

North Yukon Regional Land Use Plan Conformity Check

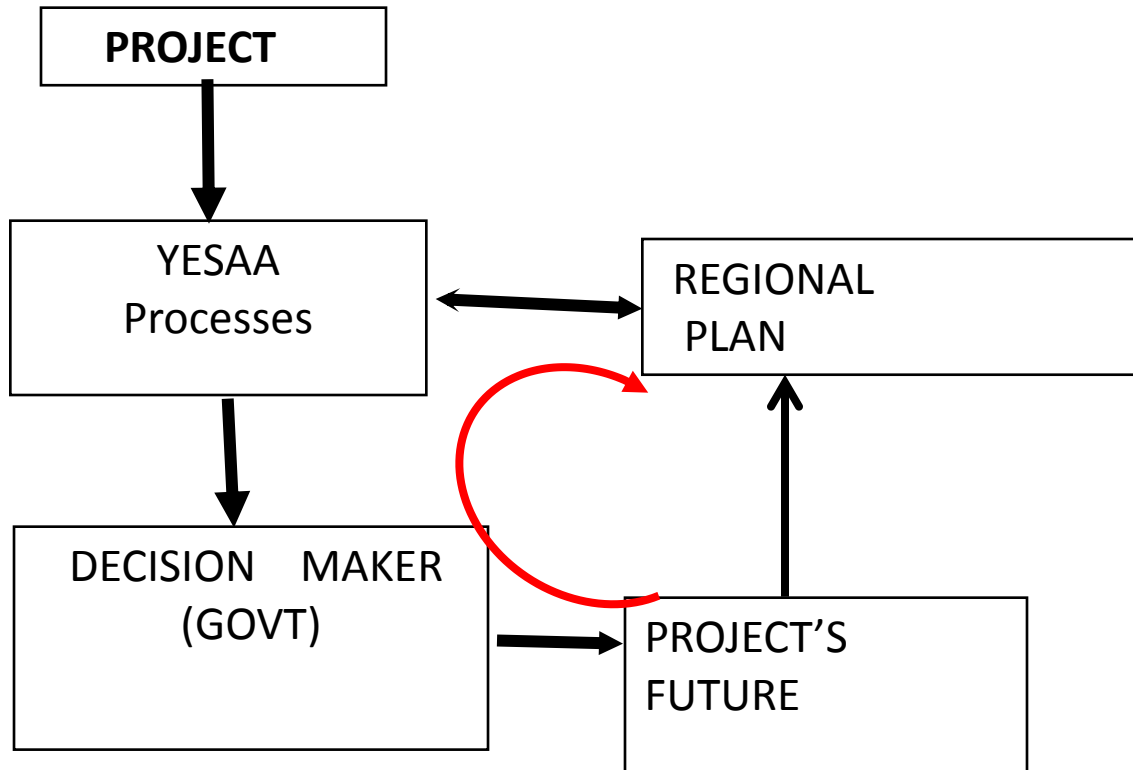
Eagle Plains Multi-Well Exploration
Program 2014-0112

December 2014



YUKON LAND USE
PLANNING COUNCIL

Regional Planning and Project Specific Review (YESAA)



PUBLIC NOTICE

The Dawson Designated Office of the Yukon Environmental and Socio-economic Assessment Board (YESAB) has begun the evaluation of the following project proposal.

Project Name: Eagle Plains 3D Seismic Survey

Project Proponent: Northern Cross (Yukon) Limited

Project Number	Sector	Deadline for Comments
2013-0067	Energy - Petroleum	June 6, 2013

The Proponent, Northern Cross (Yukon) Limited, is proposing a 3D Seismic Survey program over a 700km² area to further delineate the extent of hydrocarbon prospectivity on oil and gas licences. In order to carry out the Project, the Proponent is seeking the right to access and conduct activities on Crown land. Project activities are proposed to occur between November 2013 and April 2014.

Use of existing access (Chance road, seismic lines)
Establishment of seismic survey lines

