



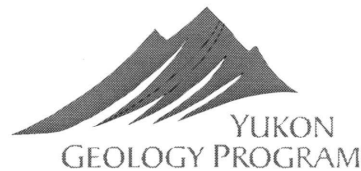
Resource Assessment

Anna L. Fonseca
JoAnne van Randen

Mineral Resources Branch
Yukon Geology Program

Riona Bernatsky

Oil and Gas
Resources Branch



Overview

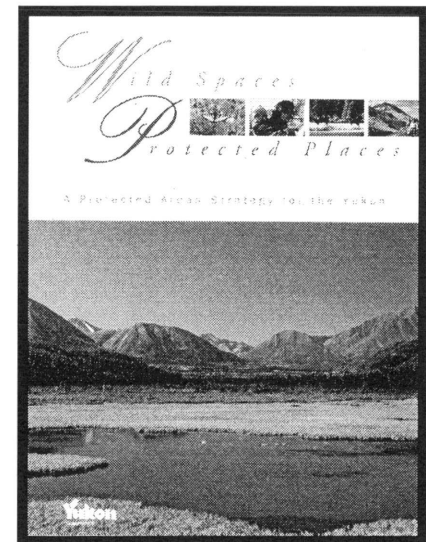
- YTG commitments through YPAS
- Methodology
 - ┆ phases
 - ┆ products
- Time frames
- Minimum requirements and costs
- Summary

YTG commitments in YPAS

Avoiding areas of high mineral potential and development activity where an option exists;

Carrying out Oil and Gas and Mineral Resource Assessment at a reasonable level of detail, and within a prudent time frame;

Resource Assessment carried out at regional (PAS step 2) and detailed (PAS step 5) scales.



Regional Assessments

Minerals

Regional Mineral Potential Maps (Phase I)

- Compilation (~4 months)
- Large tracts
- Assessment panel (4-6 days)
- Computer simulation (1 month)
- Relative ranking
- Mineral potential maps,
Open File Reports (1 month)
- Characterize a broad range of
mineral deposits
- Reviews triggered by advances
in knowledge of mineral
deposits

Oil and Gas

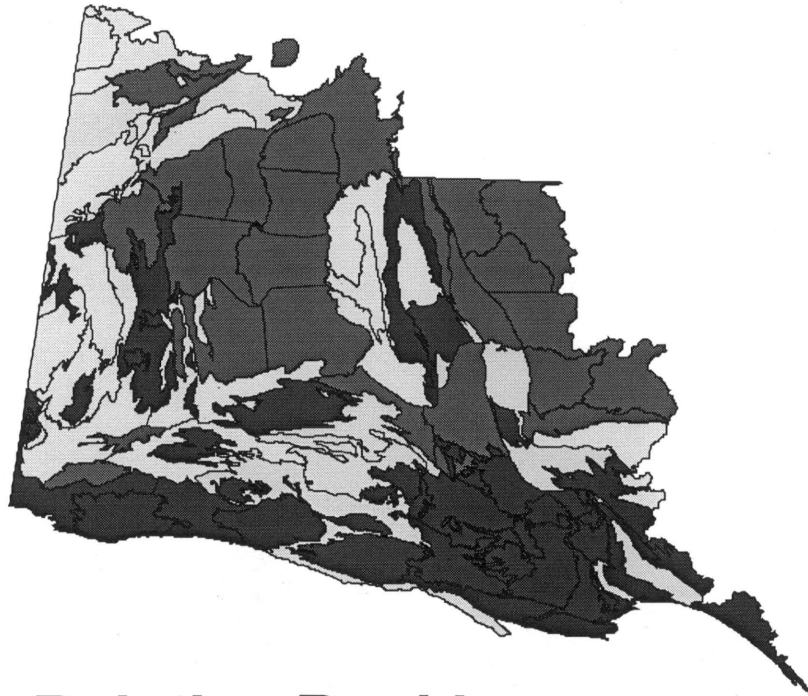
Basin-scale Assessment Reports

- NEB/GSC: PETRIMES (6
months)
 - ┆ Geological compilation
 - ┆ Identification of plays
 - ┆ Statistical analysis:
probability of frequency
and volume of potential
resources
 - ┆ Report and maps
characterizing oil and
gas potential for each
play within a basin

