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THE ENERGY OF OUR RESOURCES



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CRUDE OIL PRICING REPORT





December 1992

Issue 89

General Information

This report is prepared by the Canadian Oil Markets and Emergency Planning Division (COMEP), Energy, Mines and Resources Canada. It provides a reference for domestic and imported crude oil prices in Canadian markets and illustrates the competitive position of Canadian crude in the U.S. market.

The information in this report is in part based on the Crude Oil Pricing Survey (COPS), conducted by COMEP, of Canadian refiners' domestic crude oil purchases, refinery receipts, imports and data from trade publications as well as industry pricing bulletins. All prices quoted in this report are in Canadian dollars (per m³ at 15°C or per barrel at 60°F), unless otherwise specified.

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Disponible en français.

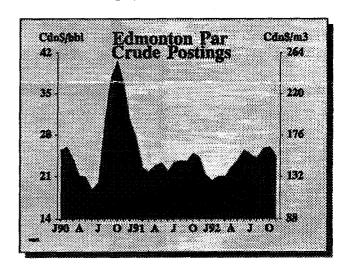
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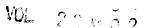
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SECTION I Canadian Crude Oil Postings

The average price for November of Edmonton Par crude (40°API, 0.5% sulphur), as posted by four refiners, was \$24.46/bbl (\$153.95/m³).

Par crude prices, as posted by the Canadian refiners, are illustrated on the graph below.





SECTION 2 Domestic vs Foreign Crude Oil Prices

The following table represents monthly average crude oil prices calculated at the point of sale. Deliveries to the LOOP were assumed to have been made with VLCCs. For deliveries to Portland, a 90,000 dwt vessel for Brent and an LR1 for Maya were used. Ocean freight costs were derived using spot tanker rates for the month of October. The average exchange rate for the month was used.

November 1992 (Cdn\$/bbl)

Heavy Crude

Light Crude

LOOP

St.James

Chicago

Cana	dian Par	Alberta Heavy						
(40°AP	I, 0.5%S)	(25.2°API, 2.10%S)						
Edmonton	\$24.46	Hardisty	\$17.54					
Montreal	\$26.04	Montreal						
Chicago	\$25.83	Chicago	\$18.97					
WTI	NYMEX							
(40°AP	L, 0.4%S)							
Cushing	\$25.78							
_	(US\$20.36)							
Chicago	\$26.54							
Bre	nt	Maya	(est)					
(37.4°AI	PI, 0.4%S)	(22.5°API,	2.8%S)					
North Sea	\$24.37	Mexico	\$18.27					
	(US\$19.22)		(US\$14.41)					
Portland	\$25.29	Portland	\$19.15					
Montreal	\$26.06	Montreal	\$19.92					

LOOP

St.James

Chicago

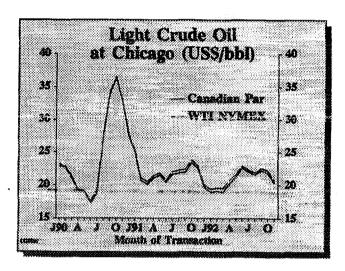
\$18.71

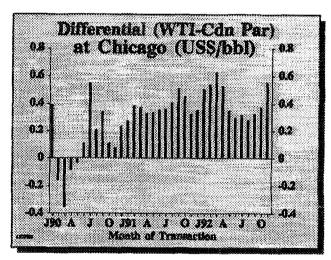
\$19.23

\$19.86

Light Crude Oil Prices at Chicago

The following graphs compare the prices of domestic light crude oil to foreign crude oil prices in Chicago. All prices are presented on a monthly average calendar basis. Table 1, in Section 4 of the report, provides the data used in the preparation of the graphs.





The price differential between Canadian Par and WTI NYMEX in November is estimated at \$US0.57/bbl (\$US3.59/m³), compared to an average of \$US0.36/bbl (\$US2.29/m³) over the last six months.

