



# Mustang Development Overview

Presented to  
Alaska Support Industry Alliance

December 11, 2014



## History of Brooks Range Petroleum

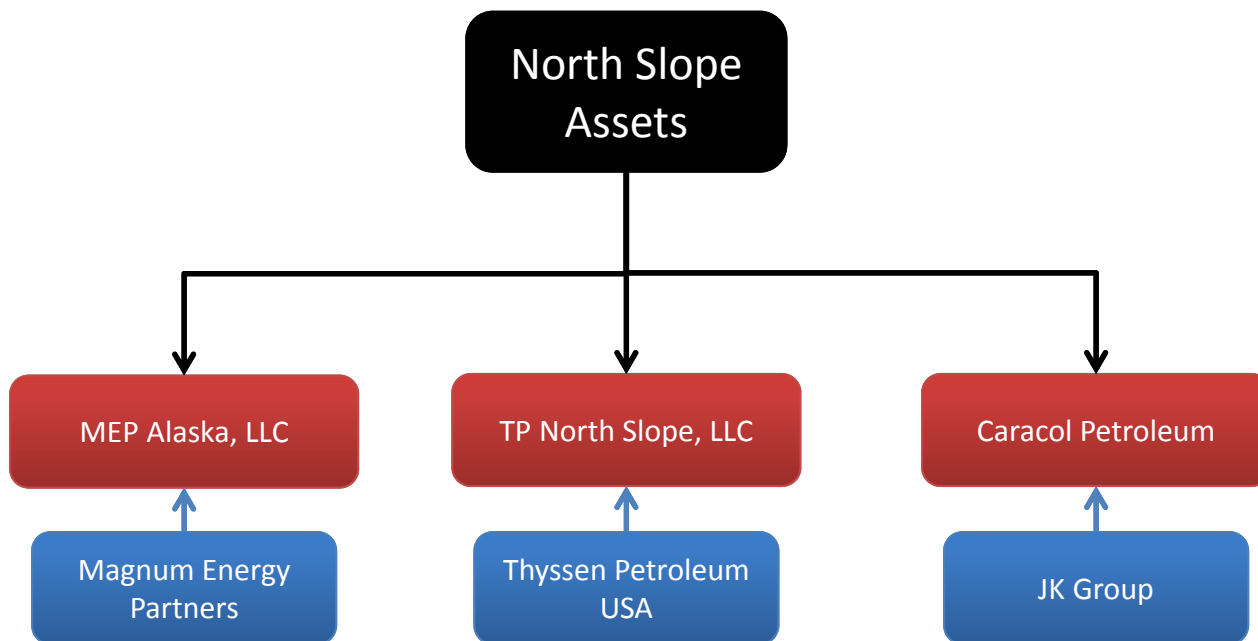
---

2001-2005	Acquired acreage by AVCG
2005	Brooks Range Petroleum (BRPC) formed
2006-2007	Attracted working interest partners Drilled first 2 wells North Shore #1 and Sak River #1 Shot 130 mi <sup>2</sup> 3-D Seismic (Beechy Point area)
2008-2009	Acquired western acreage Drilled Tofkat #1 A and B Shot seismic Big Island 3-D
2010-2013	Drilled North Tarn #1, delineate reservoir (North Tarn 1A and Mustang 1) Began Mustang development.
2014	Joined new working interest ownership



# Alaska Ownership

---





## Alaska Investment Impact

---

Original Alaska Investment	\$	240	MM
----------------------------	----	-----	----

Secured funding for Mustang Production Facility AIDEA / CES Singapore	\$	200	MM
--	----	-----	----

Approved Mustang Phase I drilling program (AFE's)	\$	50	MM
---	----	----	----

Approved Mustang Field Development drilling	\$	242	MM
---	----	-----	----

Additional seismic acquisitions	\$	3	MM
---------------------------------	----	---	----