Regional Assessments - Products

Minerals

Regional Mineral Potential Map

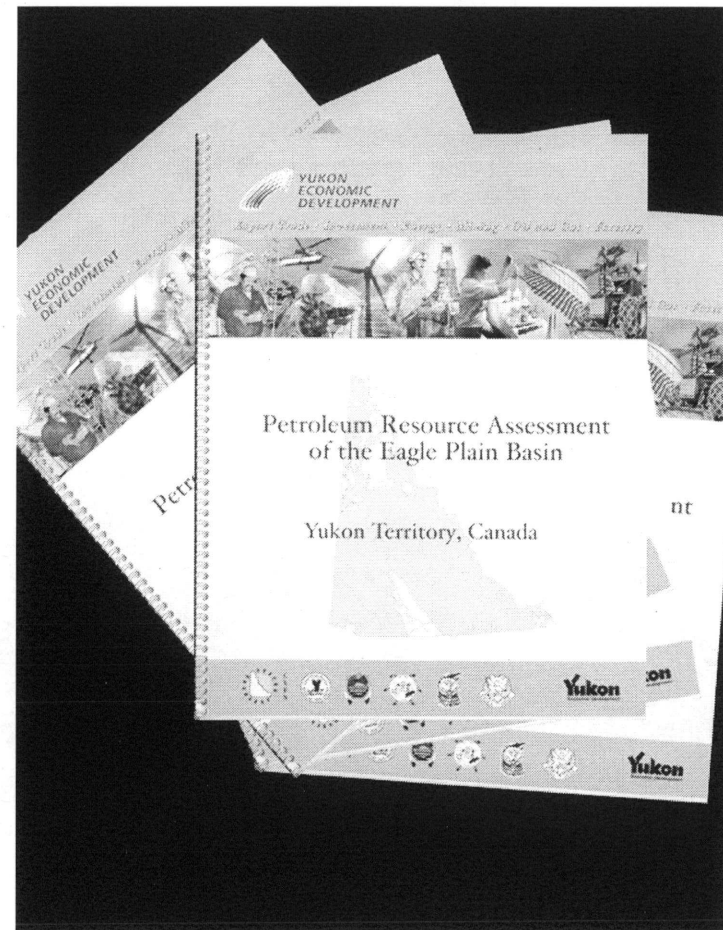


Relative Ranking

- Highest potential
- Intermediate
- Lowest potential

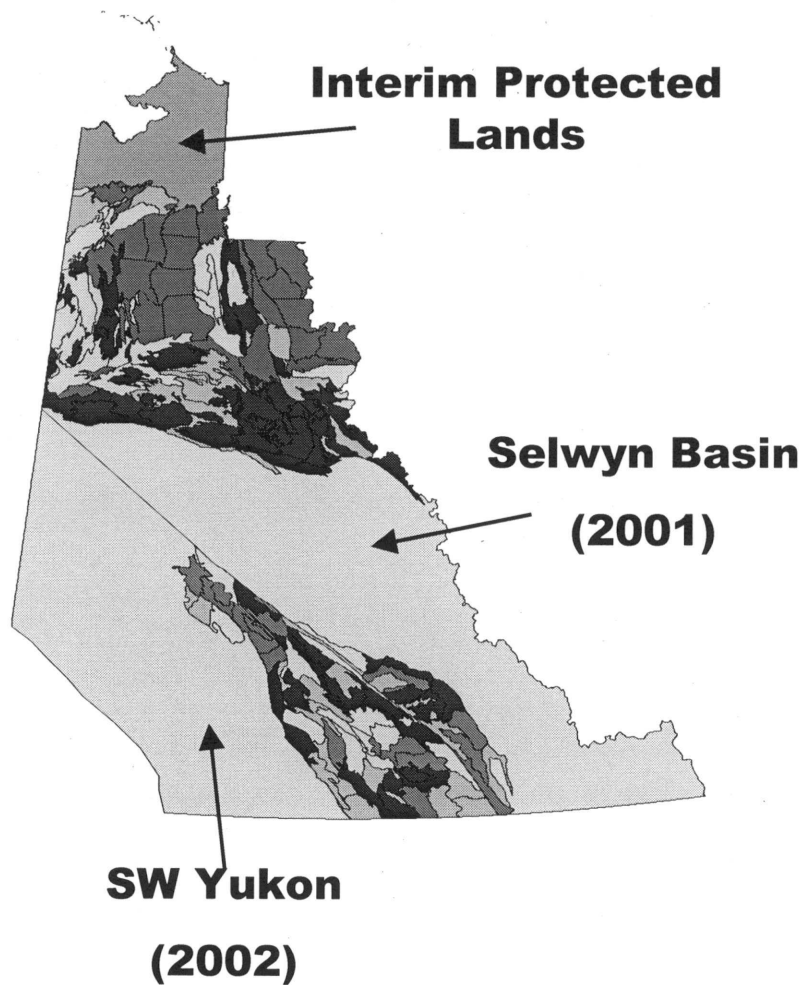