Transportation of dynamite
Dynamite storage and use: 1 kg per source station

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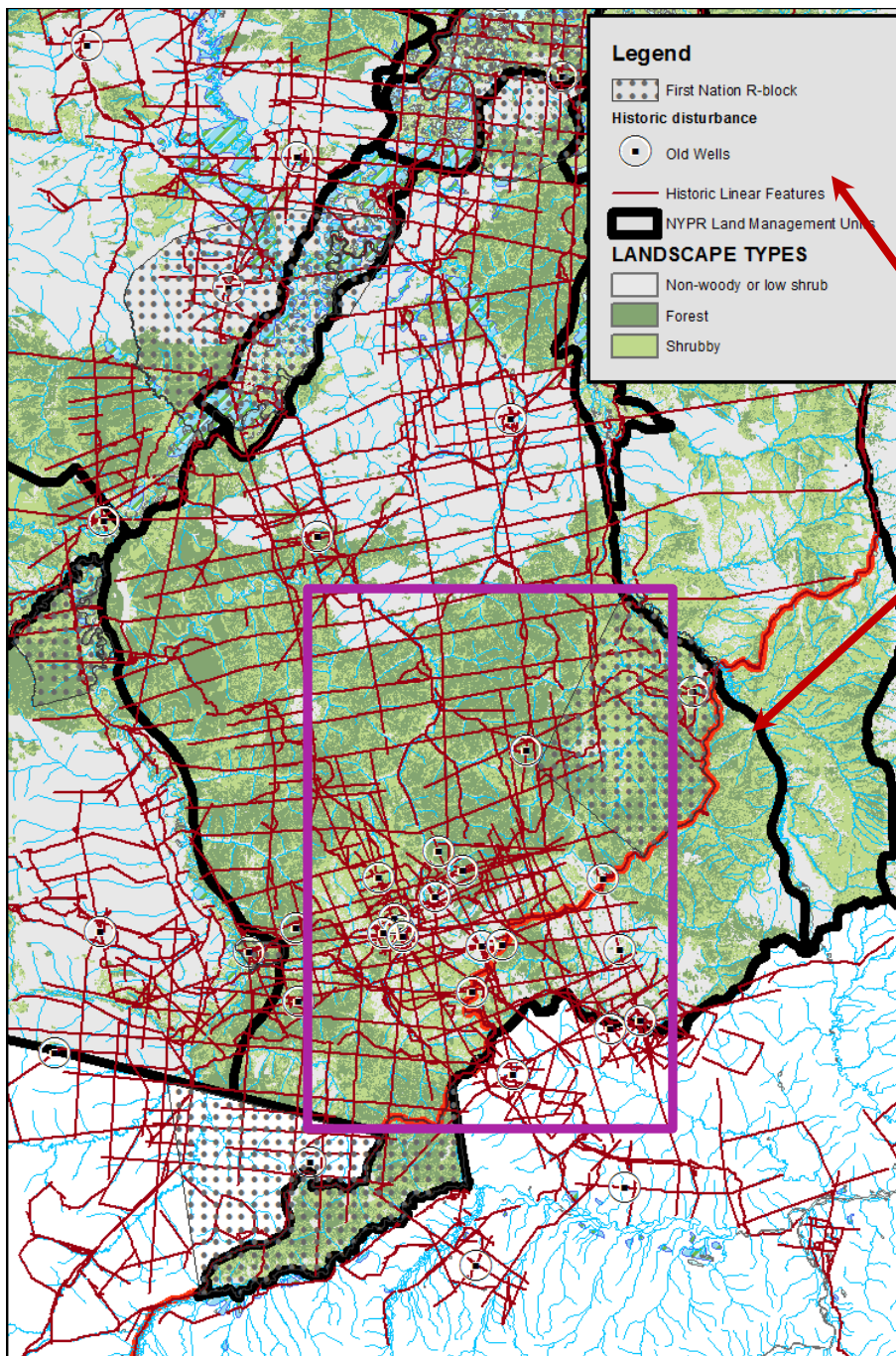
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Project Name: Eagle Plains Multi-Well Exploration Program

Project Proponent: Northern Cross (Yukon) Ltd.

Project Number	Sector	Deadline for Comments
2014-0112	Energy - Petroleum	December 4, 2014

