



**NORTHERN
CROSS**



NORTHERN CROSS (YUKON) LIMITED
Presentation to Yukon Select Committee
On Hydraulic Fracturing
January 31, 2014

Forward Looking Statements Advisory

Certain of the information provided in this presentation of Northern Cross (Yukon) Limited (the "Company") may constitute forward-looking statements and forward-looking information (collectively, "forward-looking statements") within the meaning of applicable securities legislation. The reader is cautioned that assumptions used in the preparation of such information, although considered to be reasonable at the time of preparation of such information, may prove to be incorrect. Forward-looking statements in this presentation include, but are not limited to, statements regarding the Company's resource potential, the Company's work program and the Company's ability to acquire future properties and projects.

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Northern Cross (Yukon) Limited (“Northern Cross”) was formed as a private corporation in Yukon in September, 1994

- The original founders, David Thompson and Richard Wyman, continue to be part of the company’s management team.
- In 1994 Northern Cross acquired majority working interest and operatorship of the Chance, Blackie and Birch Significant Discovery Licenses (SDL’s) representing the largest discoveries of crude oil or natural gas at Eagle Plain to date
- In 1998, Northern Cross conducted a field program to evaluate the productive capability of three previously drilled oil wells at the Chance SDL with the view of supplying a portion of Yukon’s energy needs.
- In 2006, Northern Cross acquired all the assets of Devon at Eagle Plain
- In 2007 Northern Cross obtained 13 exploration permits at Eagle Plain



- In 2008, Northern Cross acquired a mobile 'Super Single' drilling rig capable of drilling to about 2,500 metres
- In 2009 and 2010, Northern Cross added two more exploration permits at Eagle Plain
- In 2011 Northern Cross received a major equity investment from an affiliate of CNOOC Limited which has enabled Northern Cross to proceed with an ambitious exploration project
- In 2012 and 2013, Northern Cross drilled four exploration wells at Eagle Plain
- In 2014, Northern Cross has commenced its 360 sq. km. 3D seismic program

- Northern Cross has worked cooperatively with several different Yukon governments since incorporation
- Despite the volatility of the economy, Northern Cross has remained focused on assessing the resource potential of Eagle Plain
- Northern Cross has a long history of participation in First Nation, Government and Public consultations on issues related to land claim implementation, land use planning, protected areas, industry regulation and explaining its project plans
- Northern Cross has visited communities, made public presentations and offered employment and business opportunities to Yukoners long before this was required under legislation
- Northern Cross is committed to using “best practices” in the conduct of its activities often exceeding regulatory standards

Northern Cross is committed to minimizing its footprint

- The company has made extensive use of previously disturbed areas, including the Dempster highway, winter trails, vintage seismic lines and gravel pits
- For example, the base camp is on a site previously used for Dempster highway construction during the 1970's
- McParlon A-25 is located in an inactive gravel pit adjacent to the highway
- West Chance H-28 is drilled at a location that is accessed by way of the Chance winter trail which has been used regularly over more than 50 years
- The access to the two deferred wells is accessible by way of the regularly used Old Crow winter trail

