

# Oil and natural gas extraction data

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 Climate Mitigation Services  
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## Apache Oil Corporation, USA

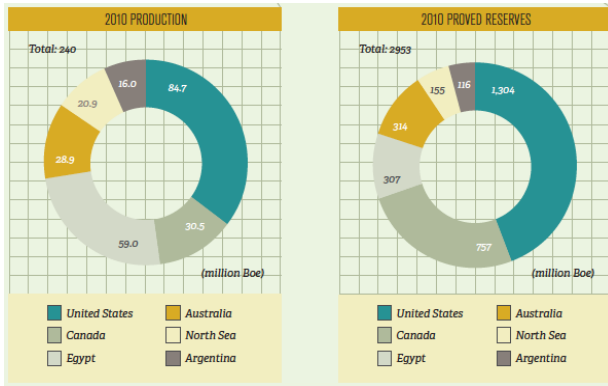
www.apachecorp.com Houston

### Production / Extraction data

Year	Crude Oil & NGL					Natural Gas				
	Company 1	Company 2	Company 1	Company 2	Sum production	Company 1	Company 2	Company 1	Company 2	Sum production
	Thousand bbl/d	Thousand bbl/d	Million bbl/yr	Million bbl/yr	Million bbl/yr	Million cf/d	Million cf/d	Billion cf/yr	Billion cf/yr	Billion cf/yr
	Apache		Apache	Dekalb Energy merger 1994	Sum			Apache gas leak	Dekalb Energy merger 1994	Sum

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Founded 1954.



Apache AnnRpt 2010, page 27.

23.36 CO2-eq (million tonnes over the 16 month event)

Year	OGJ100		erroneous?	OGJ100	OGJ100		erroneous?	OGJ100		
	k bbl per day	milion bbl per yr			Million cf per day	Bcf/yr				
1985		2.0		2.0		38.7		38.7		
1986		2.0		2.0		38.7		38.7		
1987		2.0		2.0		40.9		40.9		
1988		2.3		2.3		53.0		53.0		
1989		3.1		3.1		85.0		85.0		
1990		3.4	no data	3.4		94.6	no data	94.6		
1991		8.4	no data	8.4		104.6	no data	104.6		
1992		12.6	no data	12.6		96.0	no data	96.0		
1993		12.8	1.0	13.8		110.6	21.0	131.6		
1994		13.6	1.0	14.6		155.9	20.5	176.4		
1995		19.1		19.1		210.6		210.6		
1996		20.2		20.2		205.3		205.3		
1997		25.1		25.1		222.2		222.2		
1998	Apache AnnRpts	19.0		19.0	Apache AnnRpts	64.1	erroneous?	64.1		
1999	k bbl per day	34.7		34.7	Million cf per day	239.5		239.5		
2000		122		44.6		303.3		303.3		
2001		156		57.0		411.4		411.4		
2002		-		58.9		-		394.3		
2003		215		78.3		1,217		444.3		
2004		242		88.7		1,235		450.8		
2005		244		72.0		1,264		461.4		
2006		236		86.3		1,589		580.0		
2007		262		95.6		1,796		655.5		
2008		265		96.9		1,618		590.6		
2009		290		98.3		1,759		642.0		
2010		343		125.2		1,889		689.5		
<b>Total</b>	na	na	858	2	1,108	na	na	5,658	42	7,424

Biggest gas leak: (see note above) Add to fugitive CH4  
 16.8 386.4 Bcf CO2-eq

**Cell: J9****Comment:** Rick Heede:

Apache Oil Corporation was founded in 1954 (in Minneapolis).

By Jun88, Apache sold the last of its non-oil-and-gas subsidiaries, exited the business of managing oil-and-gas- related investments, and announced its intention to restructure as a pure exploration and production company.

In June 1992, Apache completed its five-year stay in Denver and moved the company to its present headquarters in Houston. The catalyst for the relocation was Apache's 1991 acquisition of MW Petroleum from Amoco for \$546 million. That transaction doubled Apache's size and shifted the center of Apache's geographical mass from the mid-continent and the Rockies to the Gulf Coast and the Permian Basin.

Apache strengthened its Gulf of Mex presence with the \$114-million Hall-Houston acquisition in 1993.

Hall-Houston acquisition: On April 14, 1993, Apache's Australian subsidiary, with but a half-million barrels of oil on the books, announced a 420-billion-cubic-foot gas discovery at the East Spar concession in the Carnarvon Basin offshore Western Australia. Without operations and a contract for the gas, however, Apache was unable to book its 20-percent share of the reserves. Apache's Australian program was at a strategic crossroads. The company's 40-year history, Against the Grain, said it best: "As an absentee owner with no operating presence Down Under, Apache needed an Australian hub if it were to realize any value from its East Spar discovery or its 6.9 million acres of leases." Recognition of the challenge helped identify the opportunity and, when Hadson Corporation suggested that Apache purchase its subsidiary, Hadson Energy Resources Corp (HERC), the proposal fell on receptive ears. By year end, Apache completed the \$98 million merger.

