ENERGY

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TO: EOR WORKING INTEREST OWNERS

2001 Ethane Prices

Further to EOR Guideline 2.4, the 2001 ethane prices used for valuation of ethane injected into EOR schemes are listed below. In the 1994 Conventional EOR Royalty Guidelines, ethane for royalty relief is to be valued according to the following cost of service type formula:

Ethane $/m3 = ($19.15 x Adjustment factor) + (Gas Reference Price $/GJ x 18.458 GJ/m3)

The adjustment factor is used to equate the overall value of ethane calculated using the above formula to a value equal to EOR reporting participants' actual cost experience for the period 1990-91. Beginning with 1992, the Canada GDP deflator is to be applied to the basic factor to recognize inflation. The GDP deflator used is the Canada GDP Implicit Price Index (at market value). The source of this index is The Bank of Canada Review.

2001 EOR Ethane Price Calculation

		Adjustment	Gas Reference		
		Factor	Price		**Price**
Jan	19.15	1.232	$11.21	18.458	**$230.51**
Feb	19.15	1.232	$ 8.05	18.458	**$172.18**
Mar	19.15	1.232	$ 6.48	18.458	**$143.20**
Apr	19.15	1.232	$ 6.59	18.458	**$145.23**
May	19.15	1.232	$ 5.74	18.458	**$129.54**
June	19.15	1.232	$ 4.44	18.458	**$105.55**
July	19.15	1.232	$ 3.75	18.458	**$ 92.81**
Aug	19.15	1.232	$ 3.53	18.458	**$ 88.75**
Sept	19.15	1.232	$ 2.76	18.458	**$ 74.54**
Oct	19.15	1.232	$ 2.40	18.458	**$ 67.89**
Nov	19.15	1.232	$ 3.33	18.458	**$ 85.06**
Dec	19.15	1.232	$ 3.20	18.458	**$ 82.66**

Schedule 12 Valuation

Effective the 2000 production year the Department implemented a change in methodology to calculate the Schedule 3 and Schedule 4 portions of the breakthrough valuation. Through consultation with industry it was determined that the Gas Reference price weighted by a gas equivalent of all products more accurately achieves the cost valuation of the breakthrough.

For the Schedule 3 portion of the breakthrough valuation, each proprietary injected product for the month is converted to a gas equivalent gigajoule (GJ). The GJ equivalent for all products is multiplied by the net gas price (Gas Reference price less Royalty plus Processing Allowance) or net Corporate Average Price (CAP) (CAP less Royalty plus Processing Allowance) to arrive at the Deemed Gas Equivalent Net Claim for the month. The Deemed Gas Equivalent Net Claim for the year is divided by the Total GJ for the year to arrive at the average net gas price.
Refer to attachments 1 and 3.

For the Schedule 4 portion of the breakthrough valuation, each purchased injected product for the month is converted to a gas equivalent GJ. The GJ equivalent for all products is multiplied by the monthly gas reference price or CAP to arrive at the Deemed Gas Equivalent Cost for the month. The Deemed Gas Equivalent Cost for the year is divided by the Total GJ for the year to arrive at the average gas price. Refer to attachments 2 and 3.

Updated Guidelines

The Department updated the 1994 Conventional Enhanced Oil Recovery Royalty Guidelines to include changes to procedures for reporting actual transportation costs (Information Bulletin POR 2000-1) and the valuation of breakthrough on the Schedule 12 as noted above. The updated guidelines are enclosed with this bulletin and are also available on the Department web site
http://www.energy.gov.ab.ca/com/Oil/Guidelines/Enhanced+Oil+Recovery+Royalty+Guidelines.htm