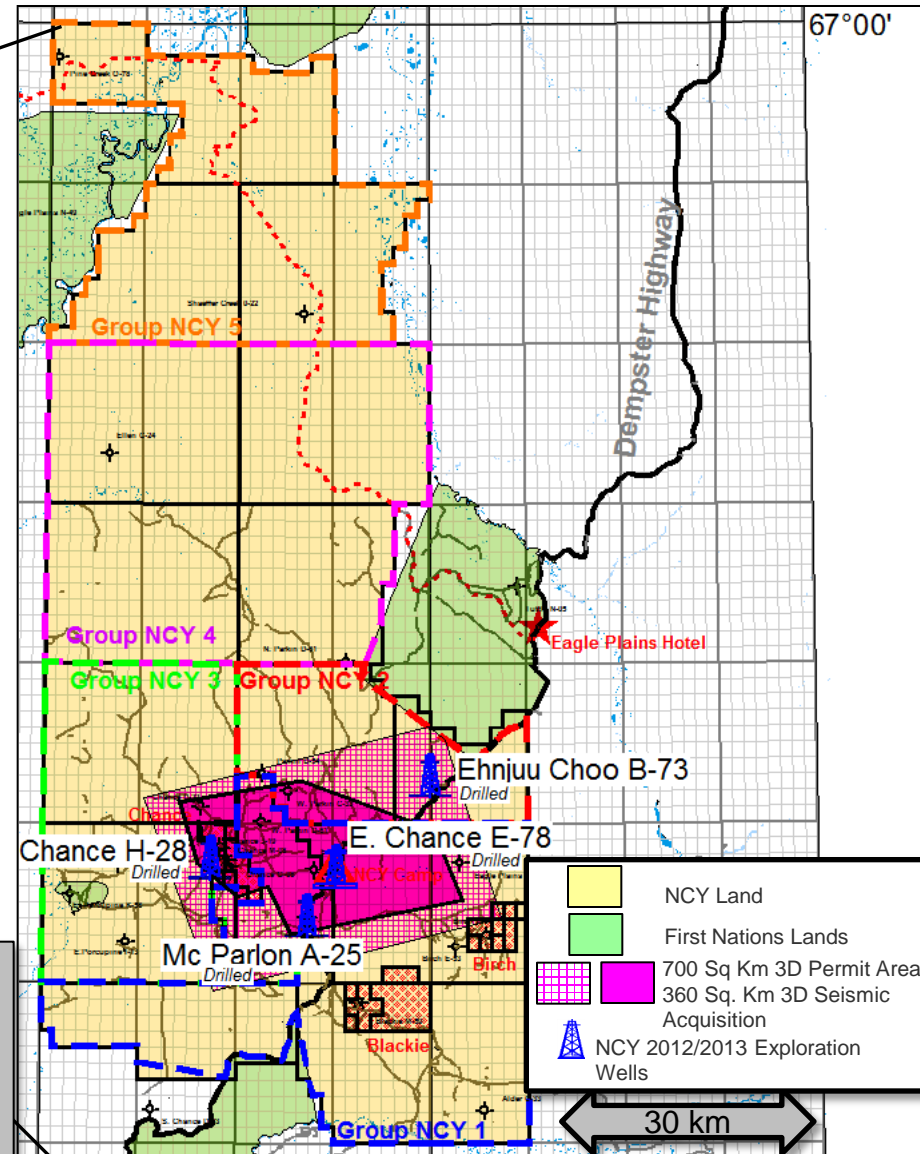
Northern Cross is committed to minimizing environmental impact

- In preparation to drill, well sites are first protected with an impermeable barrier to protect the ground from potential spills or contamination
- Overtop the impermeable barrier, layers of sawdust, earth and wooden mats are positioned to protect and insulate the ground from the impact of drilling operations
- The base camp has a sophisticated sewage treatment facility and incinerator
- Wells may be directionally drilled so they are not located on sensitive sites
- Work has been spread out year round as much as possible to reduce intensity, provide more continuous employment and involve more Yukoners in the project
- Equipment has been specially installed to prevent drips and spills from entering the environment

- Northern Cross has worked to minimize adverse human interaction with wildlife
- First Nation wildlife monitors work continuously to reduce impacts on wildlife
- Our camp site is fenced and waste is incinerated
- Access to sites off the highway is restricted
- Policies are in place to restrict activities as necessary to avoid wildlife disturbance