---

	\$	735	MM
--	----	-----	----

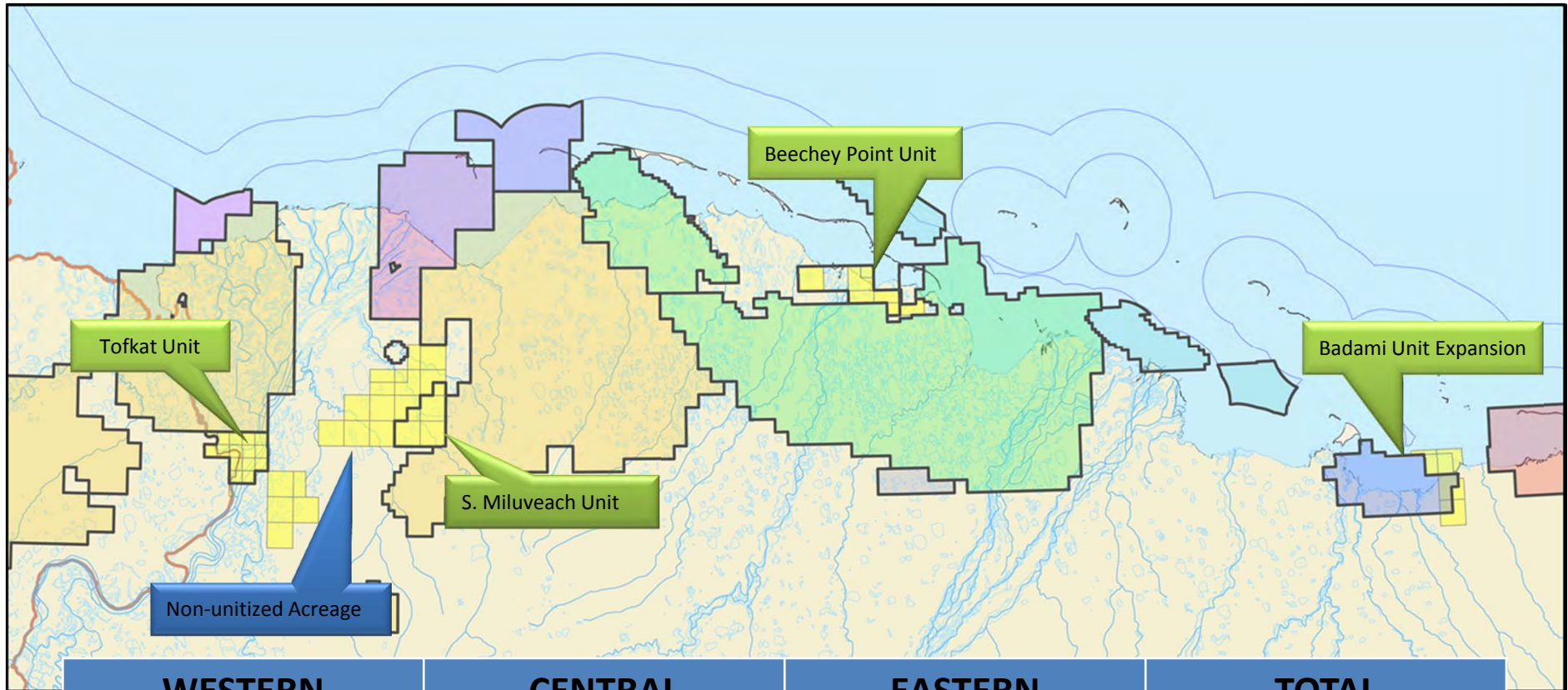
Future Exploration Drilling	\$	75	MM
-----------------------------	----	----	----