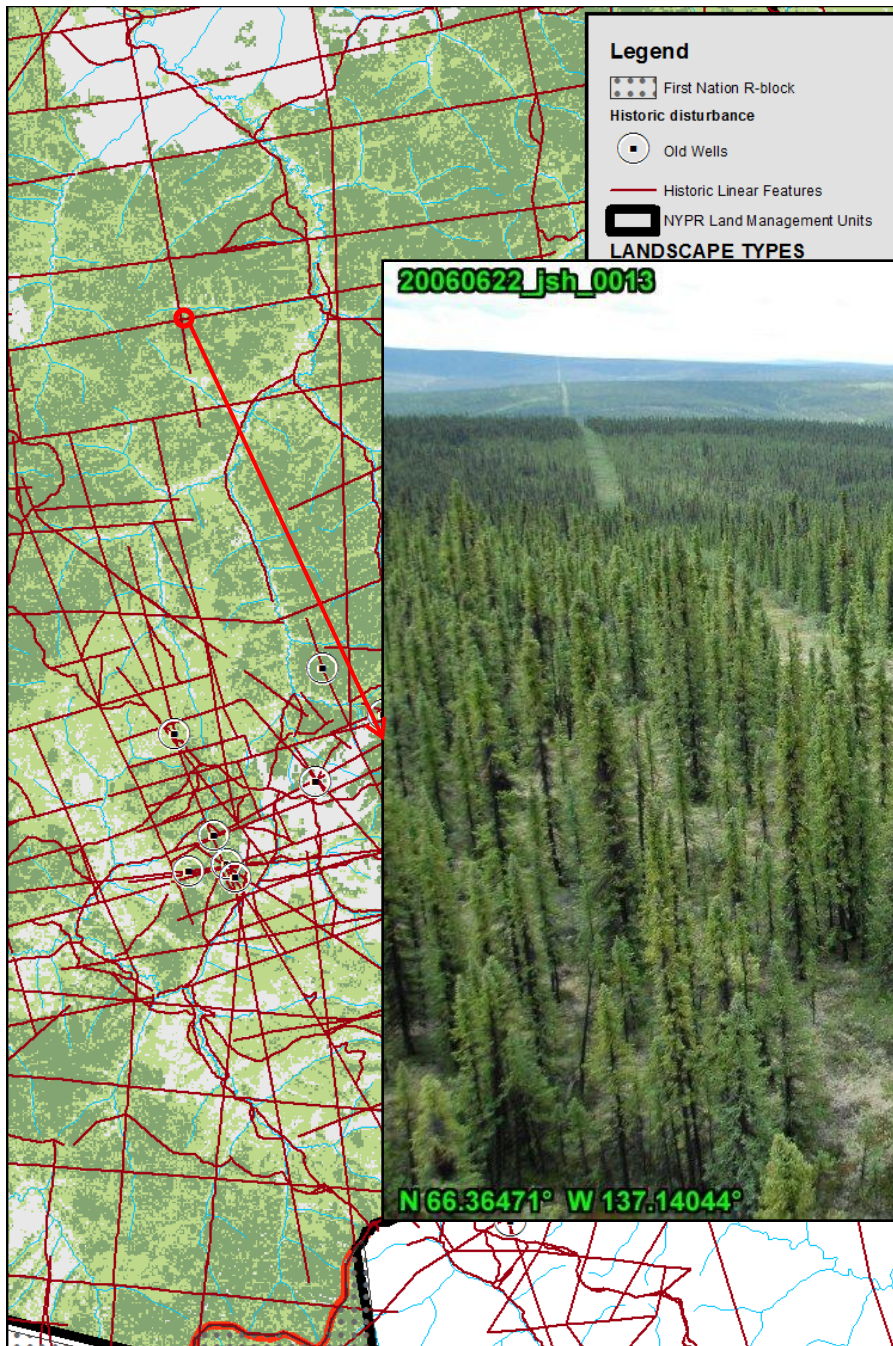
Northern Cross (Yukon) Ltd. is proposing to drill and conduct extended flow testing on up to 20 wells as part of a crude oil and natural gas exploration program. Project activities are proposed to begin January 2015 and will occur annually for eight years. The Project will take place in a 325 km² area, approximately 30 km south of Eagle Plains, within the First Nation of Nacho Nyäk Dun and Vuntut Gwitchin traditional territories and the Tetlit Gwich'in Secondary Use Area. The Project is in the North Yukon Planning Region, and at the headwaters of the Porcupine River and Upper Porcupine-Bell River watersheds.



