# BARRY T. SMITHERMAN Chairman DAVID PORTER Commissioner

CHRISTI CRADDICK
Commissioner



A Monthly Data Review from the Railroad Commission of Texas ■ January 2014

### HIGHLIGHTS

### **Natural Gas Production**

In October 2013 Texas natural gas production was 682.93 billion cubic feet (bcf), down from 684.31 bcf produced during the same month in 2012. (Note: Recent oil and gas production data are considered preliminary, incomplete, and subject to revision. See pages 3 and 6 for the most recent production adjustment factors.)

### **Crude Oil Production**

In October 2013 Texas crude oil production averaged 2.062 million barrels per day (mmb/d), up from 1.748 mmb/d reported during the same month in 2012. (See Note above.)

### **Rotary Rigs Operating in Texas**

In December 2013 the average Texas rotary rig count was 843, up from 838 rigs running during the same month last year. The December rig count was up from the November rig count of 829.

Source: Baker Hughes Co.

# **Permits to Drill**

In December 2013 the Railroad Commission issued 1,619 original permits to drill, up from 1,457 permits issued during the same month last year and up from 1,559 permits issued in November.

### **Oil and Gas Well Completions**

In December 2013 operators reported 1,348 oil completions, up from 815 oil completions during the same month last year. There were 156 gas completions in December, down from 198 gas completions reported during the same month last year. There were 1,504 wells drilled in Texas in December, up from 1,014 wells drilled during the same month last year.

## **TRENDS**

# **EIA Short-Term Outlook for Crude Oil and Natural Gas:**

The average price of imported crude for U.S. refiners (an indicator of world oil prices) is expected to decrease from the average 2013 level of \$99.63 per barrel to \$99.02 per barrel during the 1<sup>st</sup> quarter of 2014 and average \$97.37 for the year, according to the U.S. Energy Information Administration's (EIA) "Short-Term Energy Outlook" for January 2014.

The West Texas Intermediate spot average is expected to decrease from the 2013 average level of \$97.91 per barrel to \$95.00 per barrel during the 1<sup>st</sup> quarter of 2014 and average \$93.33 for the year.

U.S. petroleum demand is expected to increase 0.05 percent from 2013 to 2014 to 18.88 million barrels per day and increase 0.42 percent from 2014 to 2015 to 18.96 million barrels per day.

U.S. natural gas demand is expected to decrease 2.22 percent from 2013 to 2014 to 25.41 trillion cubic feet, and is expected to increase by 2.05 percent from 2014 to 2015 to 25.94 trillion cubic feet.

EIA projects that natural gas Henry Hub spot prices will average \$4.08 per mmbtu for the 1<sup>st</sup> quarter of 2014 and average \$3.89 per mmbtu for the year. This is a 4.29 percent increase from EIA's 2013 Henry Hub spot price of \$3.73 per mmbtu. (Note: Beginning January 2013 EIA discontinued publishing wellhead prices and began publishing a natural gas spot price at the Henry Hub.)

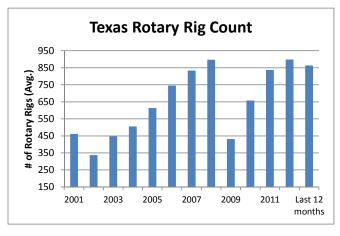
EIA projects a natural gas Henry Hub spot price of \$4.11 per mmbtu for 2015, a 5.66 percent increase from the \$3.89 projected average price for 2014. (See note above.)