---

	\$	810	MM
--	----	-----	----



## North Slope Leasehold Position



WESTERN	CENTRAL	EASTERN	TOTAL
60,714	9,640	8,841	79,196



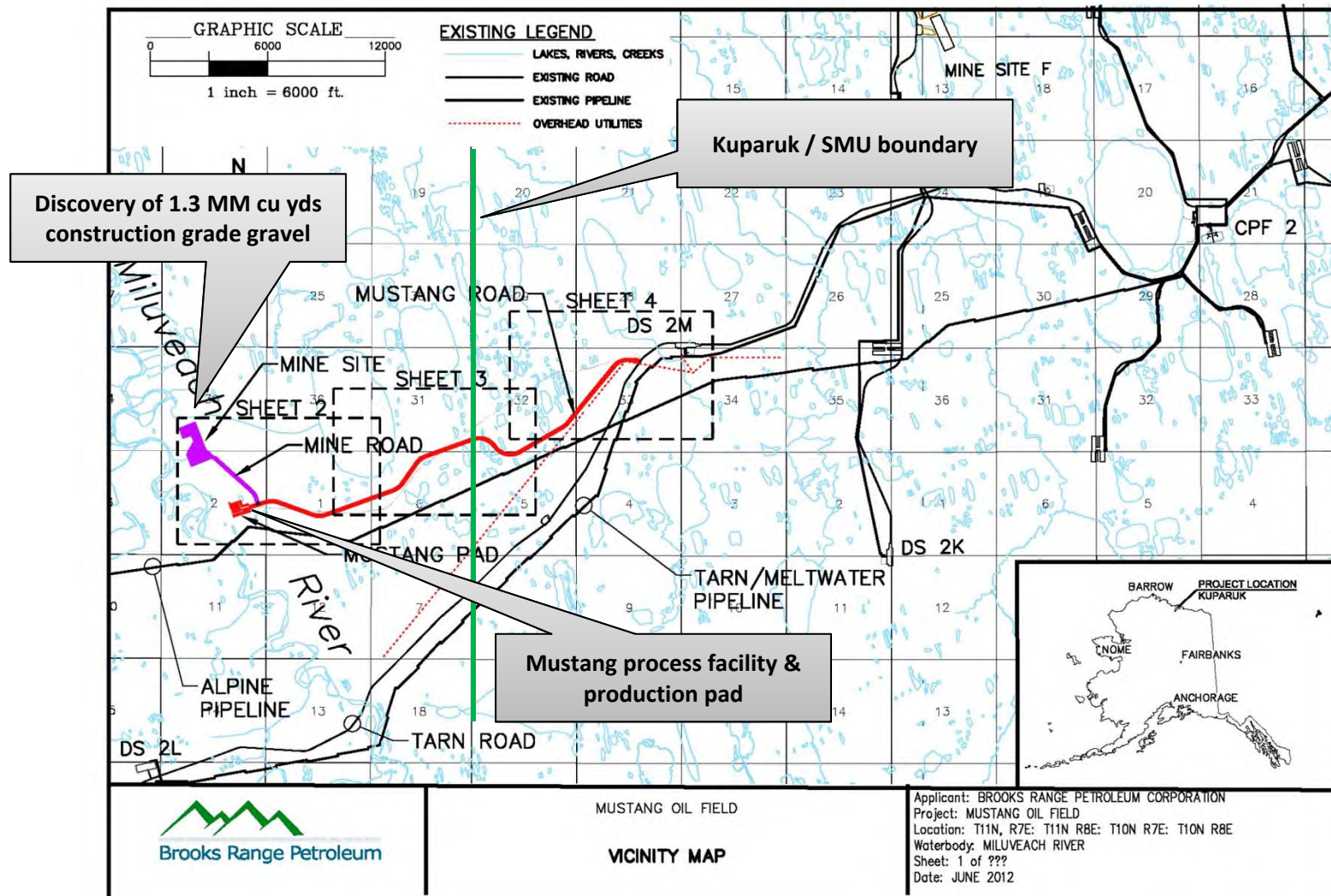
### **Facility Field Schedule**

- Feb 2013 – Apr 2013      Constructed Mustang road and pad
- Jul 2013 – Sep 2013      Conditioned gravel
  
- Apr 2015 – May 2015      Install VSM's and piling
- Aug 2015                      Install and commission camp
- Aug 2015 – Mar 2016      Install and commission process facilities
- April 1, 2016                Start up