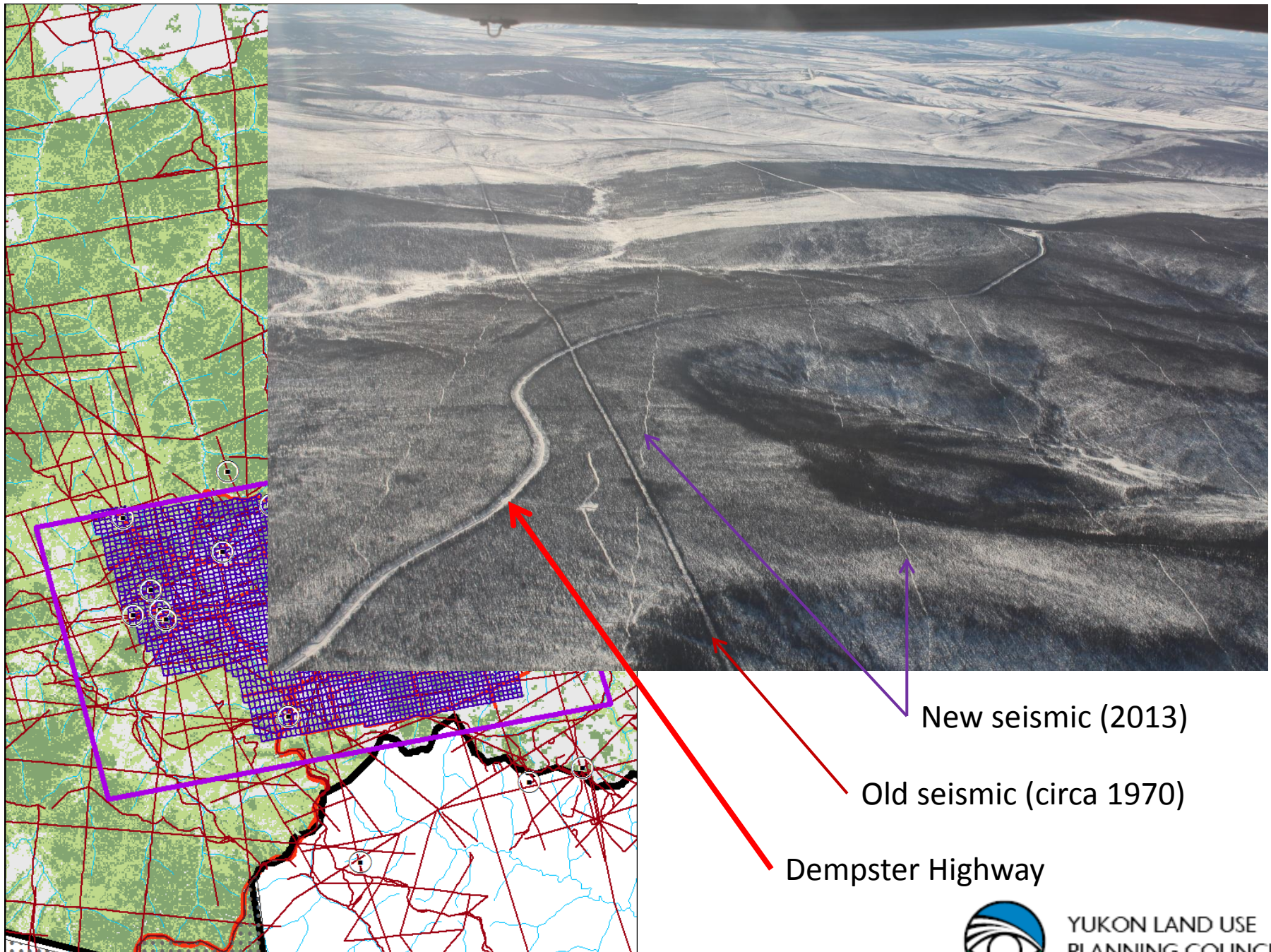
Historical disturbances
in
LMU 9 = Eagle Plains:



