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Executive Summary



Royalty and Related Information Review
Task Force Recommendations
January 26, 1998



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Eight strategic issues summarize the problems and issues identified during the consultation process

Policy related issues:

1. Optimal role and involvement of government is unclear
2. Lack of certainty around fiscal period revenues
3. Allowable Cost principles not consistent with business practices
4. Royalty regime does not encourage rationalization and efficiency

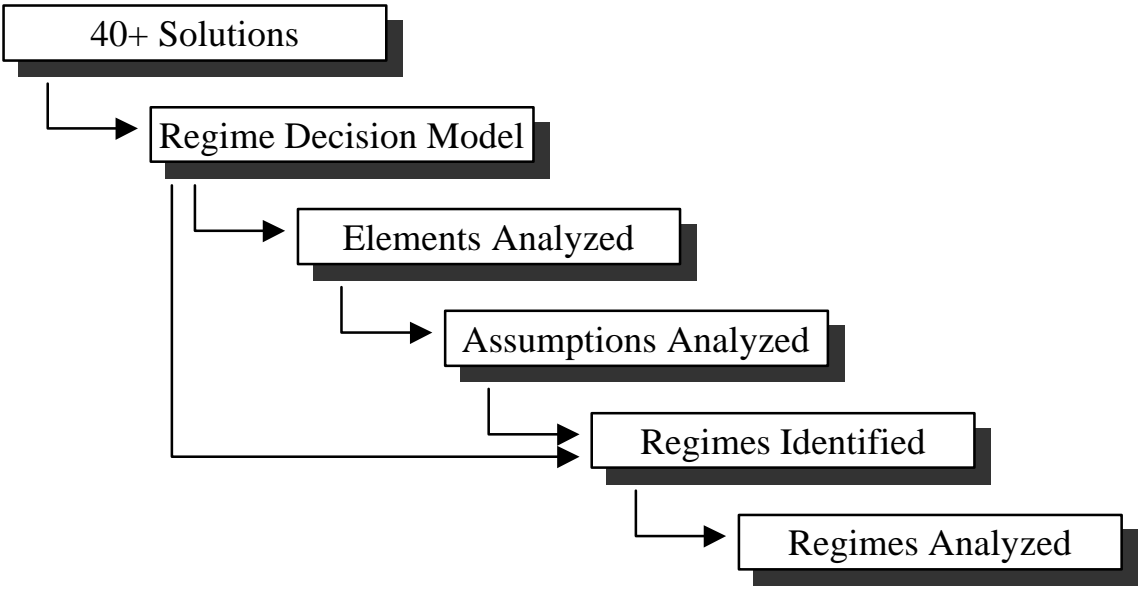
Information related issues:

5. Lack of quality & timely volumetric information
6. Cost, complexity and redundancy surrounding data requirements
7. Information gathering processes do not facilitate compliance
8. Lack of standard industry to industry reporting

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Over forty significant suggestions for change were received. Each was documented, modeled and analyzed in building the recommendations

- A number of the suggestions were not pursued as they violated the principles of royalty. Examples included: sale of Crown royalty interests to private owners; and tying royalties to net profits on a company's Alberta operations. Such options were also found to have significant distributional impacts and/or increased administration costs.
- The rest of the suggestions were deployed against a royalty model framework requiring various decision or choices. Over 20 workable regime variations were identified, analyzed and compared. Underlying assumptions were then tested and the potential royalty redistributions calculated.



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Key findings included: the potential for administrative savings are much lower than expected; and, a simple wellhead measurement is not feasible