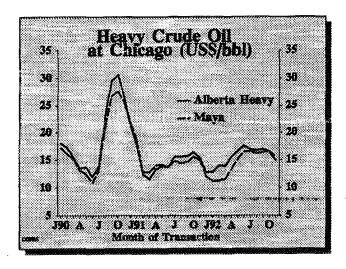
\$25.28

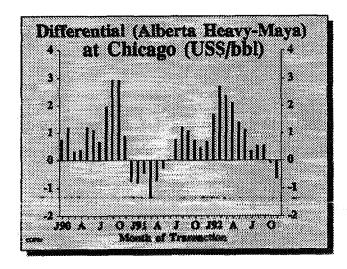
\$25.83

\$26.47

Heavy Crude Oil Prices at Chicago

The following graphs compare the prices of domestic heavy crude oil to foreign crude oil prices in Chicago. All prices are presented on a monthly average calendar basis. Table 1, in Section 4 of the report, provides the data used in the preparation of the graphs.

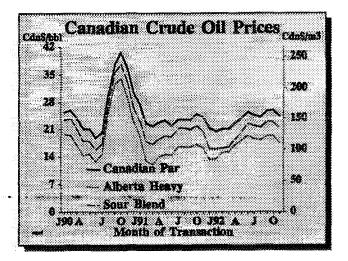


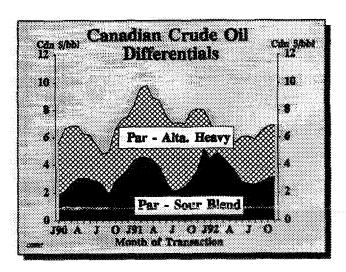


The price differential between Alberta Heavy and Maya in November is estimated at \$US0.64/bbl (\$US4.03/m³) in favor of Maya, compared to an average \$US0.31/bbl (US\$1.95/m³) in favor of Alberta Heavy, over the last six months.

Domestic Differentials

Domestic light, mixed sour and heavy crude oil are presented on a monthly average posted price basis. Light sweet and sour crude oils are priced at Edmonton and heavy at Hardisty. Sour and heavy price differentials are calculated in relation to the price of Par.



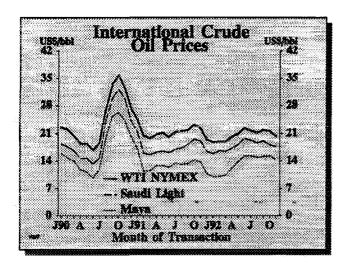


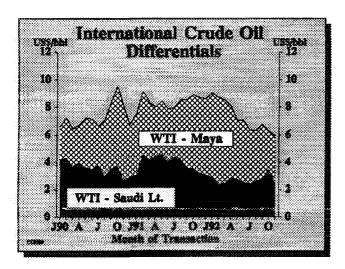
The light sour crude differential (Par - Sour Blend) is estimated to be \$3.16/bbl (\$19.89/m³) for the month of November, a decrease of \$0.64/bbl (\$4.03/m³) over the same month a year earlier.

The heavy crude differential (Par - Alberta Heavy) is estimated to be \$6.92/bbl (\$43.54/m³) for the month of November, a decrease of \$1.16/bbl (\$7.30/m³) over the same month a year earlier.

Foreign Differentials

Foreign crude oil prices are presented as calendar month averages, at source. That is, WTI NYMEX at Cushing and Saudi Light and Maya on an FOB basis. Sour and heavy price differentials are calculated in relation to WTI NYMEX. As such, these differentials illustrate trends rather than absolute values.





The sour crude differential (WTI NYMEX - Saudi Light) is estimated to be US\$2.58/bbl (US\$16.23/m³) for the month of November, a decrease of US\$0.65/bbl (US\$4.09/m³) over the same month a year earlier.

The heavy crude differential (WTI NYMEX - Maya) is estimated to be US\$5.95/bbl (US\$37.44/m³) for the month of November, a decrease of US\$2.73/bbl (US\$17.18/m³) over the same month a year earlier.