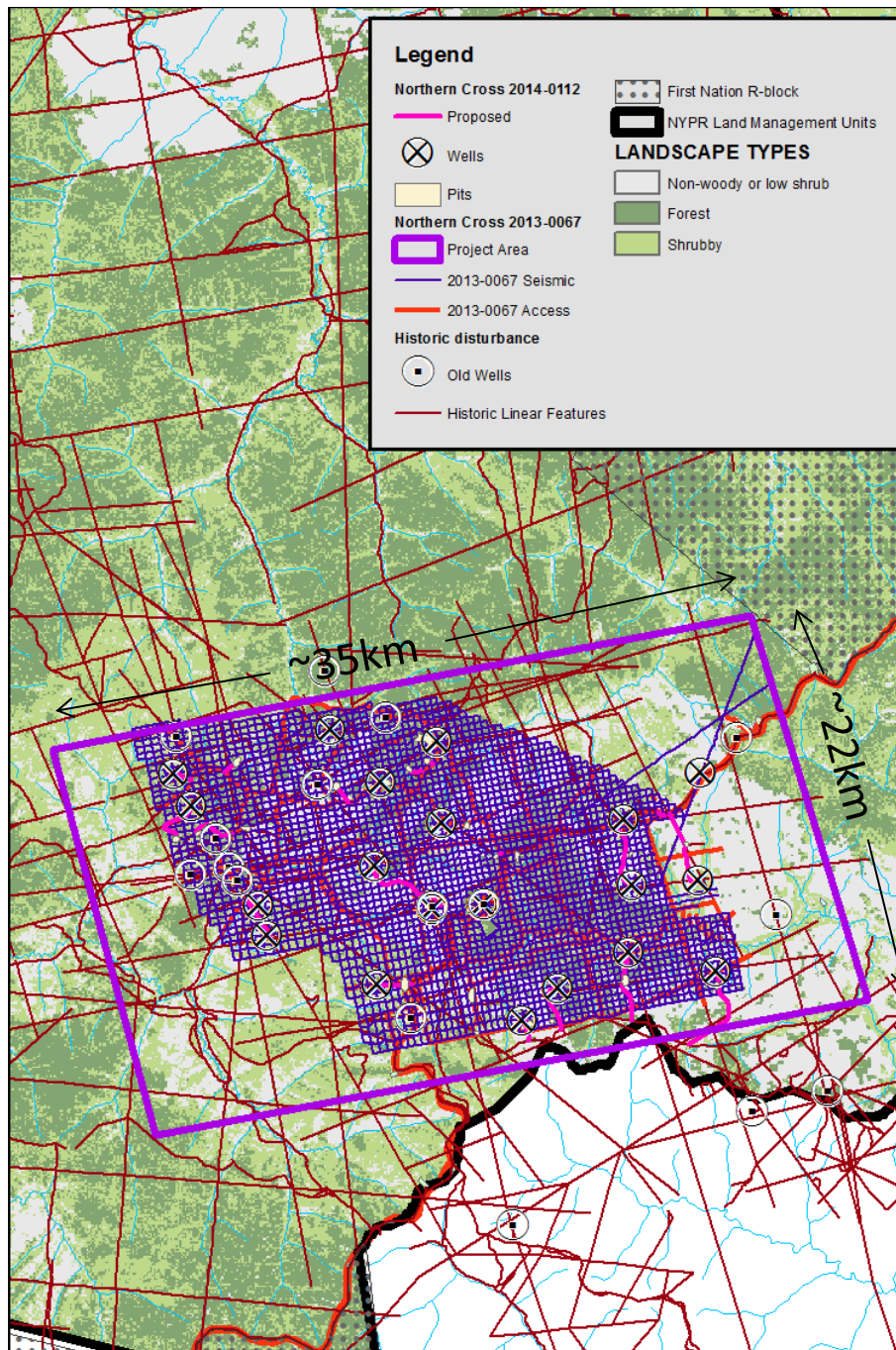
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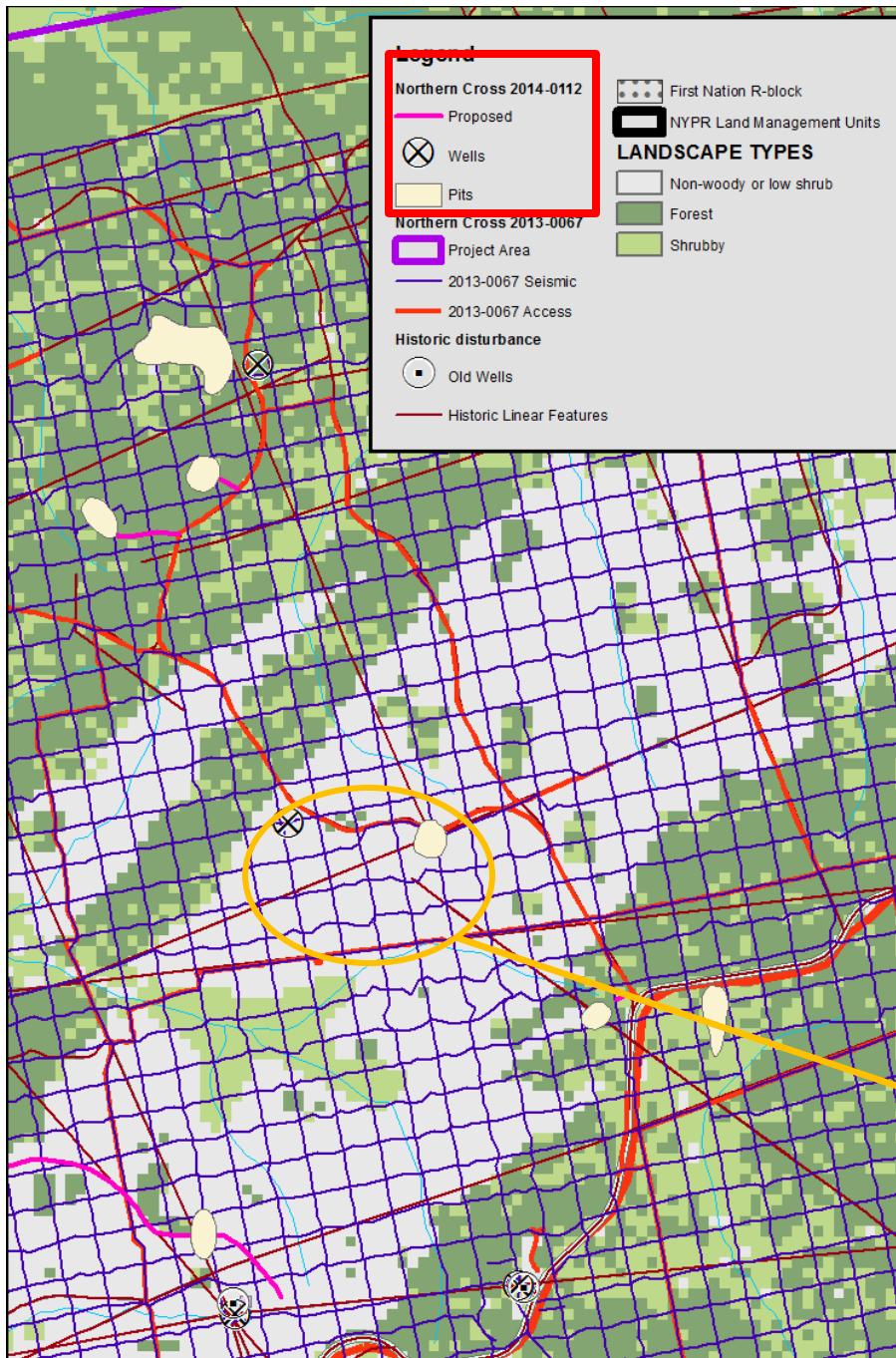
Eagle Plains Multi-Well Exploration Program (2014-0112)