- The potential for major benefit from a reduction in administration does not exist. A survey of companies of all sizes and the Ministry showed that the currently incurred administration costs are much lower than generally believed
 - Total administration cost of Crown gas royalty and S-reporting is less than \$40 Million
 - This is 3% of the 1996 \$1.3 billion of net annual royalties
 - Potential savings can only be a portion of the \$40 Million
- Delivering the royalty program based on valuing raw gas at the wellhead was widely believed to hold significant potential benefits, however:
 - Accuracy of volumetric measurement at the wellhead is inconsistent
 - consistently high for sweet/dry gas,
 - very inconsistent for wet/sour gas.
 - accuracy is driven by stream content and not the technology used
 - not acceptable for valuation or royalty calculation without support of plant outlet data
 - Potential redistribution of royalty liability is high
 - the least negative impact of any wellhead royalty option would result in negative impacts totaling \$53 Million. Model not acceptable as Allowable Cost became price sensitive
 - to improve the existing plant gate regime will have negative impacts totaling \$23 Million
 - Preliminary cost estimates for Crown, industry and service providers is high
 - developing well head business rules and IT systems would be \$12-15 Million
- Modifying the current rules and process can address many of the strategic issues and remove the sources of many of the major irritants



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The overall recommendation has three parts: repair current regime problems; streamline volumetric data capture; build a shared information registry

- Improve the current regime by:
 - Reducing the volatility of unit operating cost rates (UOCR)
 - Linking capital cost allowance more directly to individual EUB facilities
 - Implementing Custom Processing Allowances based on gas type
 - Updating and aligning Allowable Costs with industry standards and practices
- Rationalize data requirements across “S” Reports & Owner Activity Statements (OAS) by:
 - Reducing monthly information capture on OAS through use of a registry of working interest owners
 - Combining certain ‘S’ reports with the streamlined ‘OAS’ report
- Build a shared information registry by:
 - Combining the basic data gathered and maintained by the AEUB and the DoE (Ministry)
 - Providing online access to the registry to industry and the Ministry



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Proposed changes to the royalty regime address major concerns for royalty payers of all sizes about operating and capital costs, custom processing...

- Operating Costs
 - Introduce “13th month” UOCR adjustment to correct the difference between estimated and actual
 - Align Allowable Cost definitions with industry standards and practices
 - Eliminate insurance cost recognition
 - Clarify reclamation/abandonment costs and their treatment for Crown royalty purposes
- Capital Costs
 - Eliminate Corporate Effective Royalty Rate
 - Introduce EUB facility rate, capital allocated based on value weighted volumes (through-put)
 - Align Allowable Cost definitions with industry standards and practices
- Custom Processing
 - Eliminate actual Custom Processing cost filings
 - Introduce Custom Processing Allowances based on gas type
 - Determine custom user status by gas plant ownership
 - Eliminate concept of de-layered rates
 - Eliminate “excess capacity” custom processing claims

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... Freehold Mineral Rights Tax, Reclamation / Abandonment, Corporate Average Price Election, Minimal Royalty Charges and Deep Gas Holidays

- Freehold Mineral Rights Tax program
 - Natural gas component incorporated into Crown Gas Royalty business rules and processes
- Reclamation/Abandonment costs
 - Commitment to review of these expenditures/obligations as Allowable Costs
- Corporate Average Price (CAP) Election
 - Annual prospective election for royalty payers, who in the immediately preceding production year paid Crown natural gas royalties of less than \$30,000
 - Association rules apply. Election not subsequently revocable by royalty payer. VA1 not filed by prescribed date: late filing penalty/lost election rights. 90% of Reference Price floor retained
- Minimal Royalty Charges
 - Legislation and business rules established to temporarily suspend minimal monthly /annual royalty charges - proposed \$1000/year prorated monthly.
 - Royalty held in suspense pending amendments increasing royalty due or time elapses such that suspended royalty becomes statute barred and is waived
 - Associated company / agency rules required and ARTC legislation must be harmonized
- Deep Gas Royalty Holiday Program
 - Eliminating Corporate Effective Royalty Rate will facilitate potential return to net benefits
- Note: royalty triggers and royalty formulas remain as per 1994

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The Proposed Regime generates significant benefits by reducing uncertainty, distortions, complexity and dispute

