Schedule A

Licensee Liability Rating (LLR) Program

DRAFT Directive PNG025

October 2017

Version 0.0

Governing Legislation:

Act: *The Oil and Gas Conservation Act*
Regulation: *The Oil and Gas Conservation Regulations, 2012*
Minister's Order: TBD

Record of Change

Version	Date	Author	Description
0	January 2008	PNG	LLR Guideline originally released
0	October 2017	PNG	Draft (Guideline PNG025 has been changed to Directive PNG025 and updated to provide more clarification regarding the LLR Program).

Contents

1 Introduction

The Licensee Liability Rating (LLR) Program assesses the financial risk that a licensee's unfunded well and facility liability poses to the Saskatchewan Oil and Gas Orphan Fund (SOGOF). The Ministry of the Economy (ECON) manages the financial risk through the collection of security deposits to ensure the SOGOF is able to carry out the abandonment and reclamation work when a licensee or working interest owner is defunct or missing.

This Directive is intended to provide clarification on the policies and procedures used by ECON to determine a Licensee's Liability Rating and security deposit requirements under the LLR Program.

The fees under the LLR Program are only applicable to Oil and Gas Producers. Therefore, any licensee holding well and facility licences for purposes other than oil and gas production (such as potash mining, storage facilities or waste facilities) would be exempt from the fees under the LLR Program (security deposit, orphan fund fee and orphan levy).

Inquiries regarding Directive PNG025 should be directed to the Petroleum and Natural Gas (PNG) Support Desk at 1-855-219-9373 or PNG.support@gov.sk.ca.

2 LLR Equation and Terms

The LLR Program assesses the inventory of all wells and facilities held by a licensee to determine potential financial risk to the SOGOF in terms of the licensee's future costs to abandon and reclaim their wells and facilities. The basic tool used, by ECON, to assess this potential risk for each licensee is the LLR Equation:

$$LLR = \frac{Deemed\ Asset}{Deemed\ Liability} = \frac{AOE\ x\ Industry\ Netback\ x\ Return\ Period}{\sum[(Abandonment\ Cost + Reclamation\ Cost)\ x\ PVS]}$$

The LLR is the licensee's deemed asset to deemed liability ratio as determined by the minister under the authority of *The Oil and Gas Conservation Act.* A licensee's deemed asset value is measured in terms of their net production value. The deemed liability is the total cost for the future abandonment and site reclamation of all of a licensee's wells and upstream facilities.

The LLR equation and a discussion of its parameters are provided below.

2.1 Deemed Asset Calculation for a Well

The LLR Program calculates the deemed asset value of a licensee based on the cash flow derived from the oil and gas production reported to Petrinex:

$$Deemed\ Asset = AOE\ x\ Industry\ Netback\ x\ Return\ Period$$

where:

- *AOE* is the calculated oil equivalent production volume, in cubic metres, attributed to a well over a 12 month period;
- *Industry Netback* is a rolling 3-year provincial industry average netback as determined by the minister and provided in Appendix 4; and
- *Return Period* is equivalent to 3 years.

The AOE is defined as the licensee's total production of oil and gas over a 12 month period. The AOE is determined by the minister in accordance with the following formula:

$$AOE = AOP + \left[\left(\frac{AGP}{C_f}\right)(1 - S_f)\right]$$

where:

- *AOP* is the sum of the most recent 12 months of oil production, in cubic metres, that is attributable to a the licensee's wells;
- *AGP* is the sum of the most recent 12 months of gas production, in thousand cubic metres, that is attributable to the licensee's wells;
- C_f is a conversion factor, provided in Appendix 4, that, when divided into a gas production volume in thousand cubic metres, provides the economic equivalent volume of oil in cubic metres and is a rolling three-year industry average; and
- S_f is a shrinkage factor, provided in Appendix 4, which expresses the percentage of total provincial gas production that is not sales gas and is a rolling three-year industry average.

2.2 Deemed Liability Determination for a Well

The deemed liability for a well is defined as the total cost to 'cut and cap' abandon the well and reclaim the well site.

The deemed reclamation liability for a well considers its surface location in relation to the applicable PNG field office administrative boundaries (as defined in Appendix 5, where Area 1 – Lloydminster, Area 2 – Kindersley, Area 3 – Swift Current and Area 4 – Estevan). As shown in Appendix 1, the deemed abandonment liability of a well considers its surface location, down-hole completion scenario and total vertical depth of the well. For commingled or multi-zone completed wells there will be an additional 25% added onto the abandonment cost associated with the well.