Northern Cross at Eagle Plain

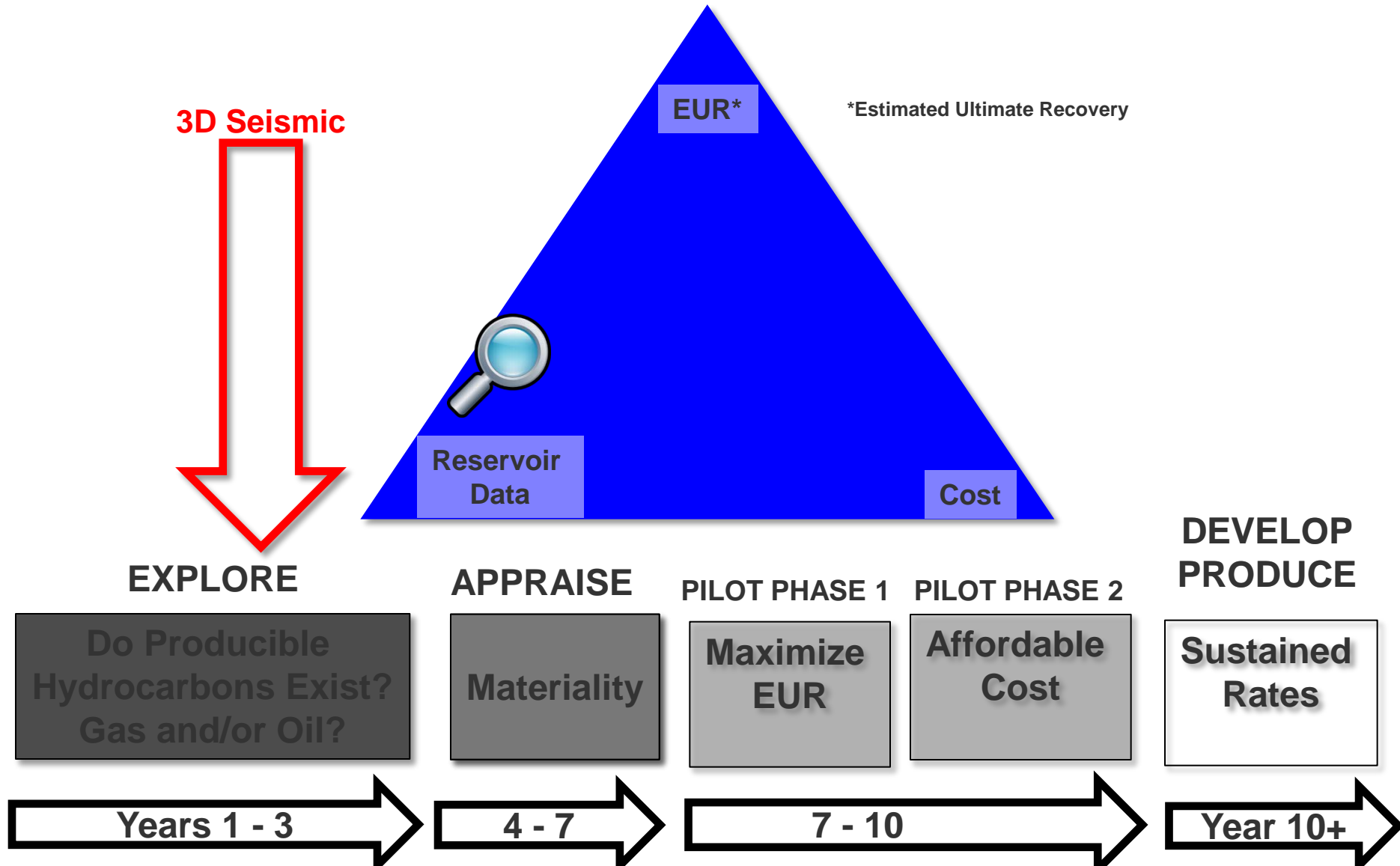


- 1.3 mm acres ~100% Working Interest NCY
- 3 Significant discovery Licenses (SDL's)
- 38 wells (25 on NCY land)
- 4,262 km historic 2D seismic data
- 450 MMBO & 6 Tcf estimated in place - GSC

- Eagle Plain has the largest oil and gas potential of any onshore basin in Yukon
- The basin has a reasonably extensive geological and geophysical data base from historical exploration, mostly established in the 1960's and 1970's
 - Prior to the current exploration program, a total of 34 wells were drilled and about 10,000 kms of 2-D seismic data was acquired
 - Eagle Plain is a complex sedimentary basin that offers both structural and stratigraphic settings for crude oil and natural gas to be found
 - The company is conducting a resource assessment to evaluate new exploration ideas and fulfill commitments made to the Yukon Government when the exploration permits were awarded
 - Following YESAB screening and regulatory approvals, the first phase of drilling by Northern Cross commenced in July 2012 and ended a year later.
 - Four exploration wells were drilled and cased, during this period

- Northern Cross is undertaking its exploration program in accordance with the approved North Yukon Land Use Plan
- Northern Cross has drilled four wells to date to evaluate up to nine different geological opportunities over a large geographical area
- Three wells are adjacent to the Dempster Highway: McParlon A-25, East Chance E-78 and Ehnjuu Choo B-73
- The fourth well is West Chance H-28 located about 23 kms west of the Dempster Highway
- Two other wells accessible by way of the Old Crow Winter Trail have been deferred
- 3-D seismic program is now underway and expected to be completed by April 2014

Exploration/Development Cycle



Learning more about the resource potential

- Resource potential will have to be further defined by more drilling and seismic before any decisions regarding development can be made
- Interpretation of the data from this seismic program will help with subsurface mapping and guide future drilling plans
- These steps are intended to reduce exploration risk and possibly define resources for development
- Because Northern Cross is still in the exploration phase, it does not have any plans to use hydraulic fracture stimulation techniques
- More engineering and geological studies are required before any hydraulic fracturing can be planned
- However, there is growing evidence that certain geological formations at Eagle Plains, having the characteristics of bearing hydrocarbons and low permeability, may be suitable candidates to apply hydraulic fracturing techniques sometime in the future



