

Cook Inlet Natural Gas Supply 2014 and Beyond

RDC Annual Meeting

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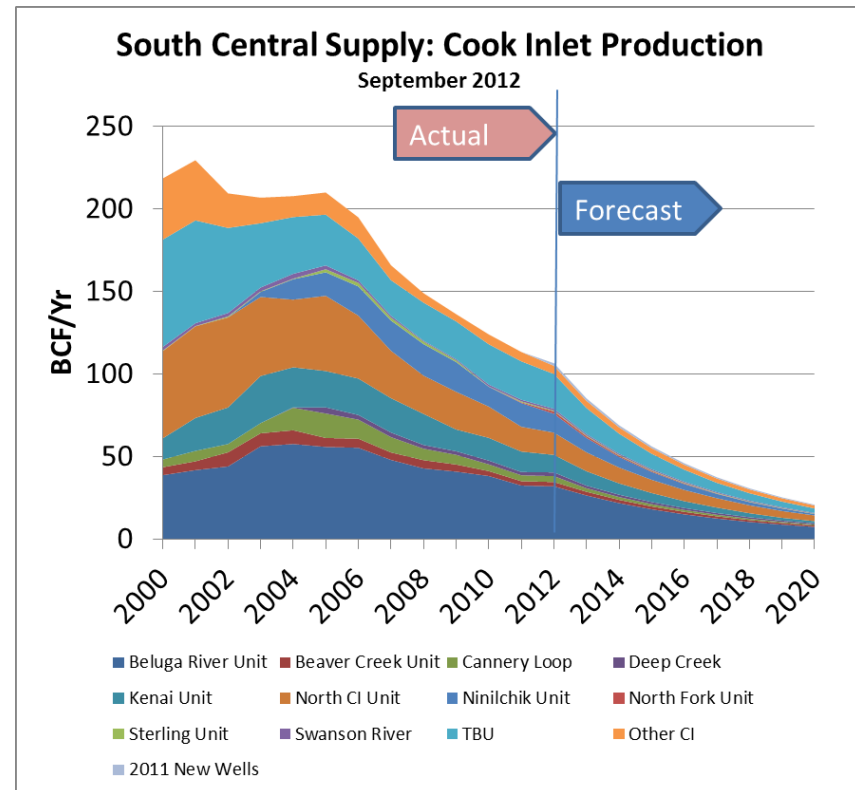
Cook Inlet Production Past and Future

2000-05: Cook Inlet production supported Utilities & Nikiski plants

- ▶ Agrium Chemical Plant shut down in 2006
- ▶ COP LNG Plant shut down March 2013

After 2014 Demand is

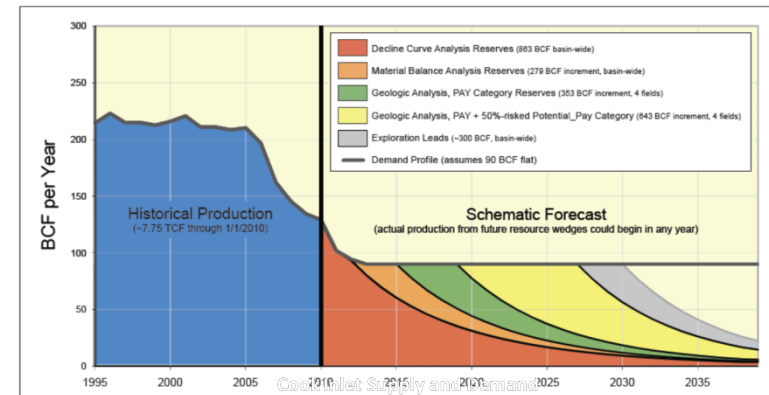
- ▶ Utilities
- ▶ Refinery
- ▶ O&G / Mining Fuel



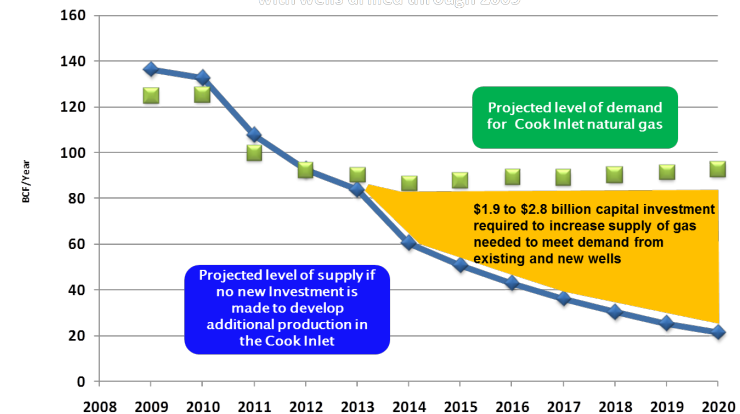
Previous PRA & DNR Studies on CI Gas Supply and Demand

- ▶ 2009 DNR Study:
 - Gas available, but need to develop

- ▶ 2010 PRA Study:
 - With existing wells only shortfall in 2013
 - 13 new wells per year required to get to 2020