- The changes recommended will result in administrative savings and operational efficiencies to industry and the Ministry:
 - Elimination of Corporate Effective Royalty Rate will reduce uncertainty in valuing capital assets and eliminate distortions caused by unique activities' impact on corporate royalty rates
 - 13th month Unit Operating Cost Rate adjustments will eliminate uncertainty in property valuations by more closely matching costs to revenues. Also ensure results of adjustments accrue to correct royalty period owners and provides increased predictability of future rates
 - Custom Processing Allowance will eliminate need for Custom Processing Adjustment Factors (CPAF), reduce / eliminate custom processing filings (AC5), and remove the complexity of adjustments in excess capacity situations
 - Allowable Cost rules consistent with industry practices/standards and use of established allocation rates in particular situations will reduce administration, filings and disputes
 - Public declaration of the Alberta's position on reclamation/abandonment costs will resolve some current disputes, eliminate future disputes and may encourage timely reclamation activity
 - Provides the opportunity to work toward a "2 year plus current" business window

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Implementing the regime changes will include costs for systems changes, new process and business rule administration and possibly mitigation

- Modifications to existing software applications:
 - 13th Month adjustment capability for Unit Operating Cost Rate (UOCR) and Capital Costs
 - capturing of amendments
 - 13th month summary calculations and invoicing
 - Calculation of annual Capital rates x Price Adjusted Volumes
 - Updating of current automated filing penalty mechanisms
- New processes:
 - Calculation of Capital rates
 - Calculation of Custom Processing Allowances by gas type
 - Determination of standardized Allowable Cost allocations for roads, fencing and similar ‘restricted’ costs
 - Minimum royalty processes
- Administration of Business Rules
 - “13th month” invoicing and collection/refund activity
- Mitigation strategies:
 - Development and implementation of necessary computer systems and operational processes
 - Reduced royalty revenues, if any



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Proposed changes to volumetric reporting will rationalize some volume (S) reports with the allocation (OAS) statement

- The reporting of total facility sales of residual gas and NGL products will be combined with the allocation of these totals to the individual well events
- Raw gas volumes from independent gathering systems will be included and cascaded to the gathering system operator
 - This will combine the streamlined OAS and the current S-8, S-20 & S-21
- The resulting combined Product Allocated to Well Statement
 - Will use existing OAS conventions, standards and business rules to capture 100% stream ID data (e.g. well, unit, cascaded entity)
 - Will continue to facilitate electronic transmission of data, building on existing conventions
 - Will, over time as the Product Allocated to Well Statement is accepted, trusted and adopted, eliminate the need for operator product allocation statements
- DOE will allocate the well event volumes to individual Crown Royalty Interest Owners using a separate registry
 - The department will utilize a centrally-controlled Crown Royalty Interest Registry (CRIR),
 - The registry will be updated by the licensed operator of the producing entity (stream id - well, unit, cascade)
- Existing EUB field and injection data (S-1, S-2, S-18) will be required and reported as today

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The benefits of the “S/OAS” Integration Proposal come from reduced data volumes and associated errors, and increased information quality

- ‘OAS’ volumes reduced 85%, from 11,800 submissions to approximately 1,800 per month
 - More reliable data quality
 - Reduces edit and misfiling errors associated with owner level details. Therefore Provisional Assessments may be reduced by an estimated 60-70%
 - Reduces data transmission costs for industry submissions to the DOE
- Single window for the capture of all gas flow data (the Product Allocated to Well Statement)
 - Reduces external reconciliation procedures
 - Eliminates need to coordinate input documents (S-reports/OAS)
 - Eliminates redundant data currently being carried forward from form to form
- Standardization of foundation code administration
 - Eliminates inconsistent validation (DOE, EUB)
 - Eliminates additional errors caused by redundant data entry (OAS, S-reports)
- Facilitates electronic exchange of business information between industry partners
 - Provides basis for future elimination of individual “non standardized” plant allocation statements
- Avoids costs needed to replace EUB Gas Gathering Plant (GGP) system.
 - Current obsolete system needs replacement within 1-2 years at costs estimated to be \$500K - \$1M.

