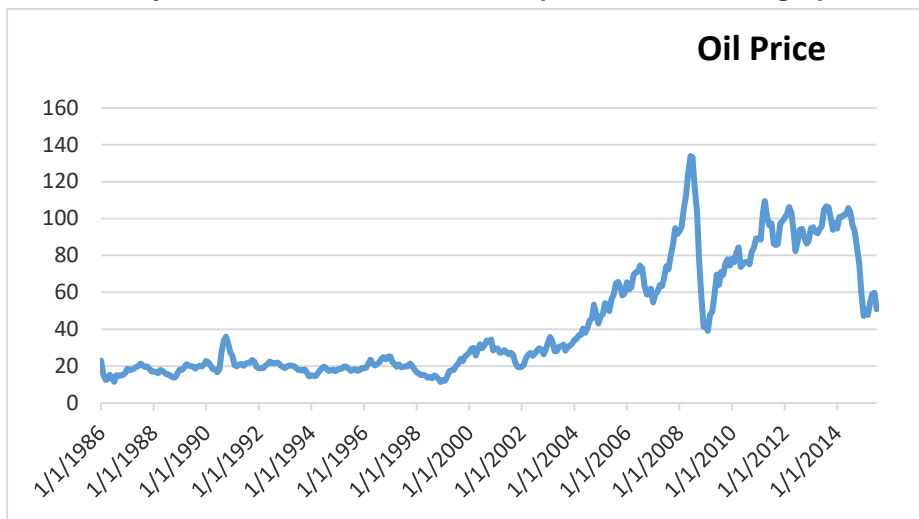


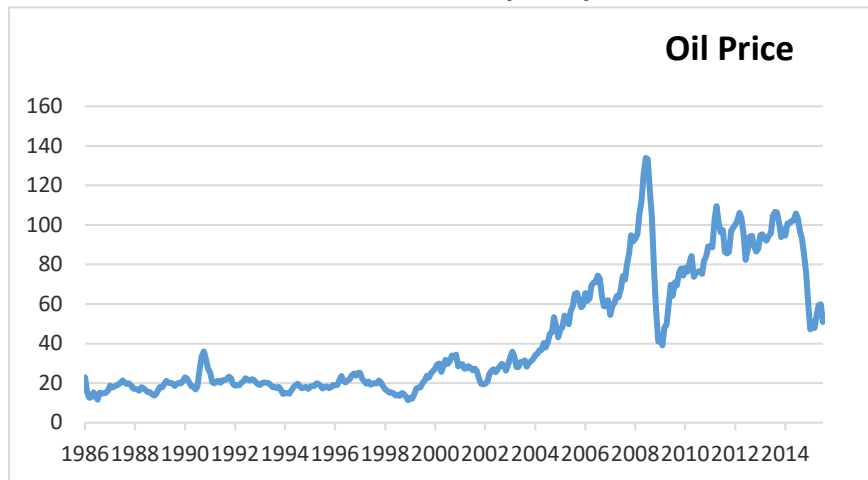
Title: Crude Oil Prices: West Texas Intermediate (WTI) - Cushing, Oklahoma  
 Series ID: DCOILWTICO  
 Source: US. Energy Information Administration  
 Release: Spot Prices (Not a Press Release)  
 Adjustment: Not Seasonally Adjusted  
 Frequency: **Monthly**  
 Calculation Method: **Average**  
 Units: Dollars per Barrel  
 Date Range: 1986-01-02 to 2015-08-17  
 Last Updated: 2015-08-19 1:41 PM CDT  
 Notes: Definitions, Sources and Explanatory Notes:  
[http://www.eia.doe.gov/dnav/pet/TblDefs/pet\\_pri\\_spt\\_tbldef2.asp](http://www.eia.doe.gov/dnav/pet/TblDefs/pet_pri_spt_tbldef2.asp)  
 Source: <https://research.stlouisfed.org/fred2/series/DCOILWTICO/downloaddata>  
 Filename: Excel2013-Graph-Ratio-Display-Demo.xlsx

Select A18:B405      Graph 1      Horizontal axis: mm/dd/yyyy (Format Axis/Number/Date/\*3/14/2001)  
 Major: 24 months. Orientation depends on width of graph.