SECTION 3 Crude Oil Pricing Survey Data

The average price for all crude and equivalent, purchased in Alberta, for use in Canada by domestic refiners, during the month of October, at the main trunk line inlets (Edmonton or Hardisty), was as follows:

October	°API	% Sul	\$/bbl	\$/m3
Condensate	59.1	0.18	25.39	159.76
Synthetic	32.7	0.25	25.22	158.71
Light	38.2	0.53	24.79	156.02
Heavy	23.4	2.70	19.32	121.58
Average	35.1	0.77	24.11	151.70

Regional Refinery Acquisition Costs

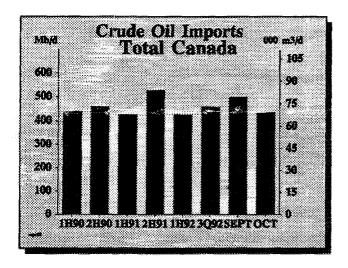
Regional receipts and refinery acquisition costs of crude oil in Canada for the month of October, as reported by respondents of the Oil Pricing Survey, are summarized below. This table should be used for pricing purposes only; for volumetric information, refer to Table 7 in section 4.

	Vol(Mb/d)	°API/%SUL	\$/bbl	\$/m³
Domestic				
B.C.	139.1	36.0/0.61	25.45	160.13
Prairies	355.4	33.0/0.84	24.31	152.97
Ontarlo	384.0	37.3/0.69	25.47	160.28
Total Domestic	878.5	35.4/0.74	24.99	157.28
Foreign				
Quebec	260.3	33.0/1.15		
Maritimes	192.5	34.9/0.69		
Total Foreign	452.8	33.8/0.95	25.67	161.52
Total Canada	1331.3	34.9/0.79	25.22	158.73

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Crude Oil Imports

Crude imports, reported by Canadian refiners, were 436.9 Mb/d (69,430 m³/d) in October. These volumes exclude crude oil received under processing arrangements, and not intended for domestic consumption. For statistics on total Canadian crude oil imports and breakdown by source, refer to Table 5. The following graph depicts only those volumes reported in the Survey.



The information contained in this report is believed to be accurate and reliable. However, because of the possibility of human or mechanical error, we do not guarantee the accuracy, adequacy or completeness of the information and are not responsible for the consequences of its use.

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SECTION 4 Other Reference Material

Table 1: Monthly Averages

		Price	s at Sou	rce		
	CDN Par	Brent	Saudl Lt	WTI	Maya	
	Edm.	FOB	FOB	Cushing	FOB	
	Cdn\$/bbl	US\$/bbl	US\$/bbl	US\$/bbl	US\$/bbl	
June	25.44	21.19	19.79	22.36	15.28	
July	24.63	20.23	19.29	21.74	15.37	
Aug.	24.09	19.79	18.63	21.29	14.94	
Sept.	25.72	20.21	19.10	21.92	15.15	
Oct.	25.95	20.34	18.15	21.71	15.38	
Nov.	24.46	19.22	17.78	20.36	14.41	
		Price	s at Chic	ago		
		1	US\$/bbl	•		
	CDN Par	WTI	Diff. *	Alta.Hvy	Maya	Diff.
June	22.66	22.96	-0.30	17.65	16.51	1.14
July	22.02	22.34	-0.32	16.97	16.62	0.35
Aug.	21.60	21.88	-0.28 -	16.74	16.19	0.55
Sept.	22.18	22.51	-0.33	16.95	16.40	0.55

Other Prices Cdn\$/bbl

-0.38

-0.57

16.55

14.97

16.64

15.61

-0.09

-0.64

22.30

20.96

21.92

20.39

Oct.

Nov.

	Brent	Maya	Sour Blend	*Alta.Hvy
	Mont.	Mont.	Edm.	Hard.
June	26.95	19.81	22.61	19.41
July	25.75	19.89	21.97	18.55
Aug.	25.18	19.35	21.48	18.23
Sept.	26.32	20.10	22.92	19.25
Oct.	27.04	20.78	22.89	19.19
Nov.	26.11	19.92	21.30	17.54
Table 2.	Conve	rsion factors		

The following conversion factors have been used in preparing the Crude Oil Pricing Report:

At the same temperature:

 $1 \text{ barrel} = 0.1589873 \text{ m}^3$

1 barrel = 42 US gallons

1 barrel = 34.9722 imperial gallons

From 60°F to 15°C:

1 barrel @ 60°F equals

0.15891 m³ @ 15°C for crude ≥ 30°API

0.1589237 m3 @ 15°C for crude < 30°API

Table 3: U.S. Import duties

The following import duties have been added to the price of Canadian crude oil imported into the United States.