Oil and Gas

Assessment Reports

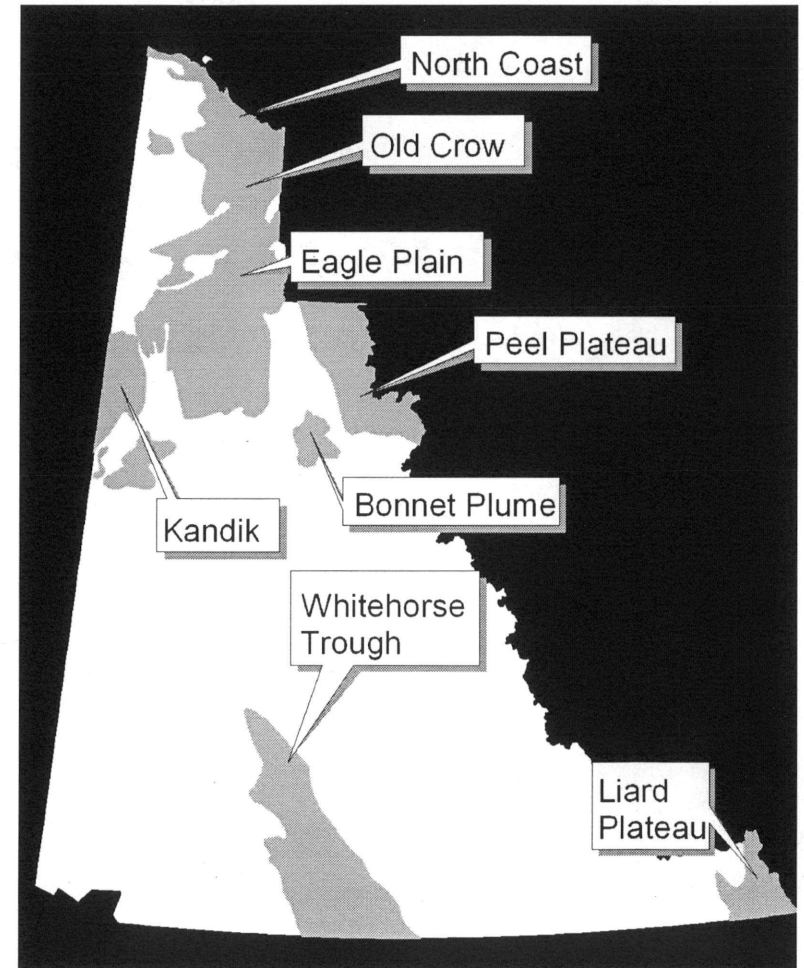


Regional Assessments - Schedule

Minerals



Oil and Gas



Detailed Assessments

Minerals

Site-specific Mineral Assessments

(Phase II)

