

Table 7. Crude Oil Production, Actual vs. Forecasts

	Comparison of AEO Production Forecasts to Historical Production										
	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
(million barrels per day)											
AEO82	8.79	8.85	8.84	8.80	8.66	8.21					
AEO83	8.67	8.71	8.66	8.72	8.80	8.63					8.11
AEO84	8.86	8.70	8.59	8.45	8.28	8.25					7.19
AEO85	8.92	8.96	9.01	8.78	8.38	8.05	7.64	7.27	6.89	6.68	6.53
AEO86		8.80	8.63	8.30	7.90	7.43	6.95	6.60	6.36	6.20	5.99
AEO87			8.31	8.18	8.00	7.63	7.34	7.09	6.86	6.64	6.54
AEO89				8.18	7.97	7.64	7.25	6.87	6.59	6.37	6.17
AEO90					7.67	7.37					6.40
AEO91						7.23	6.98	7.10	7.11	7.01	6.79
AEO92							7.37	7.17	6.99	6.89	6.68
AEO93								7.20	6.94	6.79	6.52
AEO94									6.87	6.50	6.18
AEO95										6.58	6.32
AEO96											6.54
AEO97											
AEO98											
AEO99											
AEO2000											
AEO2001											
AEO2002											
Actual	8.97	8.68	8.35	8.14	7.61	7.36	7.42	7.17	6.85	6.66	6.56
Average Absolute Error (Across AEOs)	0.16	0.12	0.34	0.35	0.59	0.50	0.24	0.16	0.17	0.19	0.34

	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
	(percent error)										
AEO82	-2.0	2.0	5.9	8.1	13.8	11.6					
AEO83	-3.4	0.3	3.7	7.1	15.6	17.3					23.6
AEO84	-1.2	0.2	2.9	3.8	8.8	12.2					9.6
AEO85	-0.6	3.2	7.9	7.9	10.1	9.4	3.0	1.4	0.6	0.3	-0.5
AEO86		1.4	3.4	2.0	3.8	1.0	-6.3	-8.0	-7.1	-6.9	-8.7
AEO87			-0.5	0.5	5.1	3.7	-1.0	-1.1	0.2	-0.3	-0.3
AEO89				0.5	4.7	3.9	-2.3	-4.2	-3.8	-4.4	-5.9
AEO90					0.7	0.2					-2.4
AEO91						-1.7	-5.9	-1.0	3.8	5.2	3.5
AEO92							-0.6	0.0	2.1	3.4	1.8
AEO93								0.4	1.4	1.9	-0.6
AEO94									0.3	-2.4	-5.8
AEO95										-1.2	-3.7
AEO96											-0.3
AEO97											
AEO98											
AEO99											
AEO2000											
AEO2001											
AEO2002											
Average Absolute Percent Error (Across AEOs)	1.8	1.4	4.0	4.3	7.8	6.8	3.2	2.3	2.4	2.9	5.1

Table 7. Crude Oil Production, Actual vs. Forecasts

	Comparison of AEO Production Forecasts to Historical Production									2005	2006	
	1996	1997	1998	1999	2000	2001	2002	2003	2004			
(million barrels per day)												
AEO82												
AEO83												
AEO84												
AEO85												
AEO86	5.80	5.66	5.54	5.45	5.43							
AEO87					6.03							
AEO89	6.05	6.00	5.94	5.90	5.89							
AEO90					5.86					5.35		
AEO91	6.48	6.22	5.92	5.64	5.36	5.11	4.90	4.73	4.62	4.59	4.58	
AEO92	6.45	6.28	6.16	6.06	5.91	5.79	5.71	5.66	5.64	5.62	5.63	
AEO93	6.22	6.00	5.84	5.72	5.60	5.54	5.50	5.50	5.51	5.50	5.50	
AEO94	5.92	5.72	5.54	5.35	5.18	5.07	5.00	4.93	4.88	4.84	4.82	
AEO95	6.04	5.74	5.58	5.39	5.35	5.27	5.25	5.22	5.19	5.16	5.17	
AEO96	6.33	6.16	5.95	5.79	5.65	5.51	5.42	5.35	5.31	5.25	5.26	
AEO97	6.47	6.32	6.15	6.02	5.87	5.73	5.63	5.57	5.52	5.49	5.47	
AEO98		6.41	6.39	6.28	6.17	6.08	6.01	5.94	5.88	5.82	5.77	
AEO99			6.41	6.33	6.29	6.21	6.05	5.95	5.87	5.82	5.79	
AEO2000				6.01	5.98	5.81	5.65	5.52	5.43	5.36	5.31	
AEO2001					5.89	5.92	6.04	6.01	5.78	5.65	5.46	
AEO2002						5.84	5.85	5.68	5.50	5.38	5.32	
Actual	6.46	6.45	6.25	5.88	5.82	5.85						
Average Absolute Error (Across AEOs)	0.27	0.40	0.36	0.27	0.28	0.30						

