

# Life In The Heartland Sturgeon Refinery Update

October 27th, 2014



Certain information set forth in this document contains forward-looking statements including management's assessment of future plans and operations, expected activity levels, timing of completion of facilities construction and the effects thereof, capital expenditure plans and the impact thereof. By their nature, forward looking statements are subject to numerous risks and uncertainties, some of which are beyond the company's control, including the impact of general economic conditions, industry conditions, volatility of commodity prices, changes to regulatory requirements, risks associated with oil and gas exploration, development, exploitation, production, marketing and transportation, loss of markets, delays resulting from or the inability to obtain required regulatory approvals, environmental risks, competition from other industry participants, the lack of availability of qualified personnel or management and ability to access sufficient capital from internal and external sources. The foregoing list is not exhaustive. Additional information on these and other risks that could affect operations and financial results are available on request.

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# Who is NWR and What is our Mission?

- A 50/50 Partnership between North West Upgrading Inc. and Canadian Natural Upgrading Limited
- Sole mission is to construct and operate the Sturgeon Refinery
- Applying Environmental Gold Standards while adding maximum value to Alberta's Bitumen Resources
- First Refinery with CO<sub>2</sub> capture designed in from start. Make Low Carbon Fuel from Alberta Bitumen

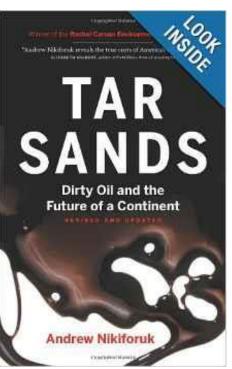
The NWR Sturgeon Refinery keeps value, taxes and jobs in Alberta and Canada

# Why build a Refinery Here?

Pipeline/'Dirty Oil' = Market Access concerns:

Bitumen May Remain Difficult To Export Alberta can gain \$\$\$ with better Market Access





## How to Improve Market Access

- Low-Carbon ULS Diesel a lot easier to market than bitumen
- Ship finished products to the Best Markets, not just 'pipeline destinations'
- Make Diesel here mitigate local shortages









### The NWR Solution

#### ✓ Provides Best Markets/Highest Value for Bitumen

- Makes products for regional market, then world market
- Exports Low Carbon, Ultra Low Sulphur Diesel vs. unrefined bitumen
- Returns highest value to resource owners from low value feedstock

#### ✓ Is Environmentally Responsible

- Manages CO<sub>2</sub> in Alberta, with gasification converting waste to value
- Has low cost recovery of CO<sub>2</sub> allowing Enhanced Oil Recovery before sequestration (Ph 1 equivalent to taking 300,000 cars off the road)
- Has leading water treatment, with recycle and minimal water use

#### ✓ Keeps Value, Taxes and Jobs in Alberta

Creates Jobs and other economic benefits in Alberta and Canada



#### What have we done?

#### Engineering, Procurement and Construction (EPC) activity continue;

- NWR team working at Calgary, Redwater, Site, and Contractor offices
- Engineering and major material procurement are well advanced
- Site workforce at approx 1,400 persons
  - Mass earthworks, rough grading and deep undergrounds nearing completion
  - Non-process building nearing completion
  - Infrastructure; job trailers, communication, warehousing, move pipelines
  - Equipment foundations well underway (3,500+ piles, concrete, tank bases)
  - Electrical substation, Air Separation Unit well advanced
- Feed-stock and Product Pipelines across North Sask River completed
- Long-lead vessels and other materials have been shipped to site
- EPC Contractors mobilized to site based on required expertise
- Bussing program started mid-Sept to reduce vehicles on roadways