The LLR Program defines the licensees future cost to abandon a well and reclaim the site as follows:

$$Deemed\ Liability = (Abandonment\ Cost + Reclamation\ Cost)\ x\ PVS$$

where:

- *Abandonment Cost* is obtained from Appendix 1;
- *Reclamation Cost* is obtained from Appendix 3; and
- *PVS* is the present value salvage factor as defined in section 2.4.

Newly drilled wells are given a one year grace period from their spud date in which they will not incur any abandonment or reclamation liability.

2.3 Deemed Liability Determination for a Facility

The deemed liability for a facility is defined as the total cost to decommission the facility and reclaim the facility site.

For the purpose of determining the deemed liability cost of a specific facility, well equivalents are assigned. The well equivalent is a term used to capture the relative liability of a facility as compared to a well and takes into account factors such as facility type and design throughput capacity (i.e. total inlet rate for oil, gas and water) provided within the facility licence application. As shown in Appendix 2 the multi well oil batteries and gas processing plants have equations provided to determine the well equivalent; whereas the remaining facility types in the table are assigned static well equivalents.

The LLR Program defines the licensees future cost to decommission the facility and reclaim the site as follows:

$$Deemed\ Liability = Well\ Equivalent\ x\ (Basic\ Abandonment\ Cost + Reclmation\ Cost) x\ PVS$$

where:

- *Well Equivalent* is obtained from Appendix 2;
- *Basic Abandonment Cost* is $10,000 per well equivalent;
- *Reclamation Cost* is obtained from Appendix 3 and is based on the surface location of the facility in relation to the applicable PNG field office administrative boundaries as defined in Appendix 5; and
- *PVS* is the present value salvage factor as defined in section 2.4.

2.4 Present Value Salvage Factor (PVS)

The present value and salvage factor is assigned to a well or facility to reflect the timing of abandonment and reclamation and the future value of equipment salvage. The PVS factor varies assigned under the LLR Program varies as follows:

- PVS = 0.75 for an active well
- PVS = 0.5 for an active facility
- PVS = 1.0 for the following situations:
  - inactive well or facility;
  - swab well;
  - water source well
  - cancelled well or facility where surface disturbance has been identified;
  - well or facility deemed a "designated problem site" (as defined in section 3.4); or
  - any well or facility licence held by a licensee who was ever involved in a well and/or facility licence transfer, as either the buyer or seller.

In situations where a well or facility licence is transferred, the PVS of both the seller and buyer will be affected. After a licence transfer, all the licensed wells and facilities of both parties, including those outside of the particular transfer application, will be irrevocably set to 1.0. **This is a very important consideration for licensees wishing to buy or sell wells and/or facilities, since their post-transfer liability will be assessed at a much higher rate following the transfer; if their PVS prior to the transfer was less than 1.**

2.5 Licensee Liability Inventory Report

Licensees can access their Licensee Liability Inventory (LLI) report, in pdf or excel format, through the LLR System Login on Saskatchewan.ca. Each licensee only receives one username/password and it is the responsibility of the licensee administrator to distribute the information within the company.

The LLI Report is updated on the 28th of every month and provides licensees the following information:

- A list of the well and facility licences held by the licensee as identified in IRIS;
- Deemed asset values associated with each well licence. Please be advised that the LLI report pulls the production data of the preceding 12 months from Petrinex. Therefore, a report generated on August 28, 2017 would be using the oil and gas production volumes, reported in Petrinex, from August 2016 to July 2017.
- Deemed abandonment liability associated with each well and facility licence;
- Deemed reclamation liability associated with each well and facility licence;

- LLR value (i.e. Total Deemed Assets/Total Deemed Liability)
- security deposit requirement (i.e. Total Deemed Liability – Total Deemed Assets) along with the security deposit amount already received.

Licensees are encouraged to review/save their LLI reports monthly. The licensee should report any discrepancies between the report and their own records to PNG.support@gov.sk.ca for review and adjustment, where applicable.

3 LLR Assessments and Security Deposits

There are two purposes for which LLR assessments are normally conducted:

1) Monthly LLR assessments for each licensee are conducted on a scheduled basis as a means of assessing a licensee’s on-going financial fitness with respect to their ability to address future abandonment and reclamation costs.
2) When a licensee applies to transfer well and/or facility licence(s) to another party a LLR assessment is conducted to determine whether or not the transfer in question will invoke any security deposit requirements. For example, where the facilities or wells being transferred carry a higher deemed liability than deemed asset value, a security deposit may be required before the licenses will be transferred.

