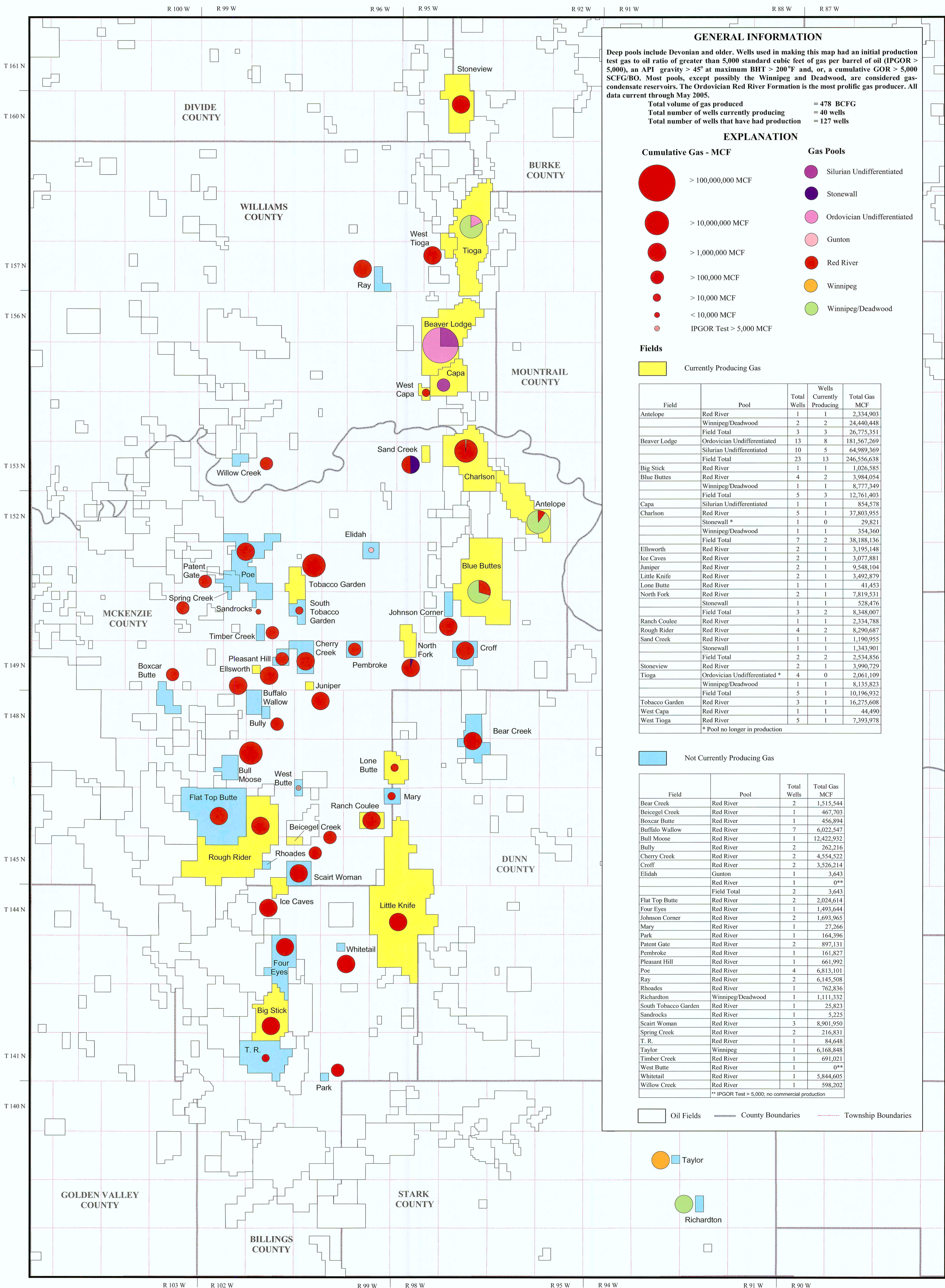


North Dakota Deep Gas Production

Randy B. Burke

2005



GENERAL INFORMATION

Deep pools include Devonian and older. Wells used in making this map had an initial production test gas to oil ratio of greater than 5,000 standard cubic feet of gas per barrel of oil (IPGOR > 5,000), an API gravity > 45° at maximum BHT > 200°F and, or, a cumulative GOR > 5,000 SCFG/BO. Most pools, except possibly the Winnipeg and Deadwood, are considered gas-condensate reservoirs. The Ordovician Red River Formation is the most prolific gas producer. All data current through May 2005.