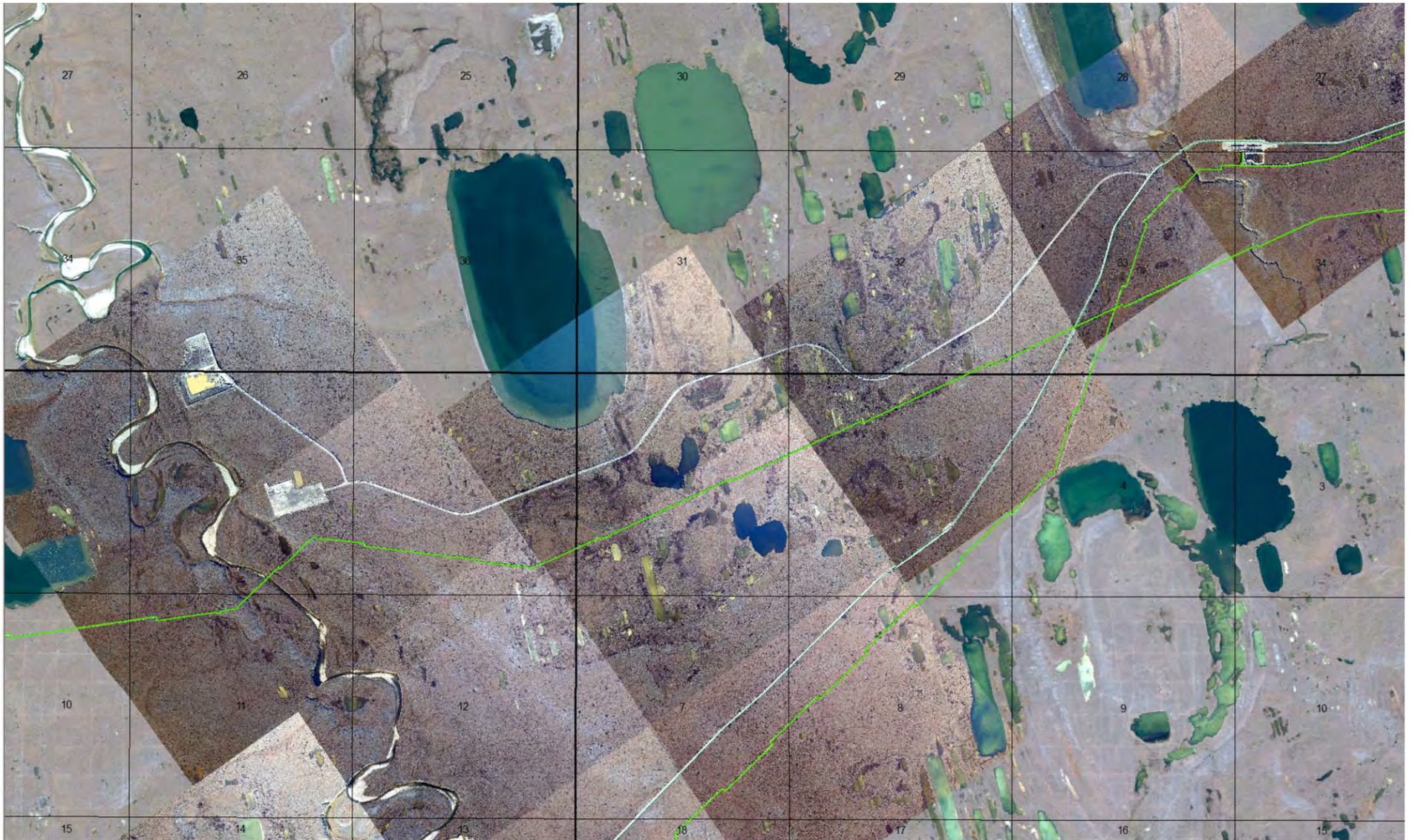
# Mustang Development Civil Works







## View of Mustang Civil Works







## Mustang Pad







## Final Roadbed and Ice Road

---





## Mustang Development Process Design Basis

### Standalone sales-quality production facility....

- First Oil – 2<sup>nd</sup> quarter 2016
- Oil Train
  - Peak Oil Throughput ~ 15,000 bopd
  - Total Oil Recovered ~28 mmbo
  - Sales Crude via 6" x <1,000' P/L to Alpine's Oil Sales Line
- Gas Train
  - Peak Gas Production ~ 7.5mmscfd @ 500 GOR
  - Peak Gas Lift Volumes ~ 12 MMSCFD
  - Flare – Low and High Pressure
- Water Train
  - Waterflood – Water Supply via 6" x <1,000' P/L to CRU Water Pipeline
  - Total Seawater Purchased from KRU ~ 30 mmbw