		(\$US/I	S/bbl)		
		Light	Heavy		
		Crude	Crude		
Customs User	Fee				
(0.068% of cru	ide value)	0.0141(e)	0.0113(e)		
Import Duty		0.0210	0.0105		
Superfund & S	Spill Fund	0.1470	0.1470		
Total		0.1821	0.1688		
Table 4: Exch	ange Rates				
December	1.1457	June	1.1959		
January 1992	1.1565	July	1.1917		
February	1.1825	August	1.1909		
March	1.1926	September	1.2223		
April	1.1875	October	1.2450		
May	1.1990	November	1.2680		

Table 5: Canadian Crude Oil Imports

The following Canadian crude oil imports include crude oil received under processing arrangements. Note that this table is subject to revision. All volumes are in 1000 m³/d.

	Octo	ber	January to October				
	1991	991 1992 1991		1992			
Africa	10.6	11.4	9.4	6.3			
Venezuela	9.5	2.5	6.6	5.4			
Iran	4.4	0.0	0.8	2.0			
Saudi Arabia	17.1	0.0	11.1	9.6			
Other Mid-East	0.0	3.2	1.0	1.1			
Mexico	0.8	2.7	1.2	3.8			
North Sea	56.8	51.5	53.8	52.4			
U.S.A.	0.1	2.8	0.3	0.6			
Other	3.3	5.5	5.9	5.2			
Total	102.6	79.6	90.1	86.4			

Table 6: Available supply of Western Canadian crude oil and equivalent.

Table 7: Domestic crude oil disposition.

Table 8: Pipeline cost reference grids.

December 199	1	СОМЕР	
_ DOCUMENCE IN		· · · · · · ·	

[•] All canadian heavy crude prices have been revised.