Should you have any questions, please contact Beverley Murray at (780) 427-2193

Jane Clerk
Business Unit Leader
Conventional Oil Development

Schedule 4 Price Valuation for Breakthrough

	A	B	C	D	E	F	G	H
MONTH	GJ C2	GJ C3	GJ C4	GJ C5	GJ GAS	TOTAL GJ	2000 GAS REFERENCE PRICE	DEEMED GAS EQUIVALENT COST
JANUARY	5,000	5,110	4,256	1,538	1,000	16,904	$2.50	$42,259
FEBRUARY	4,000	4,472	3,546	1,230	1,000	14,248	$2.62	$37,330
MARCH	3,000	3,833	2,837	923	1,000	11,592	$2.72	$31,531
APRIL	2,000	3,194	2,128	615	1,000	8,937	$3.10	$27,704
MAY	0	0	0	0	2,000	2,000	$3.35	$6,700
JUNE	0	0	0	0	2,000	2,000	$4.33	$8,660
JULY	0	0	0	0	2,000	2,000	$4.42	$8,840
AUGUST	0	0	0	0	2,000	2,000	$3.93	$7,860
SEPTEMBER	0	0	0	0	2,000	2,000	$4.66	$9,320
OCTOBER	0	0	0	0	2,000	2,000	$5.53	$11,060
NOVEMBER	0	0	0	0	2,000	2,000	$5.79	$11,580
DECEMBER	0	0	0	0	2,000	2,000	$8.28	$16,560
TOTAL	14,000	16,608	12,767	4,306	20,000	67,681		$219,404
>F*G = I							**Average Price**	**$3.24**

>Total I/Total F = Average Price Schedule 4

Gas Equivalent Conversion

MONTH	C3 VOLUME	GAS EQUIVALENT	HEAT VALUE	GJ C3	C4 VOLUME	GAS EQUIVALENT	HEAT VALUE	GJ C4	C5 VOLUME	GAS EQUIVALENT	HEAT VALUE	GJ C5
JANUARY	200	0.27201	93.936	5,110	150	0.23331	121.600	4,256	50	0.20570	149.510	1,538
FEBRUARY	175	0.27201	93.936	4,472	125	0.23331	121.600	3,546	40	0.20570	149.510	1,230
MARCH	150	0.27201	93.936	3,833	100	0.23331	121.600	2,837	30	0.20570	149.510	923
APRIL	125	0.27201	93.936	3,194	75	0.23331	121.600	2,128	20	0.20570	149.510	615
MAY	0	0.27201	93.936	0	0	0.23331	121.600	0	0	0.20570	149.510	0
JUNE	0	0.27201	93.936	0	0	0.23331	121.600	0	0	0.20570	149.510	0
JULY	0	0.27201	93.936	0	0	0.23331	121.600	0	0	0.20570	149.510	0
AUGUST	0	0.27201	93.936	0	0	0.23331	121.600	0	0	0.20570	149.510	0
SEPTEMBER	0	0.27201	93.936	0	0	0.23331	121.600	0	0	0.20570	149.510	0
OCTOBER	0	0.27201	93.936	0	0	0.23331	121.600	0	0	0.20570	149.510	0
NOVEMBER	0	0.27201	93.936	0	0	0.23331	121.600	0	0	0.20570	149.510	0
DECEMBER	0	0.27201	93.936	0	0	0.23331	121.600	0	0	0.20570	149.510	0
TOTAL	650			16,608	450			12,767	140			4,306

Attachment #2

Schedule 3 Price Valuation for Breakthrough

	A	B	C	D	E	F	G	H	I
MONTH	**GJ C2**	**GJ C3**	**GJ C4**	**GJ C5**	**GJ GAS**	**SCH 3 GAS NET CLAIM**	**TOTAL GJ**	**GAS PRICE**	**DEEMED GAS EQUIVALENT NET CLAIM**
JANUARY	175	19,386	11,765	5,714	91,403	$167,650	128,443	$1.83	$235,051
FEBRUARY	152	10,336	6,701	3,002	46,352	$89,702	66,542	$1.94	$129,092
MARCH	89	20,073	14,807	6,640	88,091	$174,380	129,700	$1.98	$256,805
APRIL	95	3,296	2,139	956	13,604	$30,600	20,091	$2.25	$45,204
MAY	662	9,446	6,122	2,746	44,550	$107,690	63,527	$2.42	$153,736
JUNE	0	0	0	0	0	$0	0	$0.00	$0
JULY	177	16,350	10,599	4,752	62,201	$198,200	94,079	$3.19	$300,113
AUGUST	0	0	0	0	0	$0	0	$0.00	$0
SEPTEMBER	0	0	0	0	0	$0	0	$0.00	$0
OCTOBER	0	0	0	0	0	$0	0	$0.00	$0
NOVEMBER	0	0	0	0	0	$0	0	$0.00	$0
DECEMBER	0	0	0	0	0	$0	0	$0.00	$0
TOTAL	1,350	78,888	52,134	23,810	346,201	$768,222	502,382		$1,120,001
> F/E = H							**Average Price**		**$2.23**
> G*H = I									
> Total I/Total G = Average Price Schedule 3									