3.1 Monthly LLR Assessment

ECON conducts the monthly LLR assessment of each licensee using the Licensee Liability Inventory Reports (run on the 28th). Licensees that maintain their LLR at or above 1.0 will not be subject to security deposit requirements. Should a licensee’s LLR fall below 1.0, and the security deposit owed is greater than $10,000, the resulting security deposit must be submitted within 30 days of a notice provided by the ministry. The licensee’s security deposit requirement is calculated as:

$$\textit{Security Deposit Required} = \textit{Total Liability} - \textit{Total Assets} - \textit{Total Security on Account}$$

Similarly, if a licensee’s previous month’s LLR assessment was less than 1.0, and following that, their monthly LLR continues to decrease, the additional security deposit requirements over and above the initial amounts must be submitted within 30 days of a notice provided by the ministry.

Security deposit invoices will be mailed to the licensee using the address provided on IRIS/Petrinex. Therefore, the onus is on the licensee to ensure the IRIS/Petrinex have the current address listed so communications will not be delayed. If a correction is required the licensee should contact ER.support@gov.sk.ca to have the information updated.

3.1.1 Enforcement Actions for Non Compliance of Security Deposit Payment

Where a licensee fails to provide security deposit payment within 30 days, the amount owing is a debt to the Minister and may be collected in any manner the Minister considers appropriate; including in the manner provided in section 53.2 of *The Oil and Gas Conservation Act.* Prior to obtaining a court issued Judgement against the licensee to collect the outstanding debt the ministry may issue the licensee a series of Minister’s Orders requiring the licensee to suspend their operation, abandon the wells, decommission the facilities, or reclaim the well/facility sites by a given date in lieu of the security deposit payment.

As per section 14(8) of *The Oil and Gas Conservation Regulations, 2012* suspension of a licence removes all rights and privileges authorized by the licence. As a consequence of this, once a licence has been suspended, the licensee is no longer authorized to operate or produce and the licensee is therefore obligated under the legislation to suspend the operation of the well or facility as the case may be. Continued production from a well or continued operation of a facility for which the licence has been suspended is a violation of *The Oil and Gas Conservation Act* and such production constitutes “illegal oil”, “illegal gas” or “illegal product”. Further, the sale of such oil, gas or products is prohibited as per section 57 of *The Oil and Gas Conservation Act*.

Any properties that continue to operate or produce after a suspension date will be identified and the licensee will be issued a Minister’s Order requiring the forfeiture of the illegal production to the Crown as per section 58 of *The Oil and Gas Conservation Act*.

Please be further advised that suspension of a licence does not remove the licensees obligation with respect to the well or facility and all liability with respect to the well or facility, whether it existed before or after the suspension, rests with the licensee as per the section 12.2 of *The Oil and Gas Conservation Act*.

If the required security deposit is not received within 30 days of a suspension date an Abandonment Order will be issued by the minister for all of the effected wells and facilities. At this time, all working interest participants (WIPs) will be identified and also served a ministers order requiring them to abandon the licences in which they are WIPs by the time frame specified.

If the abandonment order lapses and security is not submitted by the required deadline ECON will assume care and custody of the wells and make arrangements to have them abandoned. ECON will recover the abandonment and reclamation costs and expenses incurred as a debt due to and recoverable by the Crown from the licensee and any of the identified WIPs.

Finally, the licensee should be aware that ECON is obligated to enforce the Acts and Regulations for which it has been given jurisdiction. Failure to do so would constitute negligence and would be biased and discriminatory to the many licensees that have submitted required deposits and are fully compliant with the Saskatchewan Oil and Gas Orphan Program and the Licensee Liability Rating Program.

3.2 Licence Transfer Assessments

If a licensee wishes to transfer their well or facility licences to another licensee, a licence transfer application must be completed, in conjunction with the other company, and submitted through IRIS. ECON then conducts a LLR assessment on both licensees (buyer and seller) involved in the transfer to determine whether or not the transfer in question will invoke any security deposit requirements. During the assessment the liability of both licensees is calculated on the basis that the transfer has been approved.