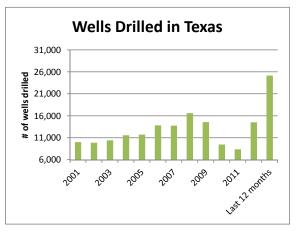
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**TABLE 1. TEXAS DRILLING AND COMPLETION SUMMARY** 

	Active Rota	ry Rigs *	<b>-</b>	Wells Cor	npleted	W-II- D.:III**	
Period	Texas	U.S.	Permits #	Oil	Gas	Wells Drilled **	
1992	252	721	12,089	5,031	2,537	9,498	
1993	264	754	11,612	4,646	3,295	9,969	
1994	274	775	11,248	3,962	3,553	9,299	
1995	251	723	11,244	4,334	3,778	9,785	
1996	283	779	12,669	4,061	4,060	9,747	
1997	358	943	13,933	4,482	4,594	10,778	
1998	303	827	9,385	4,509	4,907	11,057	
1999	227	625	8,430	2,049	3,566	10,778	
2000	343	918	12,021	3,111	4,580	8,854	
2001	462	1,156	12,227	3,082	5,787	10,005	
2002	338	830	9,716	3,268	5,474	9,877	
2003	449	1,032	12,664	3,111	6,336	10,420	
2004	506	1,192	14,700	3,446	7,118	11,587	
2005	614	1,381	16,914	3,454	7,197	11,726	
2006	746	1,649	18,952	4,761	8,534	13,854	
2007	834	1,769	19,994	5,084	8,643	13,778	
2008	898	1,880	24,073	6,208	10,361	16,615	
2009	432	1,086	12,212	5,860	8,706	14,585	
2010	658	1,541	18,029	5,392	4,071	9,477	
2011	838	1,875	22,480	5,380	3,008	8,391	
2012	899	1,919	22,479	10,936	3,580	14,535	
Last 12 months	864	1,823	22,928	20,064	5,115	25,180	
Dec-12	838	1,784	1,457	815	198	1,014	
Jan-13	821	1,756	1,978	1,114	351	1,465	
Feb-13	833	1,762	1,744	1,006	351	1,357	
Mar-13	335	702	2,053	1,391	574	1,965	
Apr-13	836	1,755	1,996	1,894	505	2,399	
May-13	838	1,767	1,931	2,395	521	2,916	
Jun-13	845	1,768	1,876	1,826	405	2,231	
Jul-13	841	1,766	1,843	1,860	470	2,330	
Aug-13	848	1,781	1,606	1,576	500	2,076	
Sep-13	837	1,760	1,531	1,456	424	1,880	
Oct-13	820	1,744	1,735	1,758	493	2,251	
Nov-13	829	1,756	1,559	1,625	167	1,792	
Dec-13	843	1,771	1,619	1,348	156	1,504	





<sup>\*</sup> Source: Baker Hughes Inc.

<sup>#</sup> Totals shown are number of drilling permits issued

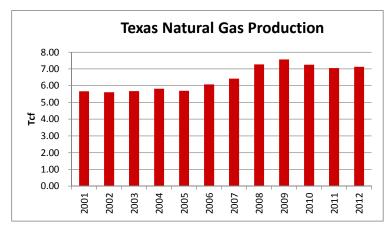
<sup>\*\*</sup> Wells drilled are oil and gas well completions and dry holes drilled/plugged.

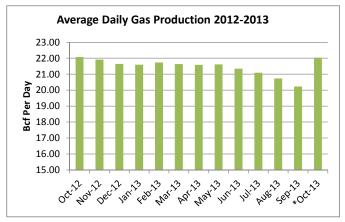
**TABLE 2. TEXAS NATURAL GAS (Trillion CF)** 