Learning more about the resource potential

- The priority focus for the next phase of exploration activities will be trying to discover and appraise crude oil and natural gas resources that do not require the use of hydraulic fracture stimulation
- Going forward, Northern Cross expects further consultation with government and community stakeholders as new projects are proposed
- Northern Cross also expects YESAB screening and Regulatory reviews of any new activities that might be proposed
- Depending on exploration success and the characteristics of the discovery(ies), resource development could supply both the Yukon market as well as export markets
- Exports require an export license from the Yukon and Canadian governments which will among other conditions require the exports to be excess to domestic needs



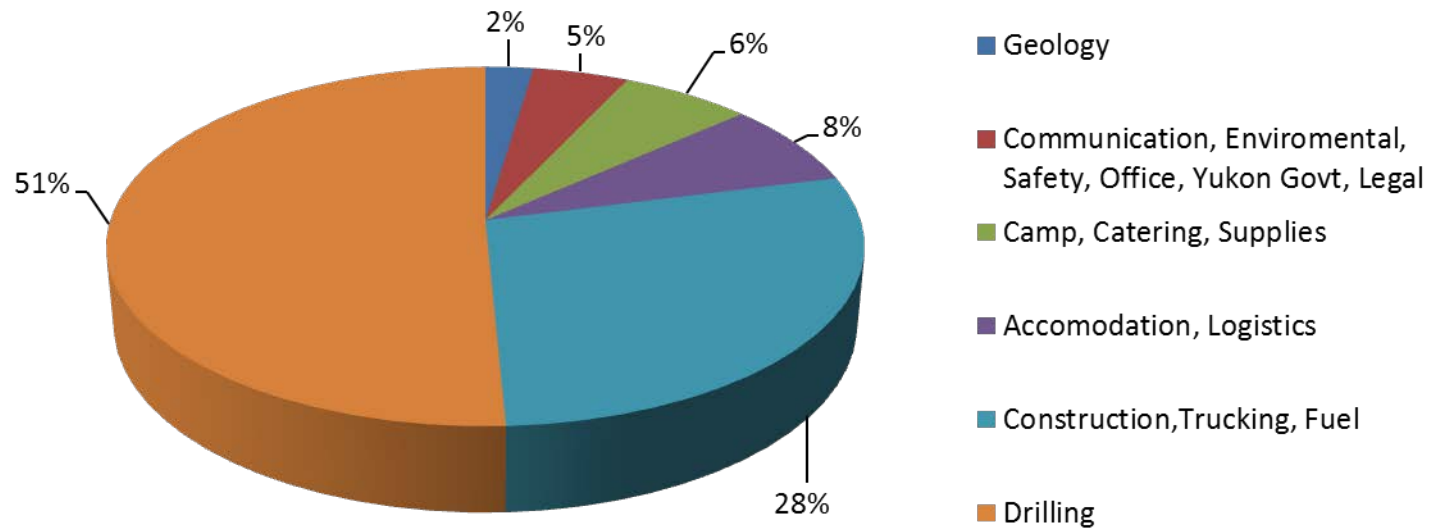
Providing Benefits and Self Reliance to Yukon

- Oil and gas industry activities help diversify the Yukon economy and offer the potential to build some or all of the economic value chain from reservoir to end use all in Yukon
- The Yukon currently imports about 130,000,000 litres of gasoline and diesel fuel annually to satisfy local transportation demand.
- Displacing imported fuel with locally sourced petroleum products will provide a large economic benefit and reduce GHG's by significantly reducing the distance to transport fuel to Yukon
- The cost of imported fuel translates into an estimated leakage from the Yukon economy of between \$150 and \$200 million per year. This equates to a cost per capita of between \$4,000 and \$5,400. It also represents the annual opportunity for jobs, royalties, taxes and other benefits that is lost to the jurisdictions supplying the fuel
- The oil and gas industry provides high salary employment for a variety of professional and skilled workers
- Establishing a reliable, cost effective oil and gas supply in Yukon offers synergies to other sectors of the Yukon economy, most notably mining.