	1996	1997	1998	1999	2000	2001
(percent error)						
AEO82						
AEO83						
AEO84						
AEO85						
AEO86	-10.2	-12.2	-11.4	-7.3	-6.7	
AEO87					3.6	
AEO89	-6.3	-7.0	-5.0	0.3	1.2	
AEO90					0.7	
AEO91	0.3	-3.6	-5.3	-4.1	-7.9	-12.7
AEO92	-0.2	-2.6	-1.4	3.1	1.5	-1.1
AEO93	-3.7	-7.0	-6.6	-2.7	-3.8	-5.3
AEO94	-8.4	-11.3	-11.4	-9.0	-11.0	-13.4
AEO95	-6.5	-11.0	-10.7	-8.3	-8.1	-10.0
AEO96	-2.0	-4.5	-4.8	-1.5	-3.0	-5.9
AEO97	0.2	-2.0	-1.6	2.4	0.8	-2.1
AEO98		-0.6	2.2	6.8	6.0	3.9
AEO99			2.6	7.7	8.0	6.1
AEO2000				2.2	2.7	-0.7
AEO2001					1.2	1.2
AEO2002						-0.2
Average Absolute Percent Error (Across AEOs)	4.2	6.2	5.7	4.6	4.8	4.5

Table 7. Crude Oil Production, Actual vs. Forecasts

	AEO Production Forecasts					2012	2013	2014	2015
	2007	2008	2009	2010	2011				
	(million barrels per day)								
AEO82									
AEO83									
AEO84									
AEO85									
AEO86									
AEO87									
AEO89									
AEO90					4.78				
AEO91	4.53	4.46	4.42	4.42					
AEO92	5.62	5.55	5.52	5.51					
AEO93	5.54	5.57	5.59	5.66					
AEO94	4.87	4.90	4.95	5.10					
AEO95	5.17	5.26	5.33	5.39					
AEO96	5.28	5.34	5.40	5.44	5.48	5.53	5.63	5.74	5.81
AEO97	5.45	5.43	5.41	5.39	5.34	5.32	5.30	5.27	5.23
AEO98	5.72	5.67	5.62	5.57	5.52	5.47	5.41	5.32	5.24
AEO99	5.73	5.68	5.64	5.59	5.55	5.51	5.46	5.40	5.34
AEO2000	5.26	5.22	5.19	5.18	5.18	5.18	5.20	5.20	5.20
AEO2001	5.36	5.30	5.21	5.15	5.06	5.07	5.07	5.05	5.08
AEO2002	5.32	5.24	5.15	5.08	5.05	5.06	5.24	5.41	5.56