If the LLR assessment shows that the post transfer LLR of both parties involved is equal to or greater than 1.0, there will be no security deposit requirements and the transfer can proceed provided that the eligibility criteria are met as set forth in section 12 of *The Oil and Gas Conservation Regulations, 2012*.

If the licensees (buyer or seller) post transfer LLR is less than 1.0 and less than their pre-transfer LLR then a security deposit or deposits must be submitted before the ministry will transfer the licences.

Licensees will be notified, via email, of any security deposit requirements due to the pending licence transfer and provided 30 days in which to submit the deposit. **Licence transfer applications will be denied if the required security deposit is not received within 30 days.**

As stated in section 2.4, when a licence transfer is completed, the **PVS factors for all the wells and facilities that both parties own will be irrevocably set to 1.0**.

3.3 Unassessed Problem Sites – How they affect LLR Assessments

ECON will advise a licensee of any site identified as a potential problem site and provide the licensee with an opportunity to respond to the identification prior to formally classifying the site as an "unassessed problem site" (UPS). If a licensee cannot establish that the potential problem site identification was in error, ECON will provide notification to the licensee that the site has been designated as an UPS and set the liability of the site at **four times** the standard abandonment and/or reclamation liability; or greater depending on the severity of the problem.

When ECON assigns an UPS classification to a well or facility, the licensee must complete a site specific liability assessment (SSLA), within a time period specified by ECON; SSLAs must be conducted by qualified third party professionals. The unassessed value determined by the ministry will be used for monthly LLR assessment purposes until the licensee has submitted the SSLA to ECON.

For ease of identifying unassessed problem sites in Saskatchewan, ECON updates the "Deemed Problem Site" column of the applicable licence within the LLR Well List or LLR Facility List (available on Saskatchewan.ca) with a "U".

If an unassessed problem site is **transferred**, the UPS liability, as determined by the ministry, will be **multiplied by a factor of two; post transfer**. This is to account for the uncertainty and risk involved in transferring a well/facility licence in the absence of a SSLA to quantify the liability. A licensee acquiring an UPS will have the UPS's liability calculated at this higher rate for monthly and transfer LLR assessments until the UPS identification is removed or changed to a "designated problem site".

3.4 Designated Problem Sites

Once a SSLA has been submitted to ECON and reviewed, the site will be reclassified as a "designated problem site" and will remain in effect until abandonment and/or reclamation related progress has been made at the site. The assessed liability as determined by the SSLA will be used to set the abandonment and/or reclamation liability of the site. For designated problem sites, both monthly and licence transfer LLR assessments are conducted using the "assessed" value as determined in the SSLA.

For ease of identifying designated problem sites in Saskatchewan, ECON updates the "Deemed Problem Site" column of the applicable licence within the LLR Well List or LLR Facility List (available on Saskatchewan.ca) with an "A".

3.5 Security Deposits

One of the ways ECON manages the financial risk to the SOGOF, in terms of that licensee's future costs to abandon and reclaim their wells and facilities, is through the collection of security deposits. As stated in section 3.1 a licensee whose LLR is less than 1.0 will be advised by ECON of the amount of security deposit that is due.

The collected security deposit maybe refunded to a licensee when eligible or forfeited to the SOGOF to carry out the abandonment and reclamation work when a licensee/working interest owner is defunct or missing. Any questions regarding security deposit assessments or refunds should be directed to PNG.support@gov.sk.ca.

3.5.1 Payment of a Security Deposit

Any security deposit requirements arising from the above-mentioned assessments should be in the form of an irrevocable letter of credit (LOC) or cash payment. Cheques and LOCs should be made payable to the **Minister of Finance – The Oil and Gas Orphan Fund**. Payments with applicable invoice stub/remittance voucher, should be sent to:

The Ministry of the Economy
1000, 2103 - 11th Avenue
Regina, SK S4P 3Z8

In terms of cash payments options ECON will accept the following: cheque, bank draft, electronic funds transfer (EFT), direct deposit, online payments and wire transfers. The Irrevocable Letter of Credit (LOC) must be obtained from a recognized Canadian Bank, Credit Union, or Trust Company guaranteeing payment upon presentation to the issuer. ECON will accept only renewable irrevocable LOC issued by an eligible financial institution in the exact legal name of the licensee required to pay the security deposit. A blank LOC form is available on Saskatchewan.ca which identifies information required for it to be accepted by ECON.