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S/OAS integration requires investment in a data capture system and a royalty interest registry and modifications to third party and Ministry systems

- Development of an Integrated Data Capture System (IDCS) electronically accessible by all stakeholders. Initially this system would provide data to meet Ministry needs but eventually could provide data for all stakeholder purposes (refer to Exhibit 2, page 95)
- Development of a Crown Royalty Interest Registry (CRIR) updated by the licensed operator of the stream id (e.g. well, unit, well group) and administered by the DoE
- Modify existing royalty calculation and invoice processes to use the above registry
- Modification of existing Ministry information systems to receive and process volumetric data in its revised format
- Training, support and user documentation

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The recommendation is to develop a registry containing key oil and gas information accessible and shareable by the Ministry and Industry

- The shared information registry would:
 - Be an electronic warehouse of information with minimal calculation and processing.
 - Be the source of data for activities requiring processing or calculation (e.g. royalty calculation) which would then occur within existing software applications. All authorized organizations requiring energy sector information will access the shared information registry and “pull” information from it to enable ongoing business practices to continue
- The shared information registry should be initially developed and delivered by the Ministry with the following functionality:
 - Information generated by industry will proceed through a front end edit to reduce error rates
 - Receive information from industry to the shared information registry via an electronic delivery method; disseminate from the Ministry to industry
 - Provide a query, reporting and download facility to industry and the Ministry
 - Provide access to the shared information registry via the Internet
- To succeed the shared information registry must:
 - Be a cooperative industry / government initiative
 - Be the residence of all identified information; not optional by company or Ministry
 - Be supported by
 - Changes in people, culture and skills - 50% of the total success factor
 - Business and management processes - 35% of the total success factor
 - IT tools - only 15% of the total success factor
 - Recognize that benefits and trust in the information will increase over time



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The tangible benefits of a Shared Information Registry include a reduction in rejected documents, reworks and paper for Industry and the Ministry

- Reduced rework and increased accuracy due to edits at “source” (front end edits):
 - Currently, rework costs are \$1 Million per year for the EUB; industry compliance fees for S-reporting at current accuracy levels are estimated at \$2 - \$3 Million per year
 - DoE OAS rejects average 2,000 detail lines per month (10%)
 - Edits at source will result in a 50% reduction to approximately 1,000 OAS detail lines
 - Minimal cost savings will be realized by the DoE
- Reduced paper and associated costs:
 - EUB paper filings: 13,000 forms per month could be eliminated
 - DoE gas royalty paper filings average 2000 forms per month
 - Error rates from 17% - 30% dependent upon document type
 - Edits at source will result in a 50% reduction to approximately 200 input documents
 - Minimal cost savings will be realized by the DoE
- Industry has a single source of OAS information (no need to contact each operator for OAS data):
 - 10% or \$1 Million - \$1.5 Million per year of Production Accountants’ royalty related time pursuing OAS information
- Faster and effective information delivery
 - Will provide a larger window for industry to compile information through the use of electronic transportation mechanisms (EDI, Internet, etc.) to reduce data delivery, entry or conversion time
 - Reduced industry overtime by an estimated average of 2-3 days per month per company (\$500,000)

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The intangible benefits from the reduction in frustrations and provision of new functionality are equally as important as are the tangible benefits

- Inquiry capability against one consistent source of data for use by industry, the Ministry, and potentially other Ministries, other jurisdictions and the public
- Better decision making due to improved access to information:
 - Volumetric / transactional data
 - Field, pool, well and facility data
- Potentially less duplication in business processes and in the total number of databases containing the same or similar information (in DOE, EUB and in industry). This longer term benefit will be realized in time
- Reduced duplication of efforts, infrastructure investment, data storage
- Improved industry administration efficiency, and increased quality and consistency of data
- An environment that could grow to cover other common information needs when and where appropriate
- Facilitates business process reengineering, particularly in production accounting

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The initial development costs to deliver the Shared Information Registry range from \$6.4 to \$8.4Million

Activity	Industry	Ministry	New Costs
Development life cycle of a shared information registry from design through implementation (software delivery)			\$2M - \$4M
Server hardware and software			\$500K
Conversion of existing data (assumes clean data)		\$500K (EUB) \$500K (DoE)	
Training (trainer, CD production)			\$125K
Sub Total		\$1M	\$2.6M - \$4.6M
Implications on existing applications (assumes purely modifying data feeder systems)	\$1M	\$1.2M (EUB) \$600K (DoE)	
TOTAL	\$1M	\$2.8M	\$2.6M - \$4.6M

Note 1: The entire costing of the Shared Information Registry is predicated on using the current business practices. These costs are independent of the costs of the two other initiatives, Royalty Regime and S/OAS integration. The estimates assume all existing Ministry file creation activities (eg. Well data tape production) continue to be the responsibility of the current process owner.