Table 7. Crude Oil Production, Actual vs. Forecasts

	Absolute Forecasting Errors as Compared to Actual Historical Figures								1993	1994	1995	1996
	1985	1986	1987	1988	1989	1990	1991	1992				
(absolute forecasting errors)												
AEO82	0.18	0.17	0.49	0.66	1.05	0.86						
AEO83	0.30	0.03	0.31	0.58	1.19	1.28					1.55	
AEO84	0.11	0.02	0.24	0.31	0.67	0.90					0.63	
AEO85	0.05	0.28	0.66	0.64	0.77	0.70	0.22	0.10	0.04	0.02	0.03	
AEO86		0.12	0.28	0.16	0.29	0.07	0.47	0.57	0.49	0.46	0.57	0.66
AEO87			0.04	0.04	0.39	0.27	0.08	0.08	0.01	0.02	0.02	
AEO89				0.04	0.36	0.28	0.17	0.30	0.26	0.29	0.39	0.41
AEO90					0.06	0.01					0.16	
AEO91						0.13	0.44	0.07	0.26	0.35	0.23	0.02
AEO92							0.05	0.00	0.14	0.23	0.12	0.01
AEO93								0.03	0.09	0.13	0.04	0.24
AEO94									0.02	0.16	0.38	0.54
AEO95										0.08	0.24	0.42
AEO96											0.02	0.13
AEO97												0.01
AEO98												
AEO99												
AEO2000												
AEO2001												
AEO2002												
	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
	(absolute percent error)											
												(absolute percent ε)
AEO82	2.0	2.0	5.9	8.1	13.8	11.6						
AEO83	3.4	0.3	3.7	7.1	15.6	17.3					23.6	
AEO84	1.2	0.2	2.9	3.8	8.8	12.2					9.6	
AEO85	0.6	3.2	7.9	7.9	10.1	9.4	3.0	1.4	0.6	0.3	0.5	
AEO86		1.4	3.4	2.0	3.8	1.0	6.3	8.0	7.1	6.9	8.7	10.2
AEO87			0.5	0.5	5.1	3.7	1.0	1.1	0.2	0.3	0.3	
AEO89				0.5	4.7	3.9	2.3	4.2	3.8	4.4	5.9	6.3
AEO90					0.7	0.2					2.4	
AEO91						1.7	5.9	1.0	3.8	5.2	3.5	0.3
AEO92							0.6	0.0	2.1	3.4	1.8	0.2
AEO93								0.4	1.4	1.9	0.6	3.7
AEO94									0.3	2.4	5.8	8.4
AEO95										1.2	3.7	6.5
AEO96											0.3	2.0
AEO97												0.2
AEO98												
AEO99												
AEO2000												
AEO2001												
AEO2002												

Table 7. Crude Oil Production, Actual vs. Forecasts

	Absolute Forecasting Errors as Compared to Actual Historical Figures					Average Absolute Error (Across Years)
	1997	1998	1999	2000	2001	
(absolute forecasting errors)						
AEO82						0.57
AEO83						0.75
AEO84						0.41
AEO85						0.32
AEO86	0.79	0.71	0.43	0.39		0.43
AEO87						0.11
AEO89	0.45	0.31	0.02	0.07		0.26
AEO90						0.08
AEO91	0.23	0.33	0.24	0.46	0.74	0.29
AEO92	0.17	0.09	0.18	0.09	0.06	0.10
AEO93	0.45	0.41	0.16	0.22	0.31	0.21
AEO94	0.73	0.71	0.53	0.64	0.78	0.50
AEO95	0.71	0.67	0.49	0.47	0.58	0.46
AEO96	0.29	0.30	0.09	0.17	0.34	0.19
AEO97	0.13	0.10	0.14	0.05	0.12	0.09
AEO98	0.04	0.14	0.40	0.35	0.23	0.23
AEO99		0.16	0.45	0.47	0.36	0.36
AEO2000			0.13	0.16	0.04	0.11
AEO2001				0.07	0.07	0.07
AEO2002					0.01	0.01
Actual						
Average Absolute Error (Across AEOs)						0.31
Average Absolute Percent Error (Across Years)						
	1997	1998	1999	2000	2001	
AEO82						7.2
AEO83						10.2
AEO84						5.5
AEO85						4.1
AEO86	12.2	11.4	7.3	6.7	0.0	6.0
AEO87						1.4
AEO89	7.0	5.0	0.3	1.2	0.0	3.5
AEO90						1.1
AEO91	3.6	5.3	4.1	7.9	12.7	4.6
AEO92	2.6	1.4	3.1	1.5	1.1	1.6
AEO93	7.0	6.6	2.7	3.8	5.3	3.3
AEO94	11.3	11.4	9.0	11.0	13.4	8.1
AEO95	11.0	10.7	8.3	8.1	10.0	7.4
AEO96	4.5	4.8	1.5	3.0	5.9	3.1
AEO97	2.0	1.6	2.4	0.8	2.1	1.5
AEO98	0.6	2.2	6.8	6.0	3.9	3.9
AEO99		2.6	7.7	8.0	6.1	6.1
AEO2000			2.2	2.7	0.7	1.9
AEO2001				1.2	1.2	1.2
AEO2002					0.2	0.2
Average Absolute Percent Error (Across AEOs)						4.5