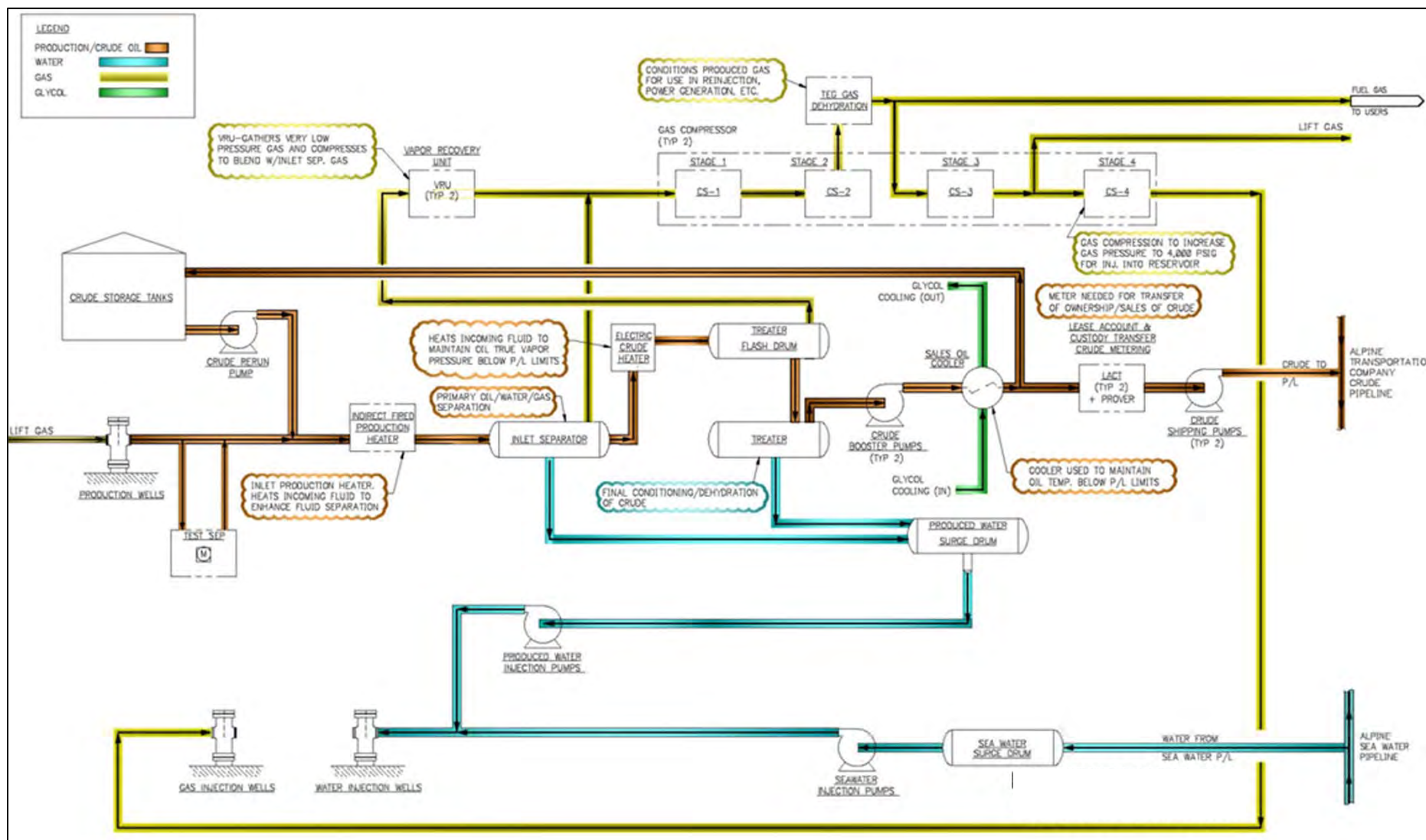
---

## Mustang Development Infrastructure Design Basis

- Process Control Room
- 60 – bed permanent camp
- Communications and Process Controls
- Multi-Use Utility Building
  - Warehouse / Minor Maintenance / Shops / Offices
- Fuel and Chemical Tank Farm
- Water and Waste Water Infrastructure
- Site Power ~ 9 mw primary / 4 mw secondary