Note 2: The opportunity exists to modify / port certain legacy applications from outdated platforms to new platforms thereby offering an opportunity to maximize application and business process effectiveness. The costs to perform this activity are not included in the above table.

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The estimated annual operational costs of a Shared Information Registry
are between \$800,000 - \$1.5 Million

- The estimated operational costs of \$800,000 - \$1.5 Million per annum include:
 - application maintenance (break fix activity)
 - software, operating system and database annual license maintenance fees
 - operations staff
 - help desk staff
- The estimate does not include:
 - new application functionality or enhanced functionality

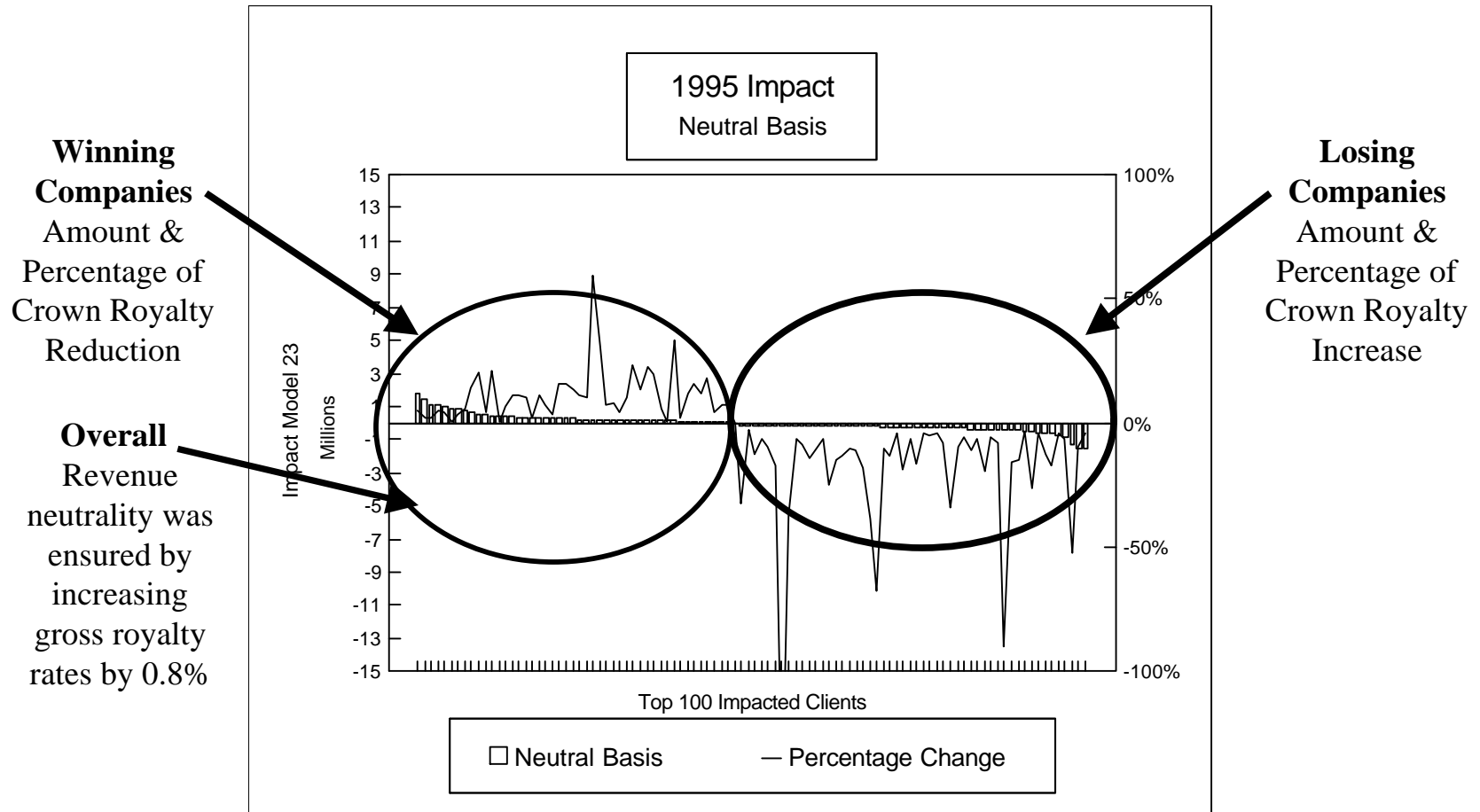
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The following pages contain a summary of the anticipated outcomes of the recommendations