A licensee may change the form of their security deposit (i.e. cash deposit to a LOC or vice versa). The existing form of security deposit will only be returned to a licensee, upon written request, once the replacement form security deposit has been received and processed by ECON.

Any questions a licensee has in regards to the security deposit payment should be directed to the service desk at 1-844-213-1030 or email *ER.support@gov.sk.ca*.

3.5.2 Refund of Security Deposit

The Ministry expects licensees to maintain a record of their security deposit submissions and to request a refund when eligible. Note: **The Ministry reserves the right to withhold a refund where it is not in the best interest of the Orphan Fund Program**, such as where a licensee has an unassessed problem site.

Licensees may be eligible for a refund of their security deposit, being held under the LLR Program, provided the licensee is in an overpayment situation during which time the licensee and has improved or maintained their LLR value for a period of six consecutive months. Where this is the case, the amount of refund the licensee would be eligible for would be dependent on their current LLR value and that during the six month period, for instance, where the licensees:

- LLR ≥ 1.0, the licensee would be entitled to a full refund of the security deposit held on account; and
- LLR < 1.0, the licensee would be entitled to a partial refund of the security deposit (equivalent to the first of the six months in which the overpayment occurred).

ECON will waive the six month waiting period for a licensee in an overpayment situation, who actively work towards reducing the liability for which a security deposit is being held. A licensee would be eligible for a full refund of the applicable abandonment and/or reclamation liability in which:

- a well or facility licence has been transferred;
- a well had been cut and cap abandoned;
- a facility has been decommissioned;
- a well or facility site has received an AOR or full exemption from reclamation approval, in accordance with the Acknowledgement and Reclamation Requirements Directive (PNG016)

To obtain a security deposit refund under the LLR Program, ECON requires the licensee to provide a formal request (on company letter head and signed by someone with authority such as the president of the company). The request should be submitted to PNG.support@gov.sk.ca and the letter should include the following:

- State the amount and form of security deposit (i.e. **cash or letter of credit**) currently being held. Please note a letter of credit please supply the LOC #).
- State the security deposit amount being requested.
- Provide a description (along with applicable licence numbers, where appropriate) of how the licensee has meet the eligibility requirements for which the full or partial refund of the security deposit is being made.
- Provide the contact information (phone number and email) of the person making the request as the Ministry may need to contact you when reviewing the request.
- Provide the mailing address where the refund should be sent while keeping in mind the following:
    - **Full/partial cash refunds** will be returned to the licensee and the mailing address indicated in the letter will be verified against the information on IRIS/Petrinex. Please be advised that the licensee may include in their **request to have the money refunded through direct deposit**; if you are not already set up for direct deposit the Ministry will contact you.
    - **Full LC refund** – the ministry will return the original LOC, via registered mail, to the issuing financial institution.
    - **Partial LC refund** – the ministry will provide documentation to the licensee that the partial LC refund is granted, at which time the licensee would need to take the letter to the issuing financial institution to have the LOC amended and filed with ECON.

Once the refund request has been reviewed the licensee will be notified via email if a refund has been approved. Once this notification has been sent any further inquiries as to the timing of the particular refund should be directed to the service desk at 1-844-213-1030 or ER.support@gov.sk.ca.

3.6 Appeals

The Saskatchewan LLR program has been designed to be flexible and provide licensees that have an LLR rating below 1.0 with the ability to submit an appeal. Licensees should be aware that when submitting an appeal, the appeal must be comprehensive, containing documentation and cost data on all of the LLR factors. ECON will only assess the appeal based on all of the various factors used in the calculation of each licensee's LLR; ECON will not accept an appeal that is not comprehensive. Requests for an appeal should be made by letter submitted to PNG.support@gov.sk.ca.

The netback value portion of the appeal must include a completed licensee netback calculation as well as all financial information supporting the calculation. If a licensee does not have three years of history, the netback calculation must include the industry average for those years required to make up the three year period.

The site specific section of the appeal must contain a detailed third party abandonment cost estimate for each licensed well and facility including problem wells (gas migration, surface casing vent flows, etc.). It also must contain third party reclamation cost assessments for each of the licensee's licensed wells or facilities. Reclamation costs must be based on actual site conditions, including contaminated sites, for each of the company's locations.

4 Liability Reduction

To reduce the liability associated with a well or facility licence, when it is no longer used for the purpose for which it was intended, the well or facility must be abandoned or decommissioned and the site assessed and reclaimed.