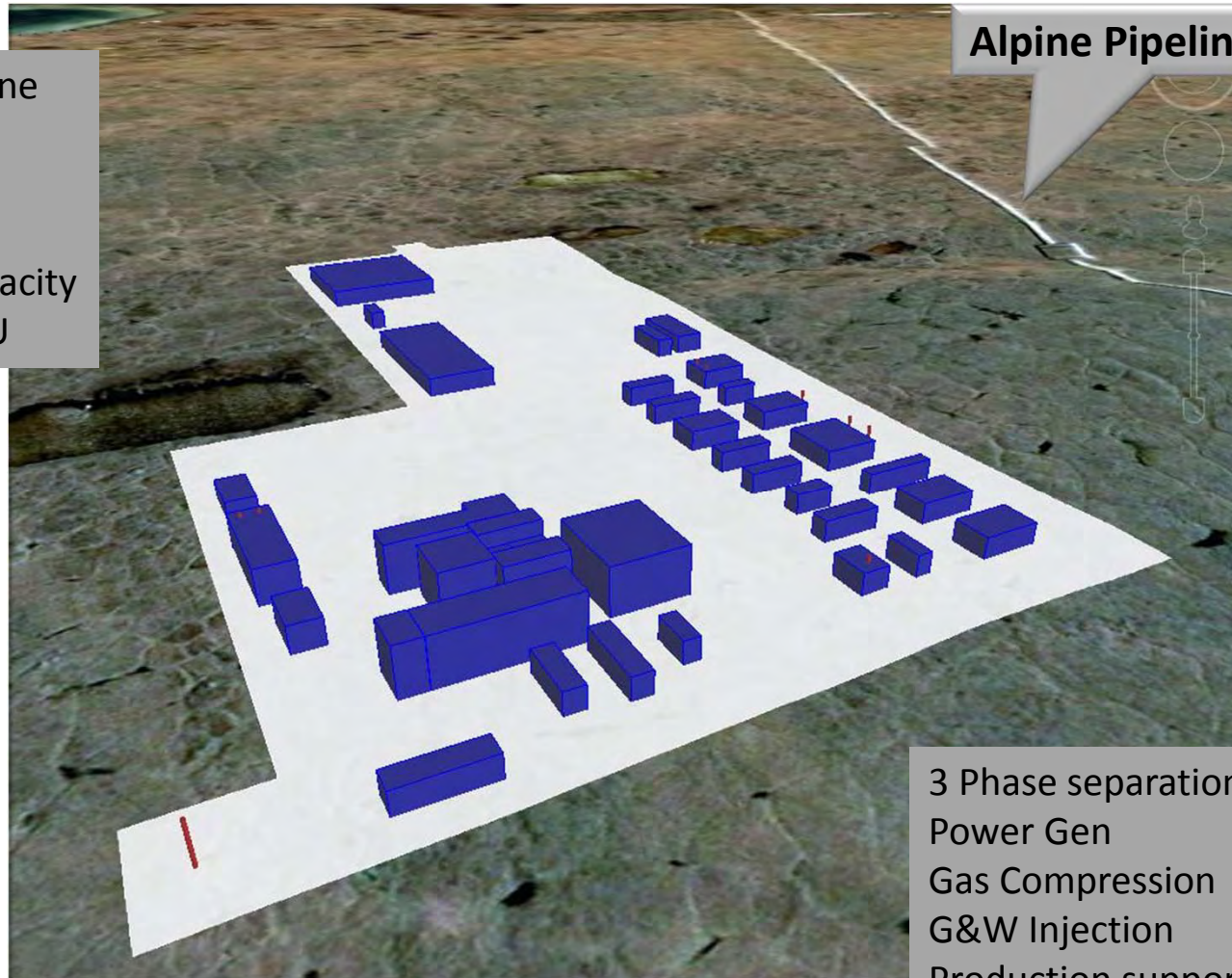
# Mustang Development Simplified Process Flow Diagram





## Mustang Production Pad

750 ft to Alpine line  
23 total wells  
12 producers  
11 injectors  
15,000 BOPD capacity  
4.5 sm to 2M KRU