Total volume of gas produced = 478 BCFG
Total number of wells currently producing = 40 wells
Total number of wells that have had production = 127 wells

EXPLANATION

Cumulative Gas - MCF

- > 100,000,000 MCF
- > 10,000,000 MCF
- > 1,000,000 MCF
- > 100,000 MCF
- > 10,000 MCF
- < 10,000 MCF
- IPGOR Test > 5,000 MCF

Gas Pools

- Silurian Undifferentiated
- Stonewall
- Ordovician Undifferentiated
- Gunton
- Red River
- Winnipeg
- Winnipeg/Deadwood

Fields

- Currently Producing Gas
- Not Currently Producing Gas

Field	Pool	Total Wells	Wells Currently Producing	Total Gas MCF
Antelope	Red River	1	1	2,334,903
	Winnipeg/Deadwood	2	2	24,440,448
	Field Total	3	3	26,775,351
Beaver Lodge	Ordovician Undifferentiated	13	8	181,567,269
	Silurian Undifferentiated	10	5	64,989,369
	Field Total	23	13	246,556,638
Big Stick	Red River	1	1	1,026,585
Blue Buttes	Red River	4	2	3,984,054
	Winnipeg/Deadwood	1	1	8,777,349
	Field Total	5	3	12,761,403
Capa	Silurian Undifferentiated	1	1	854,578
Charlson	Red River	5	1	37,803,955
	Stonewall *	1	0	29,821
	Winnipeg/Deadwood	1	1	354,360
	Field Total	7	2	38,188,136
Ellsworth	Red River	2	1	3,195,148
Ice Caves	Red River	2	1	3,077,881
Juniper	Red River	2	1	9,548,104
Little Knife	Red River	2	1	3,492,879
Lone Butte	Red River	1	1	41,453
North Fork	Red River	2	1	7,819,531
	Stonewall	1	1	528,476
	Field Total	3	2	8,348,007
Ranch Coulee	Red River	1	1	2,334,788
Rough Rider	Red River	4	2	8,290,687
Sand Creek	Red River	1	1	1,190,955
	Stonewall	1	1	1,343,901
	Field Total	2	2	2,534,856
Stoneview	Red River	2	1	3,990,729
Tioga	Ordovician Undifferentiated *	4	0	2,061,109
	Winnipeg/Deadwood	1	1	8,135,823
	Field Total	5	1	10,196,932
Tobacco Garden	Red River	3	1	16,275,608
West Capa	Red River	1	1	44,490
West Tioga	Red River	5	1	7,393,978

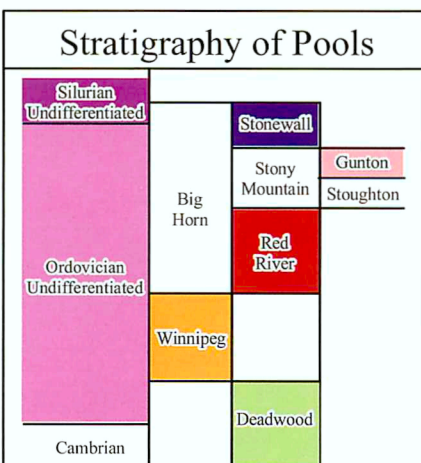
Not Currently Producing Gas

Field	Pool	Total Wells	Total Gas MCF
Bear Creek	Red River	2	1,515,544
Beicegel Creek	Red River	1	467,703
Boxcar Butte	Red River	1	456,894
Buffalo Wallow	Red River	7	6,022,547
Bull Moose	Red River	1	12,422,932
Bully	Red River	2	262,216
Cherry Creek	Red River	2	4,554,522
Croff	Red River	2	3,526,214
Elidah	Gunton	1	3,643
	Red River	1	0**
	Field Total	2	3,643
Flat Top Butte	Red River	2	2,024,614
Four Eyes	Red River	1	1,493,644
Johnson Corner	Red River	2	1,693,965
Mary	Red River	1	27,266
Park	Red River	1	164,396
Patent Gate	Red River	2	897,131
Pembroke	Red River	1	161,827
Pleasant Hill	Red River	1	661,992
Poe	Red River	4	6,813,101
Ray	Red River	2	6,145,508
Rhoades	Red River	1	762,836
Richardton	Winnipeg/Deadwood	1	1,111,332
South Tobacco Garden	Red River	1	25,823
Sandrocks	Red River	1	5,225
Scairt Woman	Red River	3	8,901,950
Spring Creek	Red River	2	216,831
T. R.	Red River	1	84,648
Taylor	Winnipeg	1	6,168,848
Timber Creek	Red River	1	691,021
West Butte	Red River	1	0**
Whitetail	Red River	1	5,844,605
Willow Creek	Red River	1	598,202

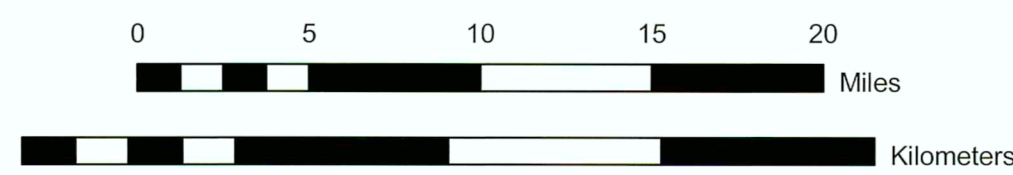
Oil Fields County Boundaries Township Boundaries

Taylor

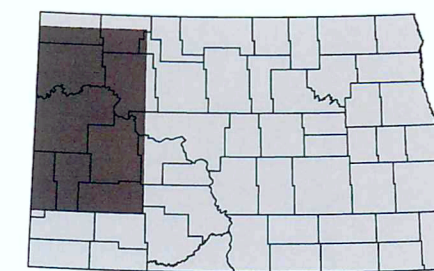
Richardton



Scale 1:355,000



1927 North American Datum
Standard parallel 47°30' Mercator Projection
Central meridian 102°00'



North Dakota