DATE	Oil Price
1986-01-01	22.93
1986-02-01	15.45
1986-03-01	12.61
1986-04-01	12.84
1986-05-01	15.38
1986-06-01	13.43
1986-07-01	11.58
1986-08-01	15.10
1986-09-01	14.87
1986-10-01	14.90
1986-11-01	15.22
1986-12-01	16.11
1987-01-01	18.65
1987-02-01	17.75
1987-03-01	18.30
1987-04-01	18.68
1987-05-01	19.44
1987-06-01	20.07
1987-07-01	21.34
1987-08-01	20.31
1987-09-01	19.53
1987-10-01	19.86
1987-11-01	18.85
1987-12-01	17.27
1988-01-01	17.13
1988-02-01	16.80
1988-03-01	16.20
1988-04-01	17.86
1988-05-01	17.42
1988-06-01	16.53
1988-07-01	15.50
1988-08-01	15.52
1988-09-01	14.54
1988-10-01	13.77



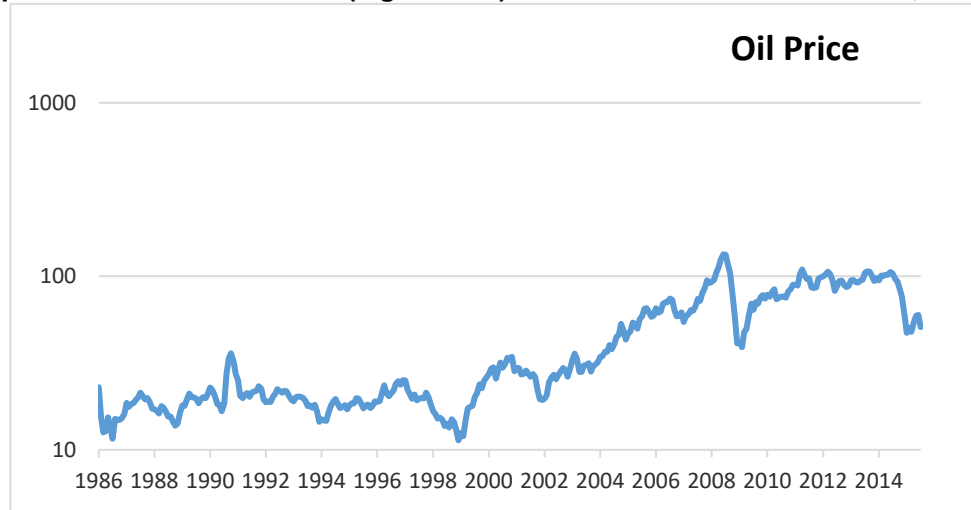
Graph 2      Horizontal axis is YYYY. Show every 2nd year.



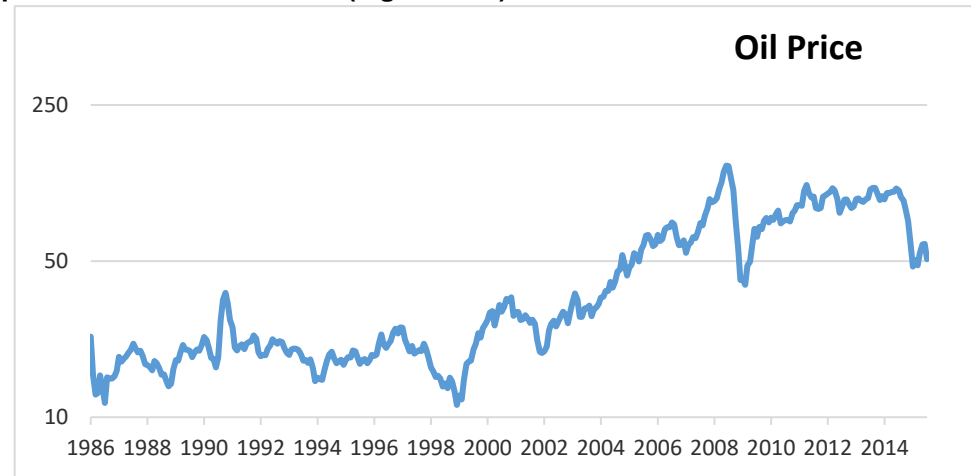
Orientation of "years" can be horizontal, slanted or vertical