4.1 Well Abandonment

In order to remove the abandonment liability associated with a licensed well, it must be properly "cut and cap" abandoned in accordance with sections 44 to 48 of *The Oil and Gas Conservation Regulations, 2012* and Directive PNG015: Well Abandonment Requirements.

4.2 Facility Decommissioning

In order to remove the abandonment liability associated with a licensed facility, the site must be fully decommissioned by:

- removing all process equipment, tanks, buildings and any associated equipment or structures;
- removing all produced liquids;
- and appropriately disposing of any structural concrete.

A decommissioning report must be submitted to PNG.support@gov.sk.ca which includes the following:

- facility licence number;
- surface location of the facility;
- facility type;
- legal survey;
- clearly labeled photo log depicting the entire lease; and
- letter signed by an official within the company requesting the status of the facility updated to abandoned and the deemed abandonment liability set to zero.

4.3 Acknowledgement of Reclamation (AOR)

Once a well is abandoned, facility is decommissioned the site must be assessed and reclaimed in accordance with section 56 of *The Oil and Gas Conservation Regulations, 2012* and Directive PNG016: Acknowledgement of Reclamation Requirements. The licensee must apply for an Acknowledgement of Reclamation through IRIS. If the Ministry approves the AOR application the reclamation liability is removed.

4.4 Application for Full Exemption from Reclamation (due to overlap)

In cases where a licensee has abandoned a well or decommissioned a facility, but is prevented from completing the reclamation work required as the lease is being used by another well/facility operation, the licensee may apply for an Exemption from Reclamation through IRIS.

If the Ministry approves an exemption from reclamation application involving a full surface lease overlap the reclamation liability is removed from the exempted well/facility licence and the future reclamation responsibility of the site is transferred to the other well/facility licence identified within the application.

4.5 Multiple Licences on a Lease

Where a licensee has more than one well or facility licence existing on a single surface lease, the liability of the site can be reduced by submitting a request to PNG.support@gov.sk.ca, with subject line "Reduction in liability for multiple licences on a site". The request letter should provide the following information:

- Licensee's name
- Licensee representative contact name, email and phone number
- Identify the purpose of the letter is to request the liability of associated wells or facilities on a lease be reduced
- Details of the site, such as the well or facility licence numbers included in the request along with their current reclamation liability
- A survey plan with the applicable wells and facilities identified by their licence numbers.

Should the Ministry approve the request the reclamation liability of the highest well or facility licence would be retained and the remaining licences would be reduced to 10% of their original reclamation amount.

Example: A licensee has two active wells within a single surface lease which each holding a reclamation liability of $13,600. After the licensee's request is approved the total reclamation liability of the site would be reduced by a total $12,240 (based on the figures in the example below).

	Reclamation Liability	
Active Licence	Before Request	After Request
Vertical Well Licence	$13,600	$13,600
Horizontal Well licence	$13,600	$1,360
Total:	**$27,200**	**$14,960**

Appendix 1: Provincial Well Abandonment Cost Table

Area	Well Configuration	Well Total Vertical Depth		Well Abandonment Cost
		From (m)	To (m)	
Any	Swab Wells	Any	Any	$5,100.00
Any	Water Source Wells	Any	Any	$5,100.00
1	Empty, Not Perforated	0	1199	$5,100.00
		1200	1999	$5,100.00
		2000	2499	$5,100.00
		2500	2999	$5,100.00
		>=3000	99999	$5,100.00
1	Empty, Perforated	0	1199	$12,300.00
		1200	1999	$13,700.00
		2000	2499	$15,100.00
		2500	2999	$16,900.00
		>=3000	99999	$19,800.00
1	Tubing Only	0	1199	$16,800.00
		1200	1999	$18,100.00
		2000	2499	$32,600.00
		2500	2999	$39,000.00
		>=3000	99999	$49,500.00
1	Tubing and Rods	0	1199	$18,900.00
		1200	1999	$31,300.00
		2000	2499	$34,500.00
		2500	2999	$41,500.00
		>=3000	99999	$53,900.00
1	Commingled or Multi-zone			+25% per completion
2	Empty, Not Perforated	0	1199	$5,100.00
		1200	1999	$5,100.00
		2000	2499	$5,100.00
		2500	2999	$5,100.00
		>=3000	99999	$5,100.00
2	Empty, Perforated	0	1199	$11,800.00
		1200	1999	$13,100.00
		2000	2499	$14,500.00
		2500	2999	$16,200.00
		>=3000	99999	$16,200.00
2	Tubing Only	0	1199	$17,500.00
		1200	1999	$26,300.00
		2000	2499	$30,000.00
		2500	2999	$38,200.00
		>=3000	99999	$38,200.00
2	Tubing and Rods	0	1199	$20,100.00
		1200	1999	$28,500.00
		2000	2499	$32,300.00
		2500	2999	$40,700.00
		>=3000	99999	$40,700.00
2	Commingled or Multi-zone			+25% per completion