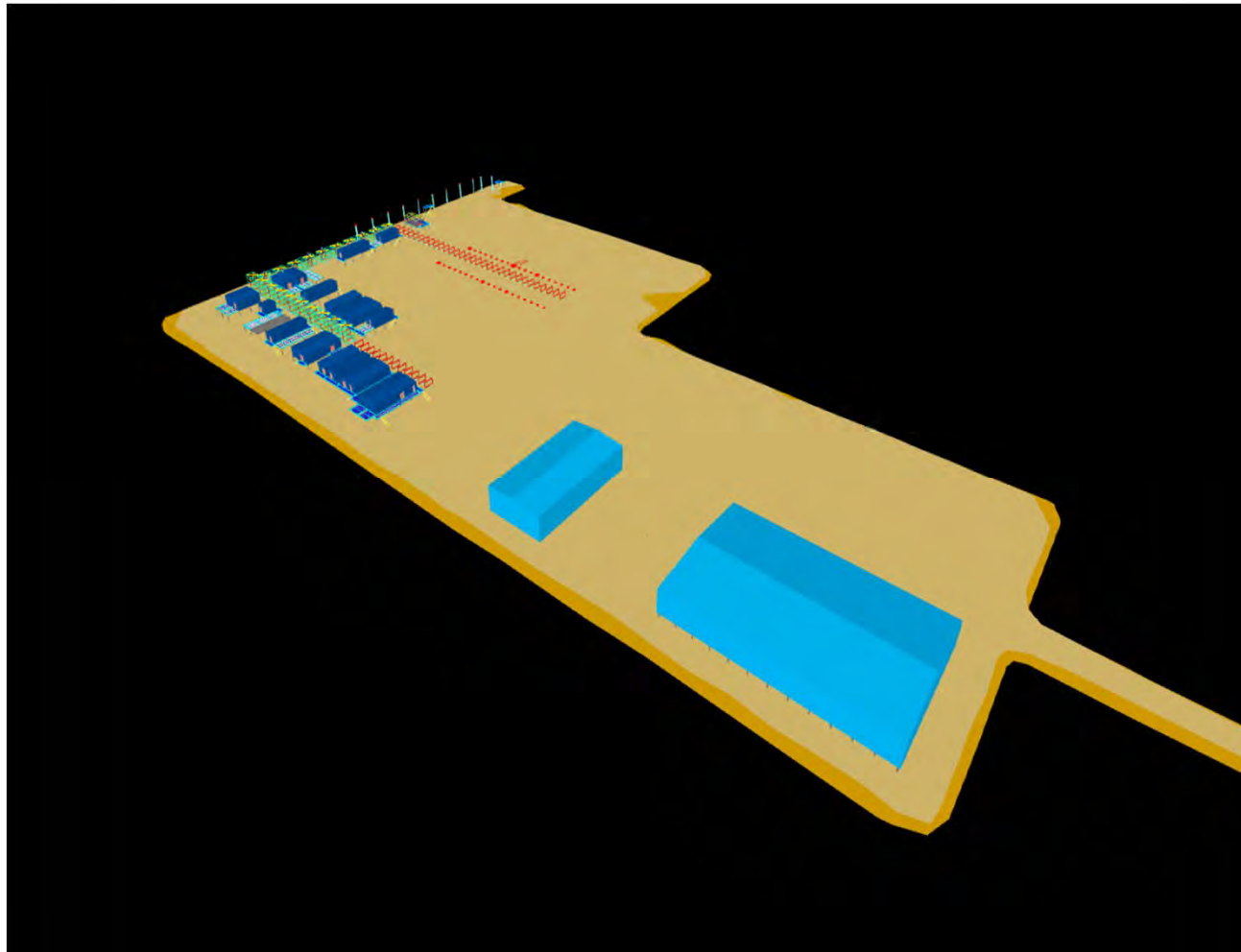
**Alpine Pipeline to KRU**

3 Phase separation  
Power Gen  
Gas Compression  
G&W Injection  
Production support modules  
Modular structure





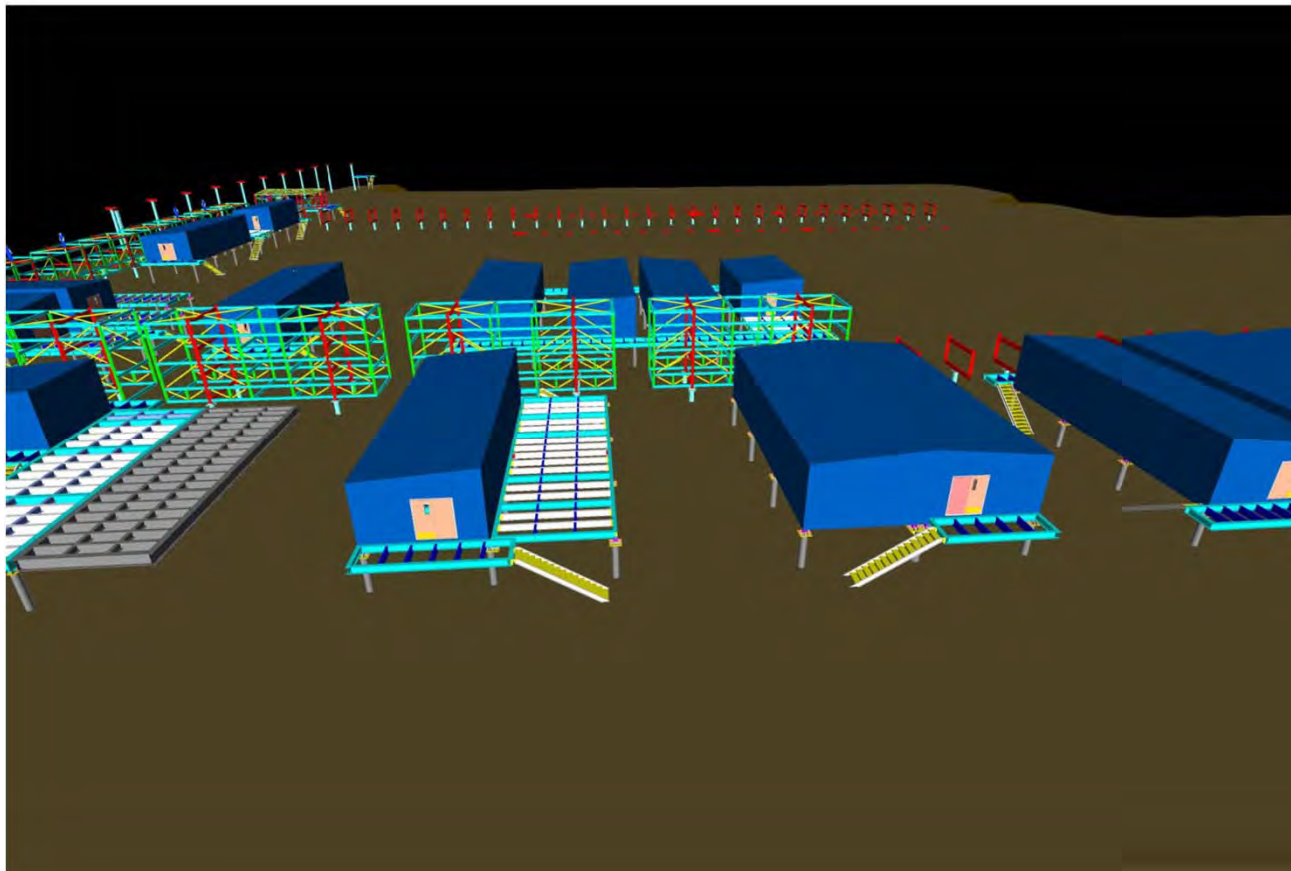
## Mustang Development Early 3-D Visualization – Site Overall