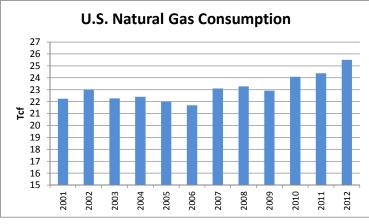
Period	Total Production *	Proved Reserves #	Consumption #	Producing Wells *	Wellhead Price **
1993	5.61	37.8	3.74	50,794	\$2.04
1994	5.68	39.0	3.67	52,614	\$1.85
1995	5.67	39.7	3.80	53,612	\$1.55
1996	5.77	41.6	3.99	55,052	\$2.17
1997	5.81	41.1	4.12	56,736	\$2.32
1998	5.77	40.8	4.21	58,436	\$1.96
1999	5.54	43.4	4.01	59,088	\$2.19
2000	5.65	45.4	4.42	60,486	\$3.68
2001	5.67	46.5	4.25	63,598	\$4.00
2002	5.61	47.5	4.30	65,686	\$2.95
2003	5.68	48.7	4.05	68,488	\$4.88
2004	5.82	53.3	3.91	72,237	\$5.46
2005	5.70	60.2	3.50	76,510	\$7.33
2006	6.08	65.8	3.43	83,218	\$6.39
2007	6.42	76.4	3.52	88,311	\$6.25
2008	7.27	81.8	3.55	96,502	\$7.97
2009	7.57	85.0	3.39	101,097	\$3.67
2010	7.25	94.3	3.57	101,653	\$4.48
2011	7.05	104.5	3.70	101,831	\$3.95
2012	7.13	n/a	3.87	n/a	\$2.66

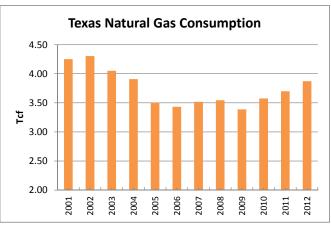
Total Gas Production (Bcf)										
Period	Daily	Monthly	Gas Well	Casinghead						
Oct-12	22.07	684.31	571.30	113.00						
Nov-12	21.91	657.40	545.77	111.63						
Dec-12	21.64	670.94	556.47	114.47						
Jan-13	21.59	669.23	555.33	113.90						
Feb-13	21.74	608.58	502.51	106.07						
Mar-13	21.63	670.60	552.81	117.79						
Apr-13	21.58	647.40	530.93	116.47						
May-13	21.62	670.16	545.69	124.47						
Jun-13	21.34	640.25	519.40	120.85						
Jul-13	21.09	653.89	528.98	124.92						
Aug-13	20.73	642.56	517.40	125.16						
Sep-13	20.22	606.75	484.64	122.11						
*Oct-13	22.03	682.93	569.44	113.50						

\* Note: The most recent 12 months of production data is preliminary and subject to revision. The most recent month of data is incomplete and may underestimate the final and complete total; a production adjustment factor of 1.2301 has been applied to reported October gas well production to obtain an estimate of final gas well production.









<sup>\*</sup> Source: Railroad Commission of Texas. The most recent 12 months of production data is subject to revision.

Source for 2001 and after is EIA and wellhead price is national average. Beginning 01/13 EIA will discontinue publishing wellhead prices and begin publishing a natural gas spot price at the Henry Hub.

<sup>#</sup> Source: US Energy Information Administration (EIA):EIA's reserves for estimates for 1992 and after exclude federal offshore and are wet after lease separation.

<sup>\*\*</sup> Source: Texas Comptroller of Public Accounts. Wellhead price is average net taxable price (\$/Mcf) and excludes federal offshore production.