- The outcomes include
 - Distribution Impact of the royalty changes
 - Benefits and Cost for
 - Royalty regime changes
 - S/OAS integration
 - Shared Information Registry

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The royalty regime changes would have redistributed \$23 Million in 1995 with a maximum win of <\$2 Million and maximum loss of ~\$1.3 Million



The Distribution Impact Model was validated by large, intermediate and small companies who calculate actual impacts on royalties paid at specific facilities and compared these with output from the model. The model cannot predict the future impact due to the many changes in ownership and other factors.

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The tangible benefits of modifying the Royalty Regime processes will result in annual Industry and Ministry benefits of \$3M - \$4M

Benefit	Industry	Ministry
Reduced allowable cost administration costs	<ul style="list-style-type: none"> • 30% - 50% of administration cost savings estimated to be \$1.5M - \$2.5M per year 	<ul style="list-style-type: none"> • Administration costs savings, reallocate 5 staff @ \$50K results in \$250,000 potential savings
Reduced royalty invoicing for minimal royalty balances	<ul style="list-style-type: none"> • accumulated, industry savings of \$125,000 per year royalty charges across 700 clients • invoice handling would be reduced by \$168,000 per year 	<ul style="list-style-type: none"> • invoice generation and mailing would realize savings of approximately \$75,000 per year) • ***
Annual CAP election	<ul style="list-style-type: none"> • \$150,000 over 1000 clients under \$30,000 royalty annually 	
Mineral Tax incorporated into the Gas monthly invoice cycle	<ul style="list-style-type: none"> • \$.5M reduced administration and audit of unit values 	<ul style="list-style-type: none"> • \$250,000 in reduced administration and audit of unit values • removal of risk due to title splitting
TOTAL	\$2.5M - \$3.5M	\$575,000

*** Note: the Ministry benefits do not include any consideration of audit cost reductions, appeals/adjustment benefits or ARTC.

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An analysis of the Royalty Regime Changes' costs and benefits indicate the payback across the gas sector occurs in 2002 (if implemented as revenue neutral)

Regime Changes	1998-2000	2001	2002	2003
INDUSTRY				
Implementation Capital	0	-	-	-
Increased Annual Ops Cost	-	0	0	0
Annual Program Savings	-	2.0-3.0M	2.0-3.0M	2.0-3.0M
MINISTRY				
Implementation Capital	1.75M	-	-	-
Annual Program Savings	-	50K	50K	50K

Payback

Freehold Mineral Tax	1998-2000	2001	2002	2003
INDUSTRY				
Implementation Capital	<1.0M	-	-	-
Annual Program Savings	-	0.5M	0.5M	0.5M
MINISTRY				
Implementation Capital	2.0M	-	-	-
Annual Program Savings	-	0.25M	0.25M	0.25M

Payback
2004-2005

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The tangible benefits of integrating the OAS and ‘S’ documents are realized through reduced data volumes and increased accuracy

Benefit	Industry	Ministry
OAS preparation reduced from 12,000 monthly to 1,800	<ul style="list-style-type: none"> • 85% reduction in OAS preparation and improved quality • reduced provisional assessment by 60 –70% per month*** • penalties are reduced due to less inputs therefore less rejects • OAS rejects reduced by 50% to 1000 detail lines • data transmission costs are reduced by \$1.5M per year 	<ul style="list-style-type: none"> • internally balanced document at facility level; eliminates DoE – EUB reconciliation processes • reconciliation processes are eased • potential for 15 day improvement in invoice cycle • eliminates redundant data required by existing carry forwards • reduces edits, lack of filing and mis-filing errors associated with owner level details
Cost avoidance	<ul style="list-style-type: none"> • no need to separately prepare S8, S20 and S21 documents 	<ul style="list-style-type: none"> • eliminates need to replace Gas Gathering Plant (GGP) system (EUB); costs estimated to be approximately \$.5M - \$1.0 M
TOTAL	\$1.5M +	\$.5M - \$1.0M

