125,991	3,161,114	25.09	5,153,666	32,388,560
Little Phantom	Toole	2,685	64,440	24.00	44,865	983,790
Little Wall Creek	Musselshell	157,894	4,098,928	25.96	3,023,672	57,110,558