**TABLE 3. TEXAS GAS STORAGE OPERATIONS** 

Productive or Depleted Re	]	Reported Max Withdrawal Rate	Working Gas*	Working Gas* 12/31/2012	Change From	Preliminary Working Gas* 1/15/2014	
Operator	Field	County Location	(MMCF/DAY)	Inventory 12/31/13 (MMCF)	(MMCF)	One Year Ago (MMCF)	(MMCF)
Oneok TX Gas Storage LP	Felmac (Yates)	Gaines	45	1,828	2,272	(444)	1,518
Oneok TX Gas Storage LP	Loop (Yates)	Gaines	75	800	800	-	800
Enbridge Pipeline LLC	Pickton (Bacon Lime)	Hopkins	15	2,170	2,108	62	2,172
Houston Pipe Line Co.	Bammell	Harris	1,300	53,592	58,582	(4,990)	45,844
Cago, Inc.	Ambassador	Clay	40	80	80	-	80
Hill Lake Gas Storage LLC	Hill-Lake Sand	Eastland	450	7,185	8,275	(1,090)	6,134
ATMOS Pipeline - Texas	Lake Dallas	Denton	120	3,305	3,314	(9)	3,251
ATMOS Pipeline - Texas	La-Pan-Miss	Clay	120	2,399	2,765	(366)	2,330
Cummings Company, Inc.	Leeray Strawn	Stephens	20	- 0.40	4.700	(004)	-
ATMOS Pipeline - Texas	New York City	Clay	120	3,919	4,780	(861)	3,805
Fort Concho Gas Storage, Inc.	Pecan Station	Tom Green	28	1,027	873	154	1,012
ATMOS Pipeline - Texas	Tri-Cities Bacon	Henderson	275	15,616	19,015	(3,399)	15,637
ATMOS Pipeline - Texas Lower Colorado River Authority	Tri-Cities Rodessa Hilbig	Henderson Bastrop	50 100	2,471 2,534	2,394 2,313	77 221	2,471 2,548
Natural Gas Pipeline Co.	North Lansing	Harrison	1,100	2,534 87,870	2,313 95,396	(7,526)	2,546 82,396
Devon Gas Services LP	Lone Camp	Palo Pinto	28	203	381	(178)	203
Kinder Morgan Tejas Pipeline LLC	Clear Lake	Harris	900	51,137	56,463	(5,326)	42,017
Energy Transfer Fuel LP	Bryson	Jack	100	5,266	5,423	(157)	5,235
Worsham-Steed Gas Storage, LLC	Worsham Steed	Jack Jack	25	14,587	20,372	(5,785)	11,911
Katy Storage and Transportation LP	Pottsville	Hamilton	200	14,307	20,372	(3,763)	11,911
Enstor Katy Storage and Transportation LP	Katy Hub & Storage	Fort Bend	700	19,816	21,320	(1,504)	16,802
Ensior Raty Glorage and Transportation Er	raty riab a otorage	Subtotals	5,811	275,805	306,926	(31,121)	246,166
		_	3,311	,,,,,	000,020	(01,121)	,
Salt Caverns		]					
Oneok TX Gas Storage LP	Salado (Loop Yates)	Gaines	500	597	1,024	(427)	754
Kinder Morgan Tejas Pipeline LP	Stratton Ridge	Brazoria	250	689	1,224	(535)	547
Centana Intrastate Pipeline LLC	Spindletop	Jefferson	400	10,805	6,385	4,420	10,623
Dow Chemical Co.	Stratton Ridge #34	Brazoria	200	-	-	-	-
Dow Chemical Co.	Stratton Ridge #6	Brazoria	180	1,064	999	65	1,013
Kinder Morgan Texas Pipeline LP	North Dayton	Liberty	750	2,559	4,658	(2,099)	3,294
ATMOS Pipeline - Texas	Bethel	Anderson	600	4,899	5,525	(626)	4,852
Moss Bluff Hub Partners LP	Moss Bluff	Liberty	1,000	14,207	14,809	(602)	11,084
Chevron Phillips Chemical Co	Clemens	Brazoria	75	1,337	863	474	1,131
PB Energy Storage Services, Inc.	Spindletop	Jefferson	480	7,012	6,694	318	6,869
Underground Services Markham, LP	Markham	Matagorda	1,100	4,101	12,140	(8,039)	5,024
Energy Transfer Fuel LP	Bethel Salt Dome	Anderson	600	1,370	1,491	(121)	1,310
Envoy Resources Inc	Wilson	Wharton	800	10,857	11,900	(1,043)	9,510
Chevron Keystone Gas Storage Underground Storage LLC	Keystone Gas Storage Pierce Junction	Winkler Harris	350 350	5,055 948	5,897 794	(842) 154	4,912 1,137
Tres Palacios Storage LLC	Markham	Matagorda	2,500	14,140	794 29,849	(15,709)	1,137 8,302
Golden Triangle Storage, Inc	Spindletop	Jefferson	300	9,414	10,542	(1,128)	7,890
Freeport LNG Development, LP	Stratton Ridge	Brazoria	300	4,299	8,374	(4,075)	-
1 100port ENO Development, El	Strattori Mago	Subtotals	10,735	93,353	123,168	(29,815)	82,551
Source: RRC Form G-3			OTALS 16,546	369,158	430,094	(60,936)	328,717