Appendix 1 continued: Provincial Well Abandonment Cost Table

Area	Well Configuration	Well Total Vertical Depth From (m)	To (m)	Well Abandonment Cost
3	Empty, Not Perforated	0	1199	$5,100.00
		1200	1999	$5,100.00
		2000	2499	$5,100.00
		2500	2999	$5,100.00
		>=3000	99999	$5,100.00
3	Empty, Perforated	0	1199	$11,800.00
		1200	1999	$13,100.00
		2000	2499	$14,500.00
		2500	2999	$16,200.00
		>=3000	99999	$16,200.00
3	Tubing Only	0	1199	$17,500.00
		1200	1999	$26,300.00
		2000	2499	$30,000.00
		2500	2999	$38,200.00
		>=3000	99999	$38,200.00
3	Tubing and Rods	0	1199	$20,100.00
		1200	1999	$28,500.00
		2000	2499	$32,300.00
		2500	2999	$40,700.00
		>=3000	99999	$40,700.00
3	Commingled or Multi-zone			+25% per completion
4	Empty, Not Perforated	0	1199	$5,100.00
		1200	1999	$5,100.00
		2000	2499	$5,100.00
		2500	2999	$5,100.00
		>=3000	99999	$5,100.00
4	Empty, Perforated	0	1199	$12,300.00
		1200	1999	$13,700.00
		2000	2499	$15,100.00
		2500	2999	$16,900.00
		>=3000	99999	$19,800.00
4	Tubing Only	0	1199	$16,800.00
		1200	1999	$18,100.00
		2000	2499	$32,600.00
		2500	2999	$39,000.00
		>=3000	99999	$49,500.00
4	Tubing and Rods	0	1199	$18,900.00
		1200	1999	$31,300.00
		2000	2499	$34,500.00
		2500	2999	$41,500.00
		>=3000	99999	$53,900.00
4	Commingled or Multi-zone			+25% per completion

Appendix 2: Facility Well Equivalent Table

Facility Type	Design Throughput Capacity	Well Equivalent (WE)
Multi Well Oil Battery	0-50 m^3/day	WE = 5
	50 - 6933.3 m^3/day	WE = [(vol - 50) x A] + 5, A = 0.005085 vol = design throughput capacity (oil, gas and water)
	>6933.3 m^3/day	WE=40
Gas Processing Facilities	0-900 10^3m^3/day	WE = 10
	900 - 5700 10^3m^3/day	WE = [(vol - 900) x C], C = 0.00625 vol = design throughput capacity (oil, gas and water)
	>5700 10^3m^3/day	WE = 40
Multi Well Swabbing Oil Battery	Any throughput level	WE = 1
Cleaning Plant	Any throughput level	WE = 5
Gas Compression Facility	Any throughput level	WE = 5
Multi Well Gas Battery	Any throughput level	WE = 5
LPG Storage Facility	Any throughput level	WE = 5
Production/Injection Satellite	Any throughput level	WE = 2
Waste Plant/Reclaimer/Skim Oil	Any throughput level	WE = 5
Water Injection/Disposal Facility	Any throughput level	WE = 2.5
EOR Injection Facility	Any throughput level	WE = 4

Appendix 3: Well and Facility Reclamation Cost Table

Area	Well Configuration	Reclamation Cost
Any	Cancelled Well or Facility (with surface disturbance)	$5,100.00
Any	Swab Well	$5,100.00
Any	Water Source Well	$5,100.00
1		$22,200.00
2		$22,200.00
3		$13,600.00
4		$22,200.00

Appendix 4: LLR Factors

Industry Average Netback ($\$/m^3$OE)	Oil Equivalent (OE) Conversion Factor (C_f)	Shrinkage Factor (S_f)
$148.98	0.9715 **Mm^3gas/m^3oil**	23.0%

Appendix 5: Field Office Area Map