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Eagle Plains 3D Seismic survey (2013-0067)



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Eagle Plains Multi-Well Exploration Program (2014-0112)

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Eagle Plains 3D Seismic survey (2013-0067)

Much disturbance not forested



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North Yukon Plan

IMA Zone	Management Intent	Cumulative Effects Indicators	Cautionary Level ¹	Critical Level
Zone I ²	Lowest development	Surface disturbance	0.075%	0.1%
		Linear density	0.075 km/km ²	0.1 km/km ²
Zone II	Low development	Surface disturbance	0.15%	0.2%
		Linear density	0.15 km/km ²	0.2 km/km ²
Zone III	Moderate development	Surface disturbance	0.375%	0.5%
		Linear density	0.375 km/km ²	0.5 km/km ²
Zone IV	Highest development	Surface disturbance	0.75%	1.0%
		Linear density	0.75 km/km ²	1.0 km/km ²



Functional Disturbance

- Physical land use disruption that result in disruption of soil or hydrology or that requires the cutting of trees.
- Activities considered exempt from functional disturbance creation are:
 - 1) new linear features less than 1.5 m in width;
 - 2) land use activities that occur on frozen water-bodies;
 - 3) winter work with no required cutting of trees;
 - 4) winter work that utilizes existing disturbance and linear features



Images Near Project



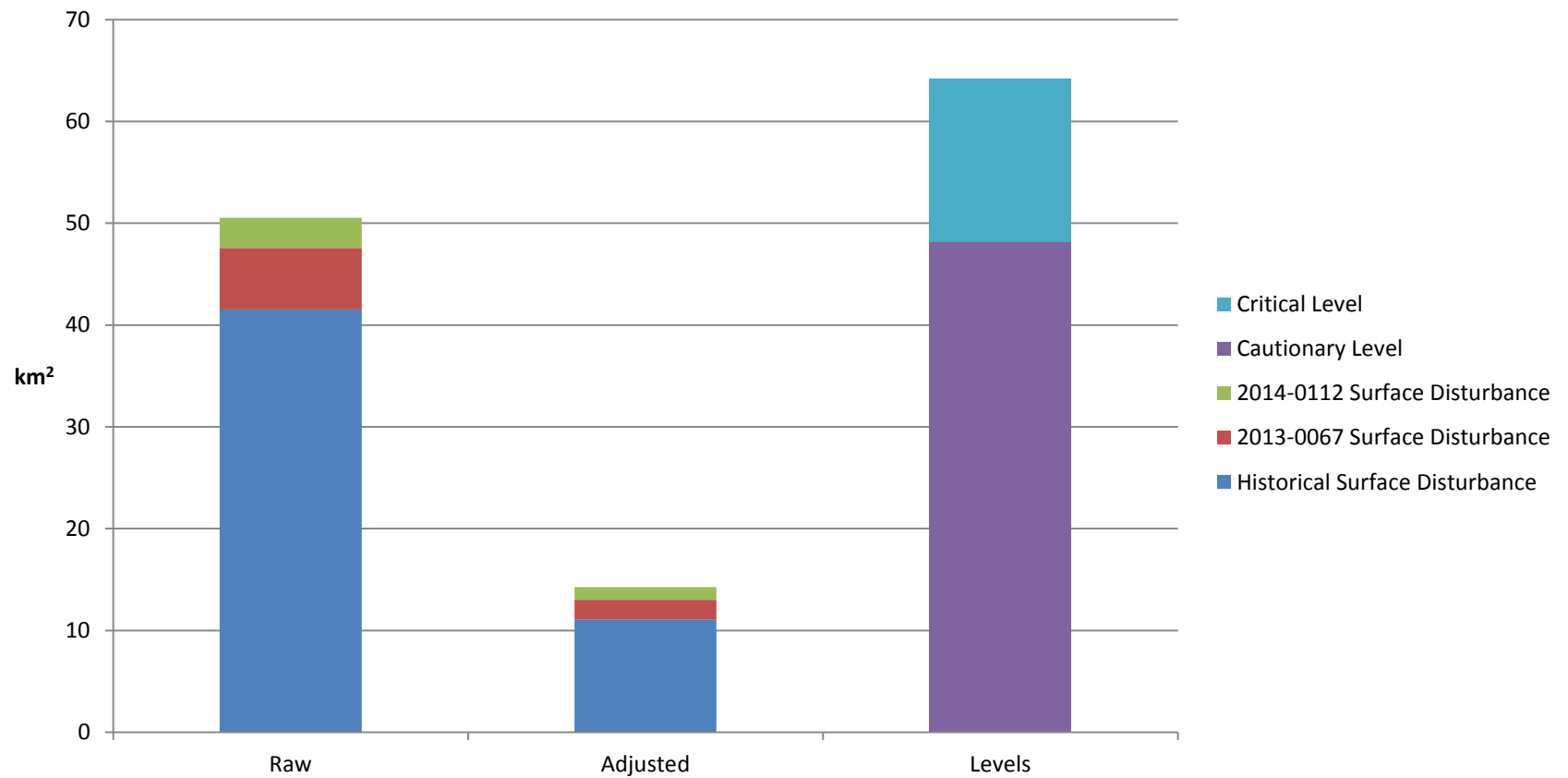
LMU/ Zone	Indicator	Cautionary Level	Critical Level	Current	After Project Amount	% of Critical
9. Eagle Plains: IMA IV	Surface Disturbance	4811 ha	6415 ha	1295 ha	1386 ha	22%
	Linear Density	4811 km	6415 km	1806km	1821 km	28%