<sup>\*</sup> Notes: 1) Native Gas volumes are included in Working Gas volumes with the exception of Houston Pipe Line's Bammel facility and Natural Gas Pipeline Co. of America's North Lansing facility, in which the native gas is part of the non-working resident gas. 2) Due to an expansion of the North Lansing facility, 9,700 MMCCF of Resident Gas Inventory was converted to Working Gas volume as of June, 2007. 3) Tres Palacios Storage LLC Salt Cavern facility was added to report as of October, 2008. 4) The information contained on this report is an estimate for Worsham-Steed Gas Storage LLC and Hill-Lake Gas Storage LLC facilities while engineering studies are in process (8/20/2010).

 TABLE 4. TEXAS GAS STORAGE OPERATIONS, 2012-2013

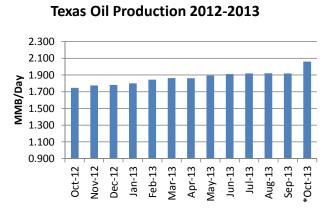
	Depleted Reservoirs		epleted Reservoirs Salt Caverns						Total				
<u>-</u>	Beginning Balance (Mmcf)	Injections/ (Withdrawals) (Mmcf)	Ending Balance (Mmcf)	Beginning Balance (Mmcf)	Injections/ (Withdrawals) (Mmcf)	Ending Balance (Mmcf)		Beginning Balance (Mmcf)	Injections/ (Withdrawals) (Mmcf)	Ending Balance (Mmcf)			
December-12	315,383	(8,482)	306,901	148,101	(24,933)	123,168		463,484	(33,415)	430,069			
January-13	306,901	(41,340)	265,561	123,168	(25,521)	97,647		430,069	(66,861)	363,208			
February-13	265,561	(32,066)	233,495	97,647	(14,834)	82,813		363,208	(46,900)	316,308			
March-13	233,495	(24,177)	209,318	82,813	(7,170)	75,643		316,308	(31,347)	284,961			
April-13	209,318	2,755	212,073	75,643	12,973	88,616		284,961	15,728	300,689			
May-13	212,073	34,329	246,402	88,616	21,834	110,450		300,689	56,163	356,852			
June-13	246,402	19,157	265,559	110,450	2,204	112,654		356,852	21,361	378,213			
July-13	265,559	13,090	278,649	112,654	(4,644)	108,010		378,213	8,446	386,659			
August-13	278,649	6,772	285,421	108,010	(4,043)	103,967		386,659	2,729	389,388			
September-13	285,421	16,544	301,965	103,967	10,314	114,281		389,388	26,858	416,246			
October-13	301,965	18,647	320,612	114,281	15,916	130,197		416,246	34,563	450,809			
November-13	320,612	(9,753)	310,859	130,197	(4,759)	125,438		450,809	(14,512)	436,297			
December-13	310,859	(35,054)	275,805	125,438	(32,085)	93,353		436,297	(67,139)	369,158			

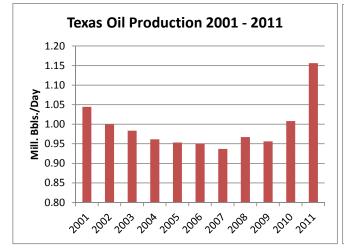
**TABLE 5. TEXAS CRUDE OIL (million barrels)** 