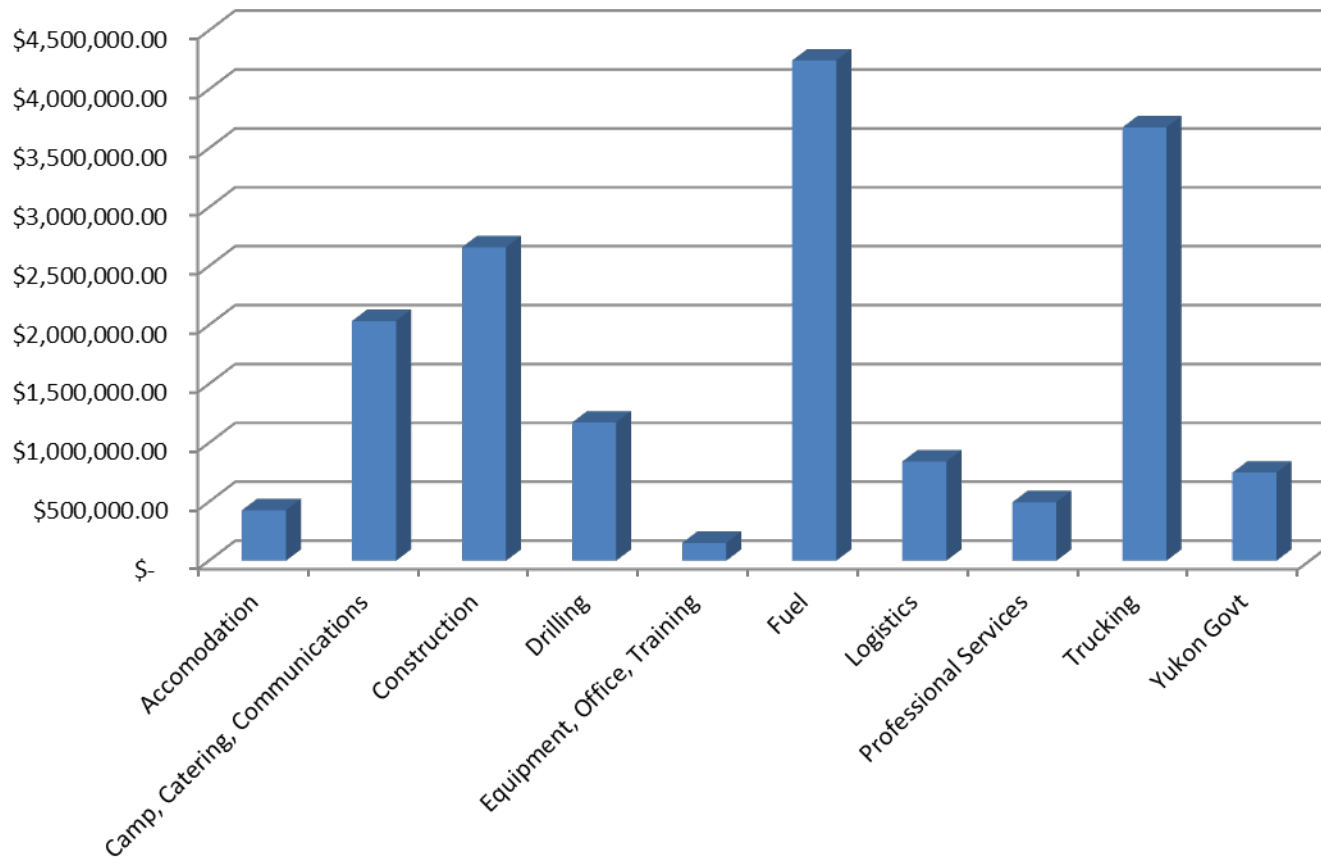
- Northern Cross conducts its activities under a Benefits Agreement with the Yukon government and local First Nations in accordance with Section 68 of YOGA
- Since the current exploration program began, Northern Cross has spent over \$80 million and expects to spend an additional \$20 million for the seismic program
- To date over \$16 million of this expenditure has been for the benefit of Yukon based businesses and citizens
- Northern Cross employed 88 Yukon based suppliers of goods and services in the recent drilling program alone
- Depending on the kind of work, an average of about 20%, but up to 45%, of the people working at Eagle Plain are Yukon citizens with many of those being First Nation
- Northern Cross is committed to providing opportunities to Yukoners, including Yukon First Nations

- Total capital expenditure of Northern Cross Yukon's Exploration project broken down by sector