Assumptions and data:

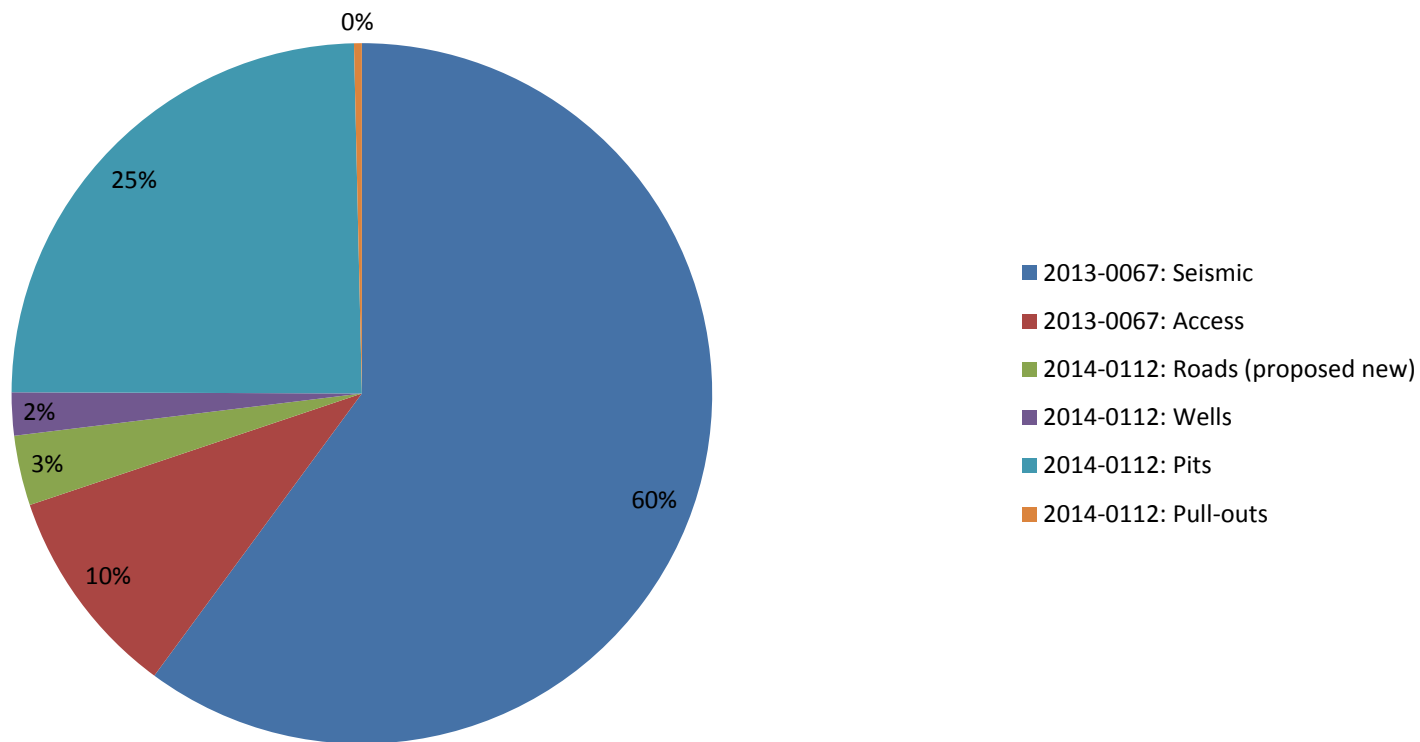
- Spatial data for proposal was used for first time.
- Actual year-end reported data for 2013-0067 (3D seismic)
- Historic disturbance (from NYPC) reduced by 20% (guessed recovery) then a further 67% (not forested)
- New disturbance reduced average of 64% (not forested)
- Assume all proposed gravel pits will be used.
- Contribution of new access for 2013-0067 was ignored. Most access from that project overlapped seismic lines.
- Shrubs still do not count for woody vegetation.