- Compilation and gap analysis (~2 months)
- Data collection (1-2 field seasons)
- Small tracts
- Assessment panel (1 day)
- Relative ranking by consensus
- Annotated mineral potential maps (1 month)
- Characterizes few styles of mineral deposit

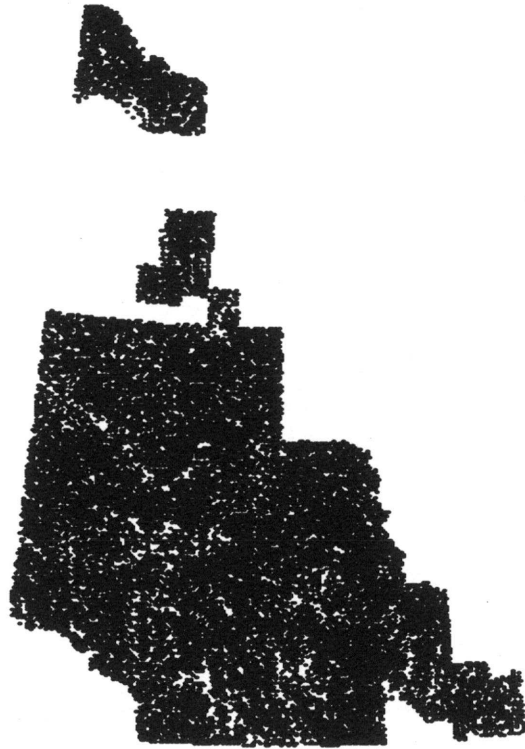
Oil and Gas

Detailed Assessment Maps

- NEB/GSC (6 months)
- Oil and Gas Resources Branch
 - ┆ Compilation and analysis of all data
 - ┆ Identification of zones of cumulative potential
 - ┆ Mapping / conversion to spatial data

Site-specific Mineral Potential Maps

Time frame



Areas with geochemical coverage

7 months

7 months		
compilation	Field Season	Map

Areas lacking geochemical coverage

20 months

20 months				
RGS contract Geochemical	Field Season	Preliminary Results	Field Season	Map

Survey contract

Requirements and Costs - Regional

Minerals

■ Regional Mineral Resource Assessments - Requirements

- YPAS work plan (Priority Areas)
- Time and GIS resources for compilation (~6 months for each regional MRA)
- Ability to convene a panel of experts from industry, government, academia

■ Cost

- 4-6 day assessment panel: ~\$16,000-25,000
- 2 outstanding

Oil and Gas

■ Basin-scale Assessments

- YPAS work plan (Priority Area)
- Time to complete PETRIMES assessment

■ Cost

- minimum \$10,000 per contract

Requirements and costs - Detailed

Minerals

- **Site-specific Mineral Resource Assessments - Requirements**
 - Geochemical (RGS) coverage
 - Adequate geological mapping
 - Ability to fill major gaps in geoscientific database (possibly involving seasonal field work)
 - Adequate time frame
 - Ability to convene assessment panel
- **Cost**
 - Assessment panel: ~\$8,000
 - RGS \$750,000/map sheet
 - Field work:\$150,000/camp

Oil and Gas

- **Detailed Assessments**
 - Time to complete assessment contract and in-house analysis
 - Incremental data
 - **Cost**
 - \$10,000 per contract (existing data)
 - new data: minimum \$3,200/km²
- (data for Arctic Circle assessment is worth ~ \$27 million)
- Due to costs, acquisition of new data is mostly dependent on industry**

Mineral Resource Assessments at YTG Summary

- **Sound, rigorous methodology applicable to comparable districts (BC, Frontier Lands)**
- **Buy-in from industry**
- **Important step in YPAS process - promotes consensus between resource development and conservation interests**
- **Challenge: input into Multiple Accounts Analyses and Socio-Economic Analyses**