1988-11-01	14.14
1988-12-01	16.38
1989-01-01	18.02
1989-02-01	17.94
1989-03-01	19.48
1989-04-01	21.07
1989-05-01	20.12
1989-06-01	20.05
1989-07-01	19.78
1989-08-01	18.58
1989-09-01	19.59
1989-10-01	20.10
1989-11-01	19.86
1989-12-01	21.10
1990-01-01	22.86
1990-02-01	22.11
1990-03-01	20.39
1990-04-01	18.43
1990-05-01	18.20
1990-06-01	16.70
1990-07-01	18.45
1990-08-01	27.31
1990-09-01	33.51
1990-10-01	36.04
1990-11-01	32.33
1990-12-01	27.28
1991-01-01	25.23
1991-02-01	20.48
1991-03-01	19.90
1991-04-01	20.83
1991-05-01	21.23
1991-06-01	20.19
1991-07-01	21.40
1991-08-01	21.69
1991-09-01	21.89
1991-10-01	23.23
1991-11-01	22.46
1991-12-01	19.50
1992-01-01	18.79
1992-02-01	19.01
1992-03-01	18.92
1992-04-01	20.23
1992-05-01	20.98
1992-06-01	22.38
1992-07-01	21.78
1992-08-01	21.34
1992-09-01	21.88
1992-10-01	21.69
1992-11-01	20.34
1992-12-01	19.41
1993-01-01	19.03
1993-02-01	20.09

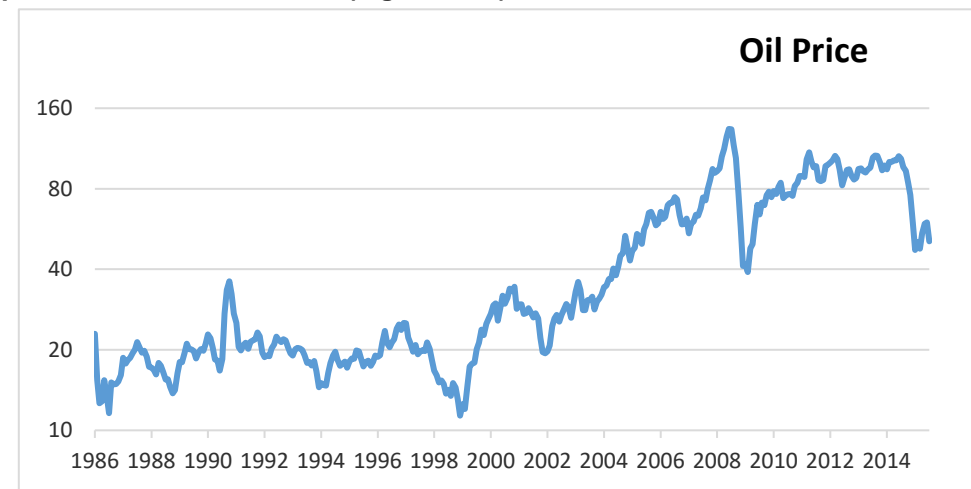
**Graph 3 Vertical axis is ratio (logarithmic) scale. Factor of 10 from 10 to 1,000.**



