

Table AR-1. World level summary of petroleum estimates for undiscovered conventional petroleum and reserve growth for oil, gas, and natural gas liquids (NGL).

[BBOE, billions of barrels of oil equivalent. Six thousand cubic feet of gas equals one barrel of oil equivalent. F95 represents a 95 percent chance of at least the amount tabulated. Other fractiles are defined similarly. Production and reserves normalized to 1/1/96. Shading indicates not applicable]

Oil				Gas					NGL			
Billion Barrels				Trillion Cubic Feet				BBOE	Billion Barrels			
F95	F50	F5	Mean	F95	F50	F5	Mean	Mean	F95	F50	F5	Mean

World (excluding United States)

Undiscovered conventional	334	607	1,107	649	2,299	4,333	8,174	4,669	778	95	189	378	207
Reserve growth (conventional)	192	612	1,031	612	1,049	3,305	5,543	3,305	551	13	42	71	42
Remaining reserves*				859				4,621	770				
Cumulative production*				539				898	150				
Total				2,659				13,493	2,249				

United States

Undiscovered conventional**	66			104	83	393			698	527	88	Combined with oil	
Reserve growth (conventional)**				76				355	59	Combined with oil			
Remaining reserves				32				172	29	Combined with oil			
Cumulative production				171				854	142	Combined with oil			
Total				362				1,908	318				

World Total
(including United States)

3,021

15,401

2,567

*World reserve and cumulative production data reflect only those parts of the world actually assessed and are from Petroconsultants (1996) and NRG Associates (1995).

**U.S. data from Gautier and others (1996) and Minerals Management Service (1996).

World Undiscovered Assessment Results Summary

[MMBO, million barrels of oil. BCFG, billion cubic feet of gas. MMBNGL, million barrels of natural gas liquids. Prob., probability (including both geologic and accessibility probabilities) of at least one field equal to or greater than the minimum assessed field size. Results shown are fully risked estimates. For gas fields, all liquids are included under the NGL (natural gas liquids) category. F95 represents a 95 percent chance of at least the amount tabulated. Other fractiles are defined similarly. Fractiles are additive under the assumption of perfect positive correlation. For the total of non-U.S. undiscovered petroleum, the resources in oil fields and in gas fields were aggregated by a separate Monte Carlo procedure from that of total resources; thus these lines do not add perfectly. Shading indicates not applicable]

Code and Field Type	Prob. (0-1)	Undiscovered Resources											
		Oil (MMBO)				Gas (BCFG)				NGL (MMBNGL)			
		F95	F50	F5	Mean	F95	F50	F5	Mean	F95	F50	F5	Mean
1 Former Soviet Union													
Oil Fields	1.00	35,601	107,036	225,654	115,985	72,152	244,123	570,495	272,806	4,016	14,234	35,833	16,336
Gas Fields						357,012	1,230,163	2,676,245	1,338,455	9,476	34,374	81,427	38,470
Total	1.00	35,601	107,036	225,654	115,985	429,164	1,474,286	3,246,740	1,611,262	13,491	48,608	117,260	54,806
2 Middle East and North Africa													
Oil Fields	1.00	73,286	215,651	432,178	229,882	90,484	295,235	678,796	329,248	3,947	13,571	33,943	15,595
Gas Fields						334,887	982,973	1,929,100	1,040,684	20,029	61,249	128,731	66,152
Total	1.00	73,286	215,651	432,178	229,882	425,371	1,278,208	2,607,896	1,369,933	23,976	74,820	162,673	81,747
3 Asia Pacific													
Oil Fields	1.00	8,726	27,392	58,653	29,780	17,495	60,806	144,713	68,314	922	3,423	8,876	3,971
Gas Fields						91,573	289,545	601,331	311,025	3,101	10,361	23,278	11,407
Total	1.00	8,726	27,392	58,653	29,780	109,068	350,350	746,044	379,339	4,023	13,784	32,153	15,379
4 Europe													
Oil Fields	1.00	6,339	20,091	45,407	22,292	8,328	31,217	80,413	36,134	525	2,121	5,894	2,519
Gas Fields						36,378	238,842	652,999	276,231	1,059	9,205	28,340	11,148
Total	1.00	6,339	20,091	45,407	22,292	44,706	270,060	733,412	312,365	1,584	11,326	34,233	13,667