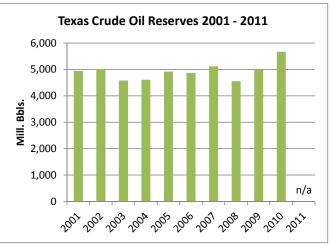
Period	Texas Total Production *	Texas Daily Average	% of U.S. Production		Proved Reserves #	% of U.S. Reserves	# of Producing Wells *	WTI Spot Price **
1993	576	1.58	23.0%	_	6,171	26.9	186,342	\$18.61
1994	542	1.49	22.3%		5,847	26.0	179,955	\$17.30
1995	513	1.40	21.4%		5,743	25.7	177,397	\$14.73
1996	500	1.37	21.1%		5,736	26.1	175,277	\$16.31
1997	491	1.35	20.9%		5,687	25.2	175,475	\$18.77
1998	460	1.26	20.1%		4,927	23.4	170,288	\$20.01
1999	409	1.12	19.1%		5,339	24.5	162,620	\$14.06
2000	401	1.10	18.8%		5,273	23.9	161,097	\$20.01
2001	381	1.04	18.0%		4,944	22.0	159,357	\$28.71
2002	365	1.00	17.4%		5,015	22.1	155,865	\$25.95
2003	359	0.98	17.3%		4,583	20.9	153,461	\$26.11
2004	351	0.96	17.7%		4,613	21.6	151,205	\$31.12
2005	348	0.95	18.4%		4,919	22.6	151,286	\$41.44
2006	347	0.95	18.6%		4,871	23.2	151,832	\$56.49
2007	342	0.94	18.5%		5,122	24.0	153,223	\$66.02
2008	353	0.97	19.5%		4,555	23.8	156,588	\$72.32
2009	349	0.96	17.8%		5,006	24.2	157,807	\$99.57
2010	368	1.01	18.4%		5,674	24.4	158,451	\$61.66
2011	422	1.16	20.3%		n/a	n/a	161,402	\$79.40
Oct-12	54.18	1.748	* Note: The I		Tex	as Oil Prod	duction 201	12-2013
Nov-12	53.30	1.777	12 months of					



data is preliminary and subject to revision. The most recent month of data is incomplete and may underestimate the final and complete total; a adjustment production factor of 1.1726 has been applied to reported October crude oil production to obtain an estimate of final crude oil production.







<sup>\*</sup> Source: Railroad Commission of Texas. The most recent 12 months of production data is subject to revision

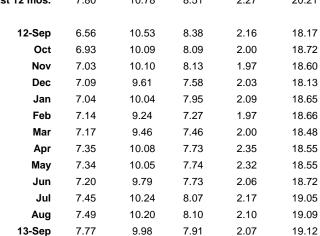
Source for 2001 and after is EIA. Wellhead price is West Texas Intermediate spot average.

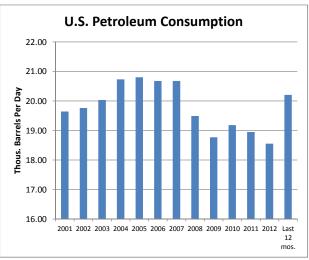
<sup>#</sup> Source: U.S. Energy Information Administration (EIA). Reserve estimates for 1985 and after exclude federal offshore.

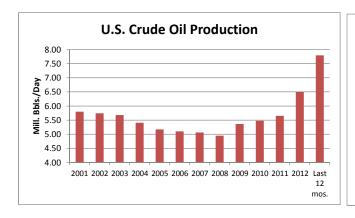
<sup>\*\*</sup> Source: Texas Comptroller of Public Accounts. Wellhead price is average net taxable price (\$/bbl.) & excludes federal offshore production.

