Canada's Discovered Oil and Gas Resources North of 60

Kenneth J. Drummond
SEDIMENTARY BASINS
CANADA NORTH OF 60

- BEAUFORT/MACKENZIE
- ARCTIC COASTAL PLAIN
- SVERDRUP
- ARCTIC PLATFORM
- LANCASTER BAFFIN BAY
- FRANKLINIAN FOLD BELT
- COLVILLE HILLS
- MACKENZIE PLAIN
- NUNAVUT
- N.W.T
- SOUTHERN N.W.T
- YUKON
- PEEL
- EAGLE
- LIARD
- HUDSON BAY
- FOXE
DISCOVERED RESOURCES

CANADA NORTH OF 60

RECOVERABLE OIL & GAS

SVERDRUP
335 MMBO
17.4 TCFG

BEAUFORT/MACKENZIE
1,258 MMBO
12.1 TCFG

TOTAL
1917 MMBO
33.7 TCFG

MACKENZIE PLAIN
308 MMBO, 59.5 TCFG

EAGLE
12 MMBO
0.08 TCFG

COLVILLE HILLS
0.87 TCFG

LIARD
0.85 TCFG

SOUTHERN NWT
4.5 MMBO .11 TCFG

BAFFIN BAY
2.3 TCFG
NORTHERN CANADA
DISCOVERED OIL AND GAS BY TERRITORY

RECOVERABLE GAS (TCF)

YUKON 1.5%
NUNAVUT 47.3%
NWT 51.2%

RECOVERABLE OIL (MMB)

YUKON 21.2%
NUNAVUT 16.8%
NWT 62.0%
ANNUAL OIL PRODUCTION

CUM. 265 MMB
AUG. 31, 2010

MILLION BARRELS


CAMEL HILLS
AMAULIGAK
BENT HORN
NORMAN WELLS
LIARD - S. TERRITORIES SCHEMATIC SECTION

Modified from NOGD, 1995
GAS FIELDS OF THE LIARD FOLD BELT

DISCOVERED 0.8 TCF

LIARD P-66A
LIARD K-29
POINTED MTN
KOTANEELEE
BEAVER R.
LIARD F-36
SE LIARD

GSC MAP 1141A
PARAMOUNT LIARD GAS FIELD PRODUCTION

CUM. PRODUCTION (Dec. 31, 2008) = 142.0 BCF

- 2M-25
- 2K-29
- F-25A
- M-25
- K-29

Billion Cubic Feet

April 2000 to April 2008
PARAMOUNT FT LIARD & FT LIARD S.E. GAS FIELD PRODUCTION

CUM. PRODUCTION = 18.0 BCF

BILLION CUBIC FEET

Apr-00  Oct-00  Apr-01  Oct-01  Apr-02  Oct-02  Apr-03  Oct-03  Apr-04  Oct-04  Apr-05  Oct-05  Apr-06  Oct-06  Apr-07
CAMERON HILLS OIL/GAS FIELD
August 31, 2010
CUM. GAS - 28.2 BCF
CUM. OIL - 2,215 MB

60° 10'

50 KM

60° 00' -117° 45'

117° 30'
CAMERON HILLS - OIL & GAS PRODUCTION

CUM OIL - 2.2 MMB
CUM GAS - 28.2 BCF
SUMMIT CREEK B-44 and STEWART D-57

2 Zones
20 mmcf/d gas
6,000 b/d cond

2 DST’s
5 mmcf/d gas

GSC Map 1498A
Memoir 398
### SUMMIT CREEK B-44

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<th>LOW</th>
<th>BEST ESTIMATE</th>
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<tr>
<td>GAS (BCF)</td>
<td>9.0</td>
<td>38.7</td>
<td>267.5</td>
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<td>COND (MB)</td>
<td>1,416</td>
<td>6,077</td>
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### STEWART D-57

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<tr>
<td>GAS (BCF)</td>
<td>6.2</td>
<td>20.8</td>
<td>63.2</td>
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COLVILLE HILLS, NWT SHOWING LOCATION OF CAMBRIAN SANDSTONE GAS DISCOVERIES