**Graph 4 Vertical axis is ratio (logarithmic) scale. Factor of 5 from 10 to 250.**



**Graph 5 Vertical axis is ratio (logarithmic) scale. Factor of 2 from 10 to 160.**



1993-03-01	20.32
1993-04-01	20.25
1993-05-01	19.95
1993-06-01	19.09
1993-07-01	17.89
1993-08-01	18.01
1993-09-01	17.50
1993-10-01	18.15
1993-11-01	16.61
1993-12-01	14.51
1994-01-01	15.03
1994-02-01	14.78
1994-03-01	14.68
1994-04-01	16.42
1994-05-01	17.89
1994-06-01	19.06
1994-07-01	19.65
1994-08-01	18.38
1994-09-01	17.45
1994-10-01	17.72
1994-11-01	18.07
1994-12-01	17.16
1995-01-01	18.04
1995-02-01	18.57
1995-03-01	18.54
1995-04-01	19.90
1995-05-01	19.74
1995-06-01	18.45
1995-07-01	17.33
1995-08-01	18.02
1995-09-01	18.23
1995-10-01	17.43
1995-11-01	17.99
1995-12-01	19.03
1996-01-01	18.85
1996-02-01	19.09
1996-03-01	21.33
1996-04-01	23.50
1996-05-01	21.17
1996-06-01	20.42
1996-07-01	21.30
1996-08-01	21.90
1996-09-01	23.97
1996-10-01	24.88
1996-11-01	23.71
1996-12-01	25.23
1997-01-01	25.13
1997-02-01	22.18
1997-03-01	20.97
1997-04-01	19.70
1997-05-01	20.82
1997-06-01	19.26

1997-07-01	19.66
1997-08-01	19.95
1997-09-01	19.80
1997-10-01	21.33
1997-11-01	20.19
1997-12-01	18.33
1998-01-01	16.72
1998-02-01	16.06
1998-03-01	15.12
1998-04-01	15.35
1998-05-01	14.91
1998-06-01	13.72
1998-07-01	14.17
1998-08-01	13.47
1998-09-01	15.03
1998-10-01	14.46
1998-11-01	13.00
1998-12-01	11.35
1999-01-01	12.51
1999-02-01	12.01
1999-03-01	14.68
1999-04-01	17.31
1999-05-01	17.72
1999-06-01	17.92
1999-07-01	20.10
1999-08-01	21.28
1999-09-01	23.80
1999-10-01	22.69
1999-11-01	25.00
1999-12-01	26.10
2000-01-01	27.26
2000-02-01	29.37
2000-03-01	29.84
2000-04-01	25.72
2000-05-01	28.79
2000-06-01	31.82
2000-07-01	29.70
2000-08-01	31.26
2000-09-01	33.88
2000-10-01	33.11
2000-11-01	34.42
2000-12-01	28.44
2001-01-01	29.59
2001-02-01	29.61
2001-03-01	27.24
2001-04-01	27.49
2001-05-01	28.63
2001-06-01	27.60
2001-07-01	26.42
2001-08-01	27.37
2001-09-01	26.20
2001-10-01	22.17

2001-11-01	19.64
2001-12-01	19.39
2002-01-01	19.71
2002-02-01	20.72
2002-03-01	24.53
2002-04-01	26.18
2002-05-01	27.04
2002-06-01	25.52
2002-07-01	26.97
2002-08-01	28.39
2002-09-01	29.66
2002-10-01	28.84
2002-11-01	26.35
2002-12-01	29.46
2003-01-01	32.95
2003-02-01	35.83
2003-03-01	33.51
2003-04-01	28.17
2003-05-01	28.11
2003-06-01	30.66
2003-07-01	30.75
2003-08-01	31.57
2003-09-01	28.31
2003-10-01	30.34
2003-11-01	31.11
2003-12-01	32.13
2004-01-01	34.31
2004-02-01	34.68
2004-03-01	36.74
2004-04-01	36.75
2004-05-01	40.28
2004-06-01	38.03
2004-07-01	40.78
2004-08-01	44.90
2004-09-01	45.94
2004-10-01	53.28
2004-11-01	48.47
2004-12-01	43.15
2005-01-01	46.84
2005-02-01	48.15
2005-03-01	54.19
2005-04-01	52.98
2005-05-01	49.83
2005-06-01	56.35
2005-07-01	59.00
2005-08-01	64.99
2005-09-01	65.59
2005-10-01	62.26
2005-11-01	58.32
2005-12-01	59.41
2006-01-01	65.49
2006-02-01	61.63