(000 m3/d) [0/10/1992

						(000) m3/d)					127	10/1992
	,	Table 6							Table 7				
SUPPLY							DISPOSITION						
	Oct.	ober		January to October				October			January to October		
PRODUCTION			7 Change			Change	Light/Medium & Equiy.			". Change			% Change
	19 9 1	1992	1991/92	1991	19 9 2	1991/92		1991	1992	1991/92	1991	1992	1991/92
Light & Equivalent							Supply						
							Production	173.6	17 6. 7	1.8	176.4	181.6	2.9
Alberta	108.7	109.0	0.3	111.3	111.6	0.3	Newgrade	3.0	3.0	0.0	1.8	2.2	22.2
British-Columbia	5.7	5.5	-3.5	5.5	5.5	0.0	Draw/(build)	12.9	0.0	-100.0	8.5	9.7	14.1
Saskatchewan	11.3	11.0	-2.7	11.0	11.3	2.7							
Manitoba	1.9	1.9	0.0	1.9	1.8	-5.3	Net supply	189.5	179.7	-5.2	186.7	193.4	3.6
Ontario	0.6	0.6	0.0	0.6	0.6	0.0	1						
Other	5.3	8.7	64.2	5.2	6.9	32.7	Demand						
							Atlantic	0.0	2.5	N/A	0.0	0.3	N/A
Sub-total	133.5	136.7	2.4	135.5	137.7	1.6	Quebec	0.0	0.0	N/A	3.2	0.4	-87.5
							Ontario	63.8	61.2	-4.1	57.9	57.4	-0.9
Synthetic							Prairies	47.6	45.9	-3.6	46.3	43.7	-5.6
Suncor	8.5	9.7	14.1	9.6	8.9	-7.3	British-Columbia	19.8	21.4	8.1	18.4	20.9	13.6
Syncrude	24.0	22.2	-7.5	25.0	26.5	6.0	l						
		+					Domestic demand	131.2	131.0	-0.2	125.8	122.6	-2.5
Sub-total	32.5	31.9	-1.8	34.6	35.5	2.6	1			_			_
							Exports Desired •	58. 3	48.7	-16.5	60.9	70.8	16.3
Pentane Plus (excl. dil.)	7.6	8.1	6.6	6.3	8.4	33.3	\						
							Total demand	189.5	179.7	-5 .2	186.7	193.4	3.6
Total Light (excl. dil.)	173.6	176.7	1.8	176.4	181.6	2.9	1						
Heavy Crude Oil							Heavy Crude Oil (Blended)						
Alberta													
Conventional	30.4	34.0	11.8	29.9	33.0	10.4	Supply						
Bitumen	17.1	22.0	28.7	20.1	20.4	1.5	Production	82.7	94.7	14.5	84.3	90.5	7.4
Diluent (excl. recy.)	8.8	10,2	15.9	9.3	9.4	1.1	Recycled	0.8	1.8	125.0	1.1	1.7	54.5
							Draw/(build)	-10.4	0.0	-100.0	-5.3	-8.9	67. 9
Sub-total	56.3	66.2	17.6	59.4	62.8	5.7	I.						
							Net supply	73.1	96.5	32.0	80.2	83.2	3.7
Saskatchewan							1						
Crude	23.3	25.0	7.3	21.9	24.2	10.5	Demand						
Diluent	3.1	3.5	12.9	3.0	3.4	13.3	Atlantic	0.0	0.0	N/A	0.0	0.0	N/A
							Quebec	0.0	0.0	N/A	0.0	0.0	N/A
Sub-total	26.4	28.5	8.0	25.0	27.7	10.8	Ontario	8.7	5.8	-33.3	10.3	9.7	-5.8
							Prairies	11.3	11.2	-0.9	10.2	11.4	11.8
Total heavy (blended)	82.7	94.7	14.5	84.3	90.5	7.4	British-Columbia	0.7 	1.1	57.1	0.6	0.7	16.7
Total production	256.3	271.4	5.9	260.8	272.0	4.3	Domestic demand	20.7	18.1	-12.6	21.0	21.8	3.8
Shut-In							Exports Derived •	52.4	78.4	49.6	59.2	61.4	3.7
Light	6.3	0.0		4.0	0.0		1						
Heavy	0.0	0.0		0.0	0.5		Total demand	73.1	96.5	32.0	80.2	83.2	3.7
Total	6.3	0.0		4.0	0.5]						
DDODUGETTIE GADACTES	262.6	271 /		264.0	272.5								
PRODUCTIVE CAPACITY	262.6	271.4		264.8	212.3		1						

N/A --> Not Applicable.

TABLE 8 PIPELINE REFERENCE GRID (CDN \$/bbl @ 60°F)

November 1992

December 1992 (est.)