# Mustang Development

## Early 3-D Visualization – East Process Train





## Mustang Development Drilling Plan

---

### Winter Drilling 2014/2015

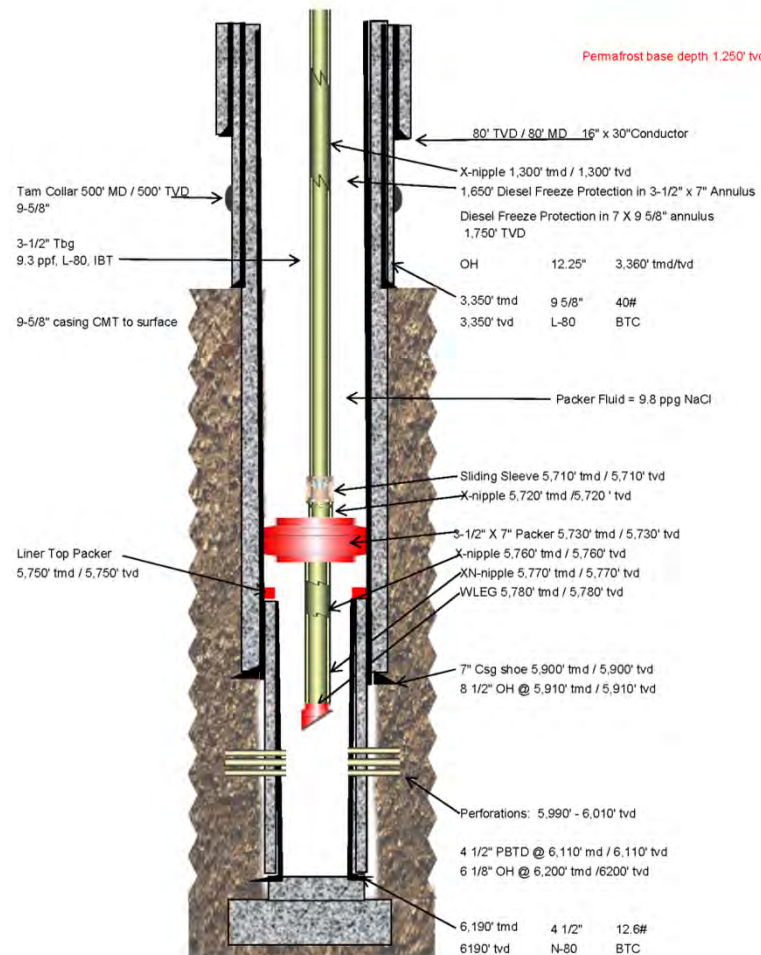
December 12-20, 2014	Mobilization, Rig-up and Acceptance of Rig
December 25, 2014	Start drilling Lippizon
January 20, 2015	Complete drilling Lippizon
January 23, 2015	Rig up and accept for Shamrock
February 20, 2015	Rig up and start testing Lippizon
February 24, 2015	Complete drilling Shamrock, Rig Down, Move Out
February 27, 2015	Rig up and accept for Argo
March 7, 2015	Rig up and start testing Shamrock
March 25, 2015	Complete drilling Argo





# Well Design “Conventional” Injectors, Horizontal Producers

Typical Injector - Mustang Production Pad  
Proposed Diagram



Typical Horizontal Producer - Mustang Production Pad  
Proposed Diagram