Total Capital Spent To Date On the Drilling Program

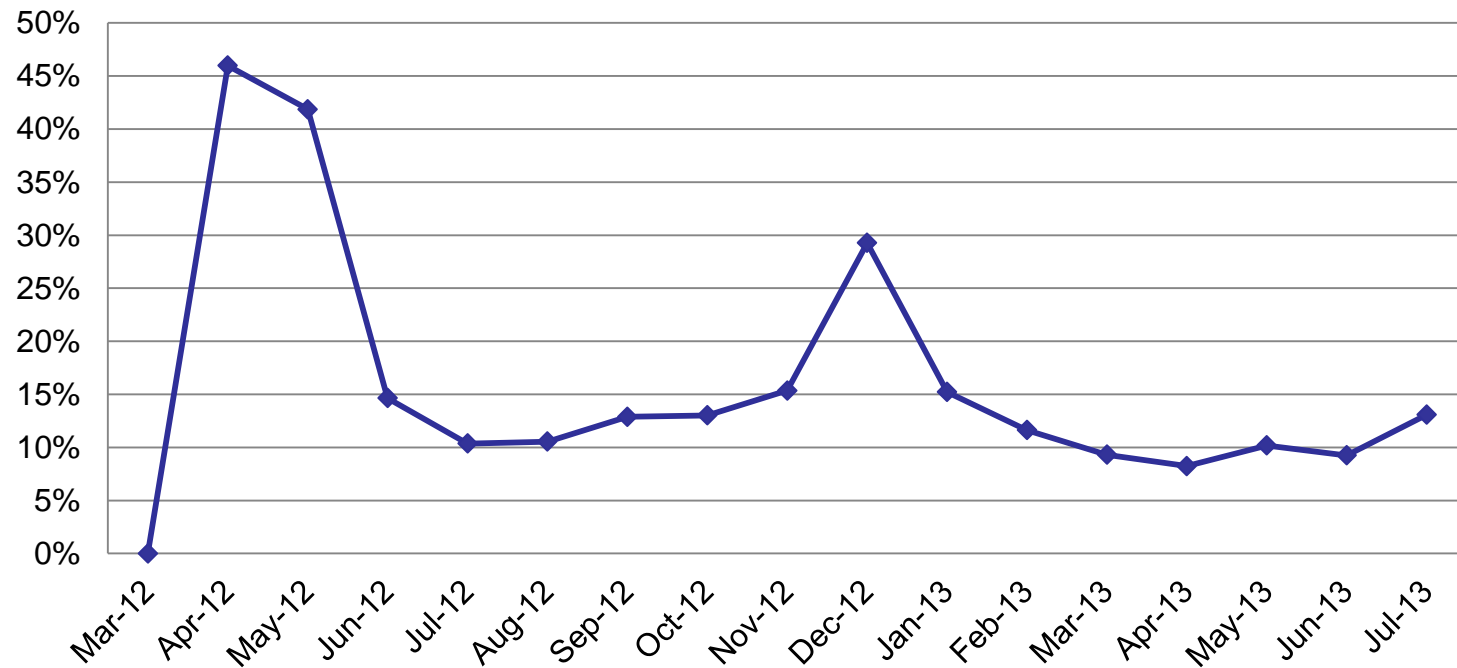


- Total capital expenditure benefiting Yukon Citizens and/or Businesses broken down by sector on the drilling program



- Percentage of Yukon citizen workdays to total workdays broken down per month

Yukon Employment on the Drilling Program





- Northern Cross believes that with proper well design and modern regulations, hydraulic fracture stimulation can be done safely and without negative environmental impacts.
- Yukon oil and gas regulations are robust and responsive to evolving industry practices and changes to regulations in other jurisdictions in Canada
- Although Northern Cross does not now have plans to apply hydraulic fracturing techniques, it would like the capability of using the technique in the future if there is technical merit to its application
- Northern Cross believes the benefits of having an oil and gas industry in Yukon more than offset the risks associated with industry activities as demonstrated in other, more mature, properly regulated oil and gas Canadian jurisdictions like British Columbia and Alberta



The following slides show various aspects of the recently concluded drilling program at Eagle Plain.

Base Camp at Km 325 and NCY Drilling Rig 1





Drilling McParlon A-25









Laying wood mats over impermeable liner





More environmental protective measures



Sawdust and earth are spread to protect and insulate the permafrost (above)

Refrigeration lines are inserted beside the conductor pipe to ensure the active layer is kept frozen (centre)

Barriers protect wellheads (upper right)





Containment to control any spills

Above the blow out preventers are a drip tray and an apron to catch and contain any drilling fluids that may be released while drilling.

These fluids are either recycled or removed for proper disposal at an approved site





Working with First Nations





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Our wildlife neighbors