*** Note:the reduction in provisional assessment would result in a benefit from reduced interest costs, not included in total

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An analysis of the S/OAS Integration costs and benefits indicate that the payback across natural gas sector occurs in 2002

S/OAS Integration	1998-2000	2001	2002	2003
INDUSTRY				
Implementation Capital	0	-	-	-
Increased Annual Ops Cost	-	0	0	0
Annual Program Savings	-	1.5M	1.5M	1.5M
MINISTRY				
Implementation Capital	3.0M	-	-	-
Systems Replacement Avoidance	(0.5-1.0M)			
Annual Program Savings				

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The tangible benefits of a Shared Information Registry include a reduction in rejected documents, rework, and paper for Industry and the Ministry

Benefit	Industry	Ministry
Reduced rework and increased accuracy due to front end edits	<ul style="list-style-type: none"> • reduced compliance fees (EUB / DoE) due to less rejects • OAS rejects reduced by 50% to 1000 detail lines • Other monthly royalty document rejects would be reduced by 50% to 200 	<ul style="list-style-type: none"> • \$1.0 M per year (EUB) • minimal cost savings to DoE
Reduced paper and associated costs		<ul style="list-style-type: none"> • 13,000 monthly paper forms would be received electronically (EUB) • 2,000 monthly paper forms would be received electronically (DoE)
Single source of OAS information	<ul style="list-style-type: none"> • \$1M - \$1.5M reduction in Production Accountants pursuing OAS information 	
Use of registry will provide a larger window for document preparation	<ul style="list-style-type: none"> • \$.5M reduction in overtime for Ministry submissions 	
TOTAL	\$1.5M - \$2.0M	\$1.0M

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An analysis of the Shared Information Registry costs and benefits indicate that the payback across natural gas sector occurs in 2004-5