Gas Equivalent Conversion

MONTH	C3 VOLUME	GAS EQUIVALENT	HEAT VALUE	GJ C3	C4 VOLUME	GAS EQUIVALENT	HEAT VALUE	GJ C4	C5 VOLUME	GAS EQUIVALENT	HEAT VALUE	GJ C5
JANUARY	758.7	0.27201	93.936	19,386	414.7	0.23331	121.600	11,765	185.8	0.20570	149.510	5,714
FEBRUARY	404.5	0.27201	93.936	10,336	236.2	0.23331	121.600	6,701	97.6	0.20570	149.510	3,002
MARCH	785.6	0.27201	93.936	20,073	521.9	0.23331	121.600	14,807	215.9	0.20570	149.510	6,640
APRIL	129	0.27201	93.936	3,296	75.4	0.23331	121.600	2,139	31.1	0.20570	149.510	956
MAY	369.7	0.27201	93.936	9,446	215.8	0.23331	121.600	6,122	89.3	0.20570	149.510	2,746
JUNE	0	0.27201	93.936	0	0	0.23331	121.600	0	0	0.20570	149.510	0
JULY	639.9	0.27201	93.936	16,350	373.6	0.23331	121.600	10,599	154.5	0.20570	149.510	4,752
AUGUST	0	0.27201	93.936	0	0	0.23331	121.600	0	0	0.20570	149.510	0
SEPTEMBER	0	0.27201	93.936	0	0	0.23331	121.600	0	0	0.20570	149.510	0
OCTOBER	0	0.27201	93.936	0	0	0.23331	121.600	0	0	0.20570	149.510	0
NOVEMBER	0	0.27201	93.936	0	0	0.23331	121.600	0	0	0.20570	149.510	0
DECEMBER	0	0.27201	93.936	0	0	0.23331	121.600	0	0	0.20570	149.510	0
TOTAL	3087.4			78,888	1837.6			52,134	774.2			23,810

Attachment #1

Schedule 12

FOR THE CALENDAR YEAR
ENDING DECEMBER 31, 2---

SCHEME ID: 9999-09
SCHEME NAME: PROJECT #1
PARTICIPANT: ABC OIL & GAS ID: 0BM4

HEATING VALUE

	Proprietary Volume m3	Purchased Volume m3	Gas Equivalent Factor 1000 m3/m3	Proprietary Volume 1000 m3	Purchased Volume 1000 m3	Total Volume 1000 m3	Heating Value Factor GJ/1000 m3	Heating Value GJ
Gas			N/A	8,475.6	489.6	8,965.2		366,201
Ethane	72.6	753.1	0.28132	20.4	211.9	232.3	66.065	15,350
Propane	3,087.4	650.0	0.27201	839.8	176.8	1,016.6	93.936	95,496
Butane	1,837.6	450.0	0.23331	428.7	105.0	533.7	121.600	64,901
Pentanes Plus	774.2	140.0	0.20570	159.3	28.8	188.1	149.510	28,116
			Total	9,923.8	1,012.1	10,935.9		570,064
							Average Heating Value Of Injectants GJ/ 1000 m3	52.13

BREAKTHROUGH PRICE PER GJ

	Total Net Gas $	Total Heating Value GJ	Average Gas Price $/GJ	Injection Volume Percent %	Contribution to Breakthrough Price $/GJ
*Schedule 3 Gas Component	0	0	$2.23	90.75	$2.02
*Schedule 4 Gas Component	0	0	$3.24	9.25	$0.30
Total		0		100.00	$2.32

BREAKTHROUGH VALUE

Net Breakthrough Gas Participant Share 1000 m3	Net Breakthrough Gas Participant Share GJ	Breakthrough Price $/GJ	Breakthrough Value $
18,597.3	969,477	$2.32	$2,249,187

*$ and GJ not populated when new methodology is used

DATE PREPARED: 02/09/30

Attachment #3