#### Reactor vessels, Vac. Tower arrival, Pond liner with piling in background



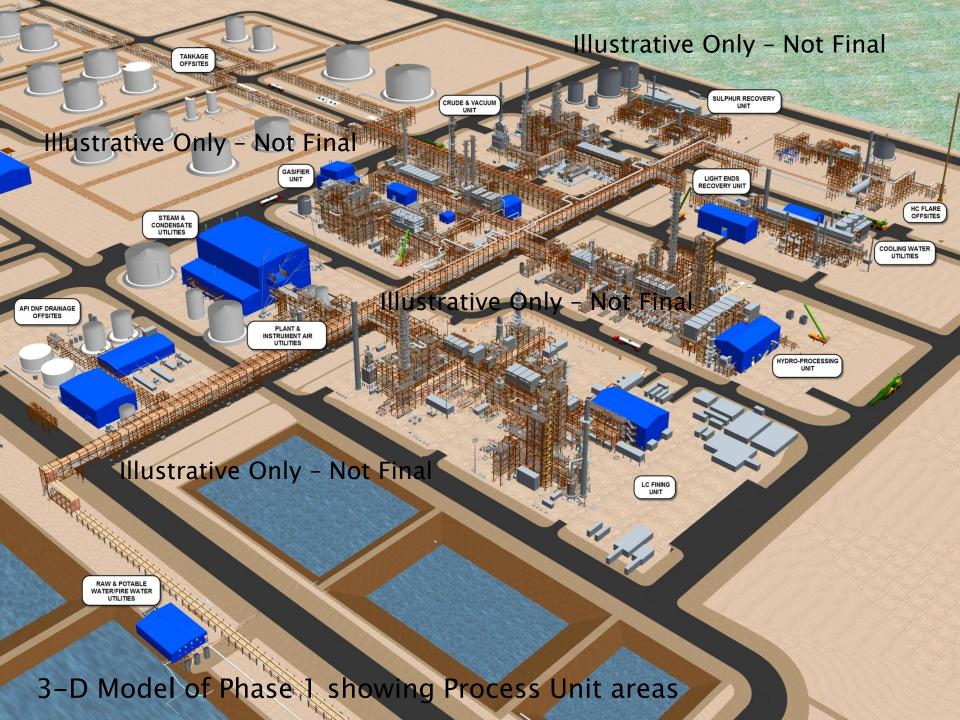


# Non-Process Buildings











#### What comes next?

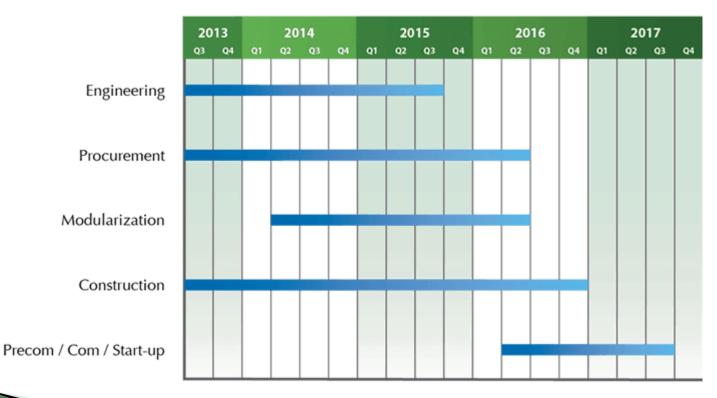
- Complete non-process buildings
- Continue with foundation construction
- Target first process module delivery to site late 2014 ~ early 2015
- Peak labour force of 3,000 to 5,000 during 2015 and 2016
- Target commercial operation Ph 1 Sept/17
- Phases 2 and 3 pending Sanction decisions



#### Schedule



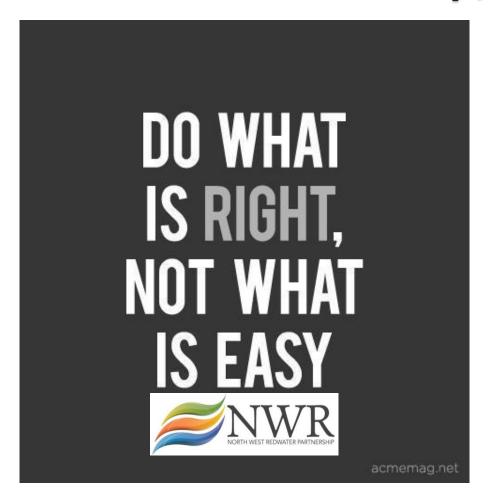
#### Phases 1 — Summary Schedule



<sup>\*</sup> Decisions related to phases 2 and 3 are pending



# It has not been easy, but...



"Building it SAFE, Building it RIGHT in the Heartland"