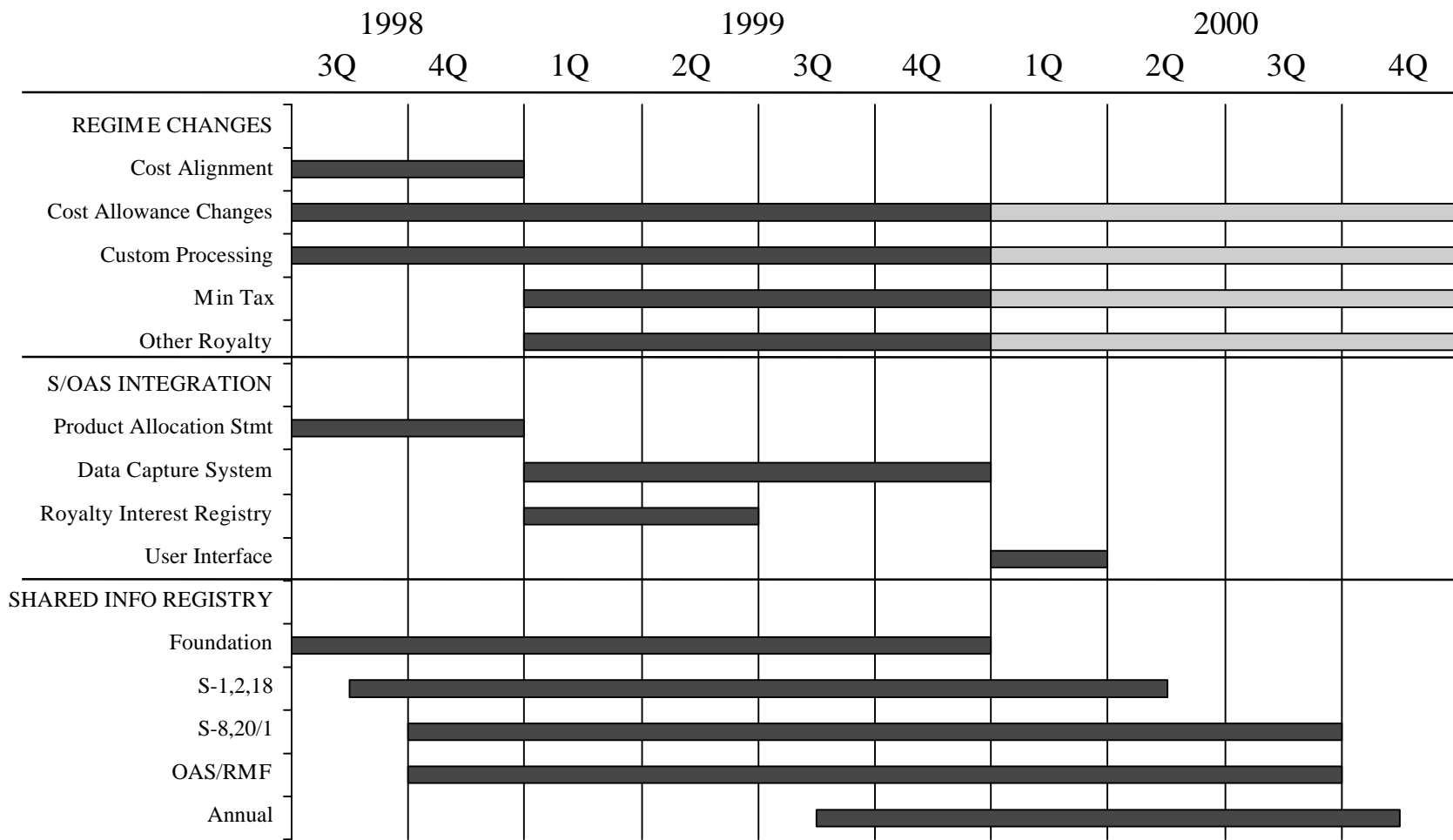
Shared Information Registry	1998-2000	2001	2002	2003
INDUSTRY				
Implementation Capital	1.0M	-	-	-
Increased Annual Ops Cost	-	0	0	0
Annual Program Savings	-	1.5-2.0M	1.5-2.0M	1.5-2.0M
MINISTRY				
Implementation Capital	2.4-4.6M	-	-	-
Increased Annual Ops Cost		(0.8-1.5M)	(0.8-1.5M)	(0.8-1.5M)
Annual Program Savings		1.0M	1.0M	1.0M

Note: Investing in a shared information registry will trigger additional one time costs (\$2.8M - \$3.0M) within the Ministry to modify existing automated applications. The net result is the 2004/2005 payback.

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The draft schedule shows S/OAS Integration and the Shared Information Registry ready in 2000 and the new royalty regime beginning in either 2000 or 2001



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Each of the eight strategic issues identified at the start of the project have been affected by one or more of the recommendations

	<u>Regime Changes</u>	<u>S/OAS Changes</u>	<u>Share Information Registry</u>
<u>Policy related issues:</u>			
1. Optimal role and involvement of government is unclear	X		X
2. Lack of certainty around fiscal period revenues	x		
3. Allowable cost principles not consistent with business practices	X		
4. Royalty regime does not encourage rationalization and efficiency	X		
<u>Information related issues:</u>			
5. Lack of quality & timely volumetric information	X	X	X
6. Cost, complexity and redundancy surrounding data requirements	X	X	X
7. Information gathering processes do not facilitate compliance	X	X	X
8. Lack of standard industry to industry reporting		X	X

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These recommendations will go through a stakeholder review period before being submitted for the Minister's consideration

February 2 - May 22, 1998

- February 3-6 - Task Force report is released to stakeholders
- February 6 to April 30 - Stakeholders review report and provide feedback to the Steering Committee
- May 4 to May 14 - Task Force reviews stakeholder responses, investigates impacts and modifies recommendations as appropriate and reviews updated recommendations with Steering Committee
- May 15 - Final Steering Committee briefing
- May 22 - Final Task Force recommendations submitted to the Minister of Energy