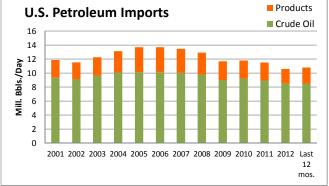
TABLE 6. US PETROLEUM OVERVIEW (MILLION BARRELS PER DAY)

	l I		Imports **		Products	Proved	Wells	Wellhead
Period	Production*	Total	Crude Oil	Products	Supplied #	Reserves **	Drilled **	Price **
1991	7.42	7.63	5.78	1.84	16.71	24,682	29,528	16.54
1992	7.17	7.89	6.08	1.81	17.03	23,745	23,608	15.99
1993	6.85	8.62	6.79	1.83	17.24	22,957	25,451	14.25
1994	6.66	9.00	7.06	1.93	17.72	22,457	22,255	13.19
1995	6.56	8.84	7.23	1.61	17.72	22,351	21,600	14.62
1996	6.47	9.48	7.51	1.97	18.31	22,017	23,886	18.46
1997	6.45	10.16	8.23	1.94	18.62	22,546	27,586	17.23
1998	6.25	10.71	8.71	2.00	18.92	21,034	22,911	10.87
1999	5.88	10.85	8.73	2.12	19.52	21,765	18,939	15.56
2000	5.82	11.46	9.07	2.39	19.70	22,045	29,287	26.72
2001	5.80	11.87	9.33	2.54	19.64	22,446	35,558	21.84
2002	5.74	11.53	9.14	2.39	19.76	22,677	27,871	22.51
2003	5.68	12.25	9.66	2.59	20.03	21,891	32,833	27.56
2004	5.41	13.13	10.08	3.05	20.73	21,371	37,057	36.77
2005	5.17	13.70	10.12	3.58	20.80	21,757	44,022	50.28
2006	5.10	13.69	10.11	3.58	20.68	20,972	51,429	59.69
2007	5.06	13.46	10.03	3.43	20.68	21,317	51,071	66.52
2008	4.95	12.91	9.78	3.13	19.49	19,121	54,302	94.04
2009	5.36	11.69	9.01	2.68	18.77	20,682	32,803	56.35
2010	5.48	11.79	9.21	2.58	19.18	23,267	36,611	74.71
2011	5.65	11.50	8.94	2.57	18.95	26,544	n/a	95.73
2012	6.50	10.60	8.49	2.11	18.55	n/a	n/a	94.52
Last 12 mos.	7.80	10.78	8.51	2.27	20.21			









<sup>\*</sup> Sources: U.S. Energy Information Administration (EIA). Recent production data is subject to revision.

<sup>\*\*</sup> Source: EIA. Wells drilled includes crude oil, natural gas, and dry wells drilled. U.S. average wellhead (first purchase) price is dollars per barrel. (Per most recent data from EIA)

<sup>#</sup> Source: EIA. Petroleum products supplied is a measure of domestic consumption.

### **Railroad Commission of Texas**

P. O. Box 12967 Austin, Texas 78711-2967

Texas PetroFacts is available in PDF format for download from the Railroad Commission web site at <a href="http://www.rrc.state.tx.us">http://www.rrc.state.tx.us</a>.

Created in 1891 by the Texas Legislature, the Railroad Commission today is known principally as a leader in the regulation and conservation of oil and natural gas in Texas. For more than 85 years, the Commission has been charged with preventing waste and pollution while safeguarding property rights.

We believe the people of Texas continue to have a vital stake in the orderly production and conservation of the state's natural resources. Across the state, crude oil and natural gas are produced in 226\* of 254 counties. About 282,300\* persons are employed in oil and gas exploration, production, refining, and related industries. In all, businesses involved with the Texas oil and gas industry contribute about \$114.43 billion annually to the state's more than one trillion-dollar economy.

As an oil and gas producer, the state of Texas ranks among the nations of the world. Texas leads the United States in the production of crude oil and natural gas, and its marketed production of natural gas represents one-third of total U. S. supply. Texas produces an average of nearly one million barrels of oil a day; natural gas production in the state exceeds 7 trillion cubic feet a year.

Barry T. Smitherman Chairman David Porter Commissioner Christi Craddick Commissioner

<sup>\*</sup> The number of producing counties and employment data are subject to revision.