In 1994, Apache announced a \$285 million merger with Canada-based DEKALB Energy Co. Total assets reached \$1.9 billion.

Apache cemented its reputation as the premiere "acquire and exploit" company in the industry. In 1994, Apache announced a \$285 million merger with Canada-based DEKALB Energy Co. Total assets reached \$1.9 billion.

In March 1995, Apache completed the \$567 million acquisition of properties from Texaco. At the time, the "Star" transaction was the largest in Apache's history. The Texaco acquisition encompassed 315 oil and gas fields in the Permian Basin, the Texas-Louisiana Gulf Coast, western Oklahoma, East Texas, the Rocky Mountains and the Gulf of Mexico. Acquisitions helped fuel Apache's performance in 1995: The company posted its 18th onsecutive year of production growth and record reserves of 420.6 million barrels of oil equivalent, a 56 percent increase from the preceding year and a 124 percent increase since the company moved its headquarters from Denver to Houston in 1992.

Apache's 1996 merger with The Phoenix Resource Companies established the company as Egypt's largest independent leaseholder-operator.

Although oil and gas prices dipped sharply in early 1999, Apache completed one of its most successful acquisitions when it acquired \$714 million in Gulf of Mexico properties from Shell Offshore Inc.

As the year drew to a close, Apache acquired the Plains Business Unit from Shell Canada, setting the stage for a new period of growth in Western Canada.

**Cell: L15****Comment:** Rick Heede:

Website, viewed 12Mar05, [www.apachecorp.com/about/hist\\_return.htm](http://www.apachecorp.com/about/hist_return.htm):

"Killing the Key No. 1 -- 'the world's biggest gas leak': "On Feb. 16, 1983, the company killed the gas flow from the Apache-operated Key No. 1, a well that had been "the world's biggest gas leak" since Oct. 4, 1981.

As much as any in the industry, Texans are partial to big statistics. "In the history of the state, the hands-down winner is undeniably the 100,000 barrels of oil that gushed daily from Spindletop when that now-fabled discovery came into being on January 10, 1901. Two days after it came in, a crowd of 10,000 persons had gathered near Beaumont to watch the mighty Spindletop heave oil 175 feet into the air."

Eighty years later, crowds gathered in Wheeler County to witness what was perhaps the largest gas well blowout in U.S. history. The well had tested at some 35 million cubic feet per day. The resultant uncontrolled gas flow could well have been a multiple.

Technical personnel from Apache and the industry worked ceaselessly to first control and then kill the blowout. "A steady stream of mud, gas, water and rocks remained in permanent eruption as crews dug a pit over 106 feet below ground" in order to capture the gas flow at the point at which the tubing and casing had separated.

Two additional Key wells, one to kill the No. 1 and the other to replace it, were drilled simultaneously from nearby surface locations. The kill well ultimately found and penetrated the No. 1's 7 5/8" casing at a depth below 16,000 feet. The gas flow was halted 16 months after it began.

The blowout dramatized once again the risk element always so exceptionally present in oil and gas exploration. Yet throughout the long months when hundreds of workers and technicians labored at the site, and costly salvage vehicles rumbled through the mud and dust, no lives were lost and no serious injury or permanent property damage was sustained.

Responding to a crisis -- it was Apache at its finest."

26Jan06 estimate of the carbon dioxide-equivalent of this blow-out -- assuming all of the gas was vented and none of it was flared: The company reported a blow rate of 35 million cf per day, which we use as the average over the sixteen month event: 35 million cf/d = 0.0168 Tcf over 30d\*16months = 0.01858 QBtu (at 1,106 Btu per cf for wet gas), which, at 14.92 MtC/QBtu, equals 0.2772 MtC (1.01581 MtCO2) and thus (at CH4 at 23xCO2) = 6.3762 MtC-eq (23.3636 MtCO2-eq). This represents a significant additional impact of Apache's total estimated emissions from natural gas and oil production.

**Cell: D65****Comment:** Rick Heede:

Apache AnnRpts 2005 and 2008.

**Cell: J65****Comment:** Rick Heede:

Apache AnnRpts 2005 and 2008.

**Cell: D67****Comment:** Rick Heede:

Oil and gas production data from Energy Intelligence (2003) Top 100: Ranking the World's Oil Companies, p. 106.

**Cell: D75****Comment:** Rick Heede:

Apache AnnRpt 2010, page 9: Oil & NGL production 2008-2010.

**Cell: J75****Comment:** Rick Heede:

Apache AnnRpt 2010, page 9: Natural Gas production 2008-2010.

**Cell: F77****Comment:** Rick Heede:

OGJ150 Oct11, page 38. Plus Gas Prodn of 689 Bcf.