Surface Disturbance: LMU 9



Sources of New Surface Disturbance



Old Crow Gravel Quarry Access Road



Access

- All 20 wells are to be accessed with an all-season road should flow-testing be required.
- 6 access points to the Dempster Hwy (4 new)
- Approved plan: *“In advance of significant levels of energy sector activity, an access management plan should be developed for the Eagle Plain oil and gas basin.”*

An access management plan should have been in place before this proposal was evaluated. One should be developed by the Parties to the North Yukon Land Use Plan in advance of subsequent phases (and therefore permits) of energy sector activity in Eagle Plains.

– Are there significant levels of activity?



Injection Wells

- Several old exploration wells were being considered for injection of “produced water”.
- One well being considered is in an IMA IV in the Peel Watershed Planning Region.
 - All Peel plans are OK with activity in IMA IV
 - Peel Region in limbo
 - Access to well does not look straight-forward



NORTH YUKON REGIONAL LAND USE PLAN CONFORMITY CHECK

YESAB Project #	2014-0112		
Project Title:	Eagle Plains Multi-Well Exploration Program		
Date:	December 4, 2014	Completed by:	Sam Skinner
Submitted to:	YESAB Dawson Designated Office Box 5060 Dawson City, YT Y0B 1G0		

Project conforms to Regional Land Use Plan: (select one) **Yes**

Background Information and Conformity Check Analysis

Affected Landscape Management Unit(LMU)(s): (insert rows as needed for additional LMUs) Map 1 and Section 6							
LM Unit #	9	LMU Name:	Eagle Plains				
Zoning:	IMA – Zone IV	Land Owner:	YG & VGFN				
Landscape Disturbance Indicators:) Table 3.2, sections 3.3.1.1, 5.1.1 Surface Disturbance (ha):							
LMU	Cautionary Level	Critical Level	*Current est. Level	Project Estimate	Total Estimate	Notification Rqr'd***	Parties Notified
9	4811	6415	1295	126**	1386**	No	No
Linear Disturbance (km):							
LMU	Cautionary Level	Critical Level	*Current est. Level	Project Estimate	Total Estimate	Notification Rqr'd***	Parties Notified
9	4811	6415	1806	15.4**	1821**	No	No
<p>*current <u>estimated</u> cumulative effects levels are to be provided by the Plan Parties. In the meantime, adjustments to the amount of historical disturbance estimated by the North Yukon Planning Commission (Appendix A2.5, Final Recommended Plan) combined with disturbances from YESAB project 2013-0067 (Eagle Plains 3D Seismic Survey) were used. Adjustments include natural recovery of disturbances as suggested by the Commission (20%) and the fraction of each disturbance that appears to be forested.</p> <p>**estimates based upon the definition of Functional Disturbance, pg.3-2, North Yukon Regional Land Use Plan, June 2009. Estimates have been adjusted by the fraction of the proposed disturbance that appears to be forested.</p> <p>*** the YLUPC shall notify the Parties prior to submitting the conformity check to YESAB if they are concerned cautionary or critical levels may be reached</p>							



Process Comments

- YG provided YLUPC year-end reported disturbance data for 3D seismic project once drilling project assessment was underway.
- YLUPC staff met with YG and VG staff to discuss preliminary conformity check results (though notification was not required).



Process Questions

- Can we improve our defn. of functional disturbance and its link to Surface disturbance and Linear Density? What is a tree? Shrubs? YG and VG need joint agreement.
- When will we get the “baseline”, new disturbance and “regeneration” rates from the Parties?
- What is the long term strategy for permitting more such work within the thresholds of the plan? E.g., access management plan?