Crudes		

Light Crudes (>30 API	
------------------------	--

			3								U.L.	Sec Grad	163 (/ _	ו בבה פו			
to \ from	Edm.	Hard.	Kerro	Regina	Cromer .	Sarnia	Portl.	Sc.James	to from	Edm.	Hard.	Kerro	Regina	Cromer	Sarnia	Porti.	St.James
dardisty	0.10								Hardistv	0.10							
Gerrobert	0.17	0.10							Kerrobert	0.17	0.10						
Regina	0.31	0.24	0.18						Regina	0.31	0.24	0.18					
Boundary	0.47	0.41	0.35	0.23	0.14				Boundary	0.47	0.41	0.35	0.23	0.14			
Sarnia	1.32	1.25	1.19	1.07	0.98				Sarnia	1.32	1.26	1.19	1.07	0.98			
Oak⊽ille	1.40	1.34	1.28	1.16	1.07	0.15			Oakville	1.40	1.34	1.28	1.16	1.07	0.15		
lanticoke	1.41	1.35	1.29	1.16	1.07	0.15			Nanticoke	1.41	1.35	1.29	1.16	1.08	0.15		
iontreal	1.63	1.57		1.38	1.29	0.37	0.77		Montreal	1.63	1.57	1.50	1.38	1.29	0.37	0.78	
Jancouver	1.41								Vancouver	1.41			1,30	,			
Billings(2)									Billings(2)	•							
Twin Cities	1.12	1.06	1.00	0.87	0.78			1.18	Twin Cities	•	1.06	1.00	0.87	0.78			1.18
Chicago	1.17	1.11		0.93	0.84			0.64	Chicago	1.18	1.11	1.05	0.93	0.84			0.65
		Me	dium Cr	udes (:	25-30°AP	I)				• :	Med	dium Cr	ıdes (;	25-30° A.I	PI)		
to \ from	Edm.	Hard.	Kerro	Regina	Crosser	Sarnia	Portl.	St.James	to \ from	Edm.	Hard.	Kerro	Regina	Cromer	Sarnia	Portl.	St.James
Hardisty	0.11								Hardisty	0.11							
Kerrobert	0.18	0.11							Kerrobert	0.18	0.11						
Regina	0.33	0.26							Regina	0.33	0.26	0.20					
Boundary	0.51	0.45		0.25	0.15				Boundary	0.51	0.45	0.38	0.25	0.15			
Sarnia	1.42	1.35		1.15	1.05				Sarnia	1.42	1.35	1.28	1.15	1.05			
Oak⊽ille	1.51	1.44		1.24	1.15	0.16			Oak⊽ille	1.51	1.44	1.38	1.24	1.15	0.16		
Nanticoke	1.52	1.45			1.15	0.17			Nanticoke	1.52	1.45	1.39	1.25	1.16	0.17		
Montreal	1.75	1.68			1.39	0.40	0.77		Montreal	1.75	1.68	1.62	1.48	1.39	0.40	0.78	
Vancouver	1.41								Vancouver	1.41						• • • • •	
Billings(2)	,								Billings(2)	,							
Twin Cities	•	1.10	1.03	0.90	0.80			1.18	Twin Cities	•	1.10	1.03	0.90	0.80			1.18
Chicago	1.26	1.20		1.00	0.90			0.64	Chicago	1.26	1.20	1.13	1.00	0.90			0.65
		He	avy Cru	des (<	25°API)						Hea	avy Cru	des (<	25°API)		
to \ from	Edma.	Hard.	Kerro	Regina	Cromer	Sarnia	Port1.	St.James	co \ from	Edm.	Hard.	Kerro	Regina	Cromer	Sarnia	Portl.	St.James
Hardisty	0.12	~~~~~	~~~~~	~~~~~				~~~~~	Hardisty	0.12	.~~~~		~~~~~			~~~~~	
Kerrobert	0.12	0.13							Kerrobert	0.12	0.13						
Regina	0.20	0.13							Regina	0.20	0.13	0.22					
Boundary	0.57				0.17				Boundary	0.57	0.50			0.17			
Sarnia	1.57	1.49			1.16				Sarnia	1.57	1.49	1.42		1.16			
Dakville	1.67	1.49			1.10	0.17			oakville	1.67	1.60	1.42		1.16	0.17		
Nanticoke	1.68	1.60			1.28	0.17			Nanticoke	1.68		1.52	1.37	1.27	0.17		
	1.93	1.86			1.53	0.18	0.77			,	1.61 1.86	1.78		1.28	0.18		
Montreal	•	1.00	1./5	1.03	1.03	0.44	0.77		Montreal	1.93	1.00	1./8	1.64	1.33	0.44	0.78	
Vancouver	1.69								Vancouver	1.69							
•	•	1 17	1 00	0.05	0.01			1 10	_	•	1 17		0.05	0.01			1 10
	•									•							1.18
unicago	1 1.39	1.32	1.24	1.10	0.99			0.64	Chicago	1.39	1.32	1.25	1.10	0.99			0.65
Billings(2) Twin Cities Chicago	-	1.17 1.32		0. 9 5 1.10	0.84			1.18	Billings(2) Twin Cities Chicago	1.60	1.17 1.32	1.09	0.95 1.10	0.84 0.99			

⁽¹⁾ Exchange rate: November - 1.2680, December - 1.2700(e)

⁽²⁾ Injection point - Sundre

⁽³⁾ Rates include loss factors and terminalling fees

⁽⁴⁾ Interprovincial Pipe Line tariffs were revised effective September 1, 1992.