2006-03-01	62.69
2006-04-01	69.44
2006-05-01	70.84
2006-06-01	70.95
2006-07-01	74.41
2006-08-01	73.04
2006-09-01	63.80
2006-10-01	58.89
2006-11-01	59.08
2006-12-01	61.96
2007-01-01	54.51
2007-02-01	59.28
2007-03-01	60.44
2007-04-01	63.98
2007-05-01	63.45
2007-06-01	67.49
2007-07-01	74.12
2007-08-01	72.36
2007-09-01	79.91
2007-10-01	85.80
2007-11-01	94.77
2007-12-01	91.69
2008-01-01	92.97
2008-02-01	95.39
2008-03-01	105.45
2008-04-01	112.58
2008-05-01	125.40
2008-06-01	133.88
2008-07-01	133.37
2008-08-01	116.67
2008-09-01	104.11
2008-10-01	76.61
2008-11-01	57.31
2008-12-01	41.12
2009-01-01	41.71
2009-02-01	39.09
2009-03-01	47.94
2009-04-01	49.65
2009-05-01	59.03
2009-06-01	69.64
2009-07-01	64.15
2009-08-01	71.04
2009-09-01	69.41
2009-10-01	75.72
2009-11-01	77.99
2009-12-01	74.47
2010-01-01	78.33
2010-02-01	76.39
2010-03-01	81.20
2010-04-01	84.29
2010-05-01	73.74
2010-06-01	75.34

2010-07-01	76.32
2010-08-01	76.60
2010-09-01	75.24
2010-10-01	81.89
2010-11-01	84.25
2010-12-01	89.15
2011-01-01	89.17
2011-02-01	88.58
2011-03-01	102.86
2011-04-01	109.53
2011-05-01	100.90
2011-06-01	96.26
2011-07-01	97.30
2011-08-01	86.33
2011-09-01	85.52
2011-10-01	86.32
2011-11-01	97.16
2011-12-01	98.56
2012-01-01	100.27
2012-02-01	102.20
2012-03-01	106.16
2012-04-01	103.32
2012-05-01	94.65
2012-06-01	82.30
2012-07-01	87.90
2012-08-01	94.13
2012-09-01	94.51
2012-10-01	89.49
2012-11-01	86.53
2012-12-01	87.86
2013-01-01	94.76
2013-02-01	95.31
2013-03-01	92.94
2013-04-01	92.02
2013-05-01	94.51
2013-06-01	95.77
2013-07-01	104.67
2013-08-01	106.57
2013-09-01	106.29
2013-10-01	100.54
2013-11-01	93.86
2013-12-01	97.63
2014-01-01	94.62
2014-02-01	100.82
2014-03-01	100.80
2014-04-01	102.07
2014-05-01	102.18
2014-06-01	105.79
2014-07-01	103.59
2014-08-01	96.54
2014-09-01	93.21
2014-10-01	84.40

2014-11-01	75.79
2014-12-01	59.29
2015-01-01	47.22
2015-02-01	50.58
2015-03-01	47.82
2015-04-01	54.45
2015-05-01	59.27
2015-06-01	59.82
2015-07-01	50.90
2015-08-01	42.87
2015-09-01	45.48
2015-10-01	46.22
2015-11-01	42.44
2015-12-01	37.19
2016-01-01	31.68
2016-02-01	<b>30.32</b>
2016-03-01	37.55
2016-04-01	40.76
2016-05-01	46.71
2016-06-01	48.76
2016-07-01	44.65
2016-08-01	44.72
2016-09-01	45.18
2016-10-01	49.78
2016-11-01	45.66
2016-12-01	51.97
2017-01-01	52.50
2017-02-01	53.47
2017-03-01	49.33
2017-04-01	51.06
2017-05-01	48.48
2017-06-01	<b>45.18</b>
2017-07-01	46.63
2017-08-01	48.04
2017-09-01	49.82
2017-10-01	51.58
2017-11-01	56.64
2017-12-01	57.88
2018-01-01	63.70
2018-02-01	62.23
2018-03-01	62.38