DISCOVERED
867 BCF

TEDJI LAKE

LAC MAUNOIR

TWEED LAKE

BELE NOGHA

Adapted from: NOGD, 1995
EAGLE PLAIN BASIN

DISCOVERED
OIL - 11.7 MMB
GAS - 83.7 BCF

Modified from Yukon Ec. Dev., NEB, 1994
From: Dixon, 2005
Modified From: Dixon et al, 1992
BEAUFORT - MACKENZIE BASIN
DISCOVERED OIL AND GAS FIELDS

59 DISCOVERIES
1.3 BB OIL
12.1 TCF GAS

100 Km
IKHIL GAS FIELD PRODUCTION

CUM. PRODUCTION (Aug. 31, 2010) = 6,058 MMCF

- **J-35**
- **K-35**
Figure 2-3: Representative 3-D Traverse across Taglu Field

From: Taglu DPA, GH1-2004
PARSONS LAKE GAS FIELD

Adapted from: R.A. Meneley, 1986
MACKENZIE DELTA – DISCOVERIES 2001-2009
TOTAL - 1.4 TCF RECOVERABLE GAS
BEAUFORT SEA – DEVON PAKTOA C-60
2006 DISCOVERY - 240 MMB RECOVERABLE OIL
TOTAL (EAST & WEST)
255 MMB OIL
1,643 BCF GAS

From: Gulf Application to NEB, 1989
AMAULIGAK OIL AND GAS DISCOVERY

From: Morrell, 1996
Beaufort-Mackenzie Atlas,
GSC Misc. Report 59
Adapted from: Morrell, 1996
GSC Misc. Report 59
GULF et al AMAULIGAK I-65B OIL PRODUCTION

CUM. PRODUCTION - 422 MB
FLARED - 120 MB
SHIPPED - 302 MB

EXTENDED FLOW TEST 3

MB/DAY

SVERDRUP BASIN
STRATIGRAPHIC DISTRIBUTION OF HYDROCARBONS

From: Embry, 1982
BENT HORN OIL FIELD, ARCTIC ISLANDS

CUM. PRODUCTION = 2,836 MB

Map GSC OF 3577
## CANADA NORTH OF 60
### RECOVERABLE OIL & GAS

<table>
<thead>
<tr>
<th>Region</th>
<th>Recovered Oil (MMB)</th>
<th>Recovered Gas (BCF)</th>
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<tbody>
<tr>
<td>LIARD PLATEAU</td>
<td>0</td>
<td>846</td>
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<tr>
<td>GREAT SLAVE PLAIN</td>
<td>4</td>
<td>114</td>
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<td>MACKENZIE PLAIN</td>
<td>308</td>
<td>60</td>
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<tr>
<td>COLVILLE HILLS</td>
<td>0</td>
<td>867</td>
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<tr>
<td>EAGLE PLAINS</td>
<td>12</td>
<td>84</td>
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<td>MACKENZIE DELTA</td>
<td>248</td>
<td>7,192</td>
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<tr>
<td>BEAUFORT SEA</td>
<td>1,010</td>
<td>4,868</td>
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<td>SVERDRUP BASIN</td>
<td>335</td>
<td>17,383</td>
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<tr>
<td>BAFFIN BAY</td>
<td>0</td>
<td>2,300</td>
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<td><strong>TOTAL</strong></td>
<td><strong>1,917</strong></td>
<td><strong>33,714</strong></td>
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CONCLUSIONS

- CANADA'S SEDIMENTARY BASINS NORTH OF 60 HAVE LARGE DISCOVERED RESOURCES OF OIL AND GAS RANGING IN AGE FROM CAMBRIAN TO TERTIARY

- DISCOVERED - 1.9 MMB OF OIL & 33.7 TCF OF NATURAL GAS

- A TOTAL OF 1,510 EXPLORATORY WELLS IN AN AREA OF 965,255 SQUARE MILES - 1 WELL / 639 SQUARE MILES

- CANADA'S NORTHERN BASINS ARE IMMATURE AND HAVE SIGNIFICANT POTENTIAL FOR FUTURE DISCOVERIES