World Undiscovered Assessment Results Summary

[MMBO, million barrels of oil. BCFG, billion cubic feet of gas. MMBNGL, million barrels of natural gas liquids. Prob., probability (including both geologic and accessibility probabilities) of at least one field equal to or greater than the minimum assessed field size. Results shown are fully risked estimates. For gas fields, all liquids are included under the NGL (natural gas liquids) category. F95 represents a 95 percent chance of at least the amount tabulated. Other fractiles are defined similarly. Fractiles are additive under the assumption of perfect positive correlation. For the total of non-U.S. undiscovered petroleum, the resources in oil fields and in gas fields were aggregated by a separate Monte Carlo procedure from that of total resources; thus these lines do not add perfectly. Shading indicates not applicable]

Code and Field Type	Prob. (0-1)	Undiscovered Resources											
		Oil (MMBO)				Gas (BCFG)				NGL (MMBNGL)			
		F95	F50	F5	Mean	F95	F50	F5	Mean	F95	F50	F5	Mean
5 North America (non-U.S.)													
Oil Fields	1.00	6,802	70,837	157,491	70,491	11,754	85,536	213,925	91,926	656	4,911	13,505	5,515
Gas Fields						8,690	60,598	139,674	62,574	241	2,158	5,652	2,338
Total	1.00	6,802	70,837	157,491	70,491	20,444	146,134	353,599	154,499	897	7,069	19,157	7,853
6 Central and South America													
Oil Fields	1.00	20,090	92,658	230,727	105,106	30,352	147,403	404,102	173,881	1,502	7,675	22,416	9,276
Gas Fields						65,816	273,591	683,420	313,309	2,059	9,168	25,372	10,919
Total	1.00	20,090	92,658	230,727	105,106	96,168	420,994	1,087,521	487,190	3,561	16,843	47,788	20,196
7 Sub-Saharan Africa and Antarctica													
Oil Fields	1.00	26,783	68,999	124,447	71,512	47,393	130,775	268,891	140,685	1,763	5,180	11,533	5,722
Gas Fields						36,081	89,369	170,545	94,604	2,015	4,762	9,031	5,044
Total	1.00	26,783	68,999	124,447	71,512	83,474	220,144	439,436	235,290	3,778	9,942	20,564	10,766
8 South Asia													
Oil Fields	1.00	1,032	3,330	6,957	3,580	2,354	8,345	19,888	9,370	90	357	967	420
Gas Fields						28,164	98,823	228,759	110,240	516	1,873	4,878	2,184
Total	1.00	1,032	3,330	6,957	3,580	30,518	107,168	248,647	119,610	606	2,230	5,845	2,604

World Potential Reserve Growth Assessment Results Summary

[MMBO, million barrels of oil. BCFG, billion cubic feet of gas. MMBNGL, million barrels of natural gas liquids. F95 represents a 95 percent chance of at least the amount tabulated. Other fractiles are defined similarly. Shading indicates not applicable]

Potential Reserve Growth											
Oil (MMBO)				Gas (BCFG)				NGL (MMBNGL)			
F95	F50	F5	Mean	F95	F50	F5	Mean	F95	F50	F5	Mean

Total: Non-U.S. Potential Reserve Growth

192,000	612,000	1,031,000	612,000	1,049,000	3,305,000	5,543,000	3,305,000	13,000	42,000	71,000	42,000
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U.S. Potential Reserve Growth (from USGS 1995 National Assessment and MMS 1996 Outer Continental Shelf Assessment)

			62,200				354,700				13,400
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Grand Total: World Potential Reserve Growth

			674,200				3,659,700				55,400
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[U.S. data from Gautier, D.L., Dolton, G.L., Takahashi, K.I., and Varnes, K.L., eds, 1996, 1995 National assessment of United States oil and gas resources--Results, methodology, and supporting data: U.S. Geological Survey Digital Data Series DDS-30, release 2, one CD-ROM, and from Minerals Management Service, 1996, An assessment of the undiscovered hydrocarbon potential of the Nation's outer continental shelf: Minerals Management Service OCS Report, MMS 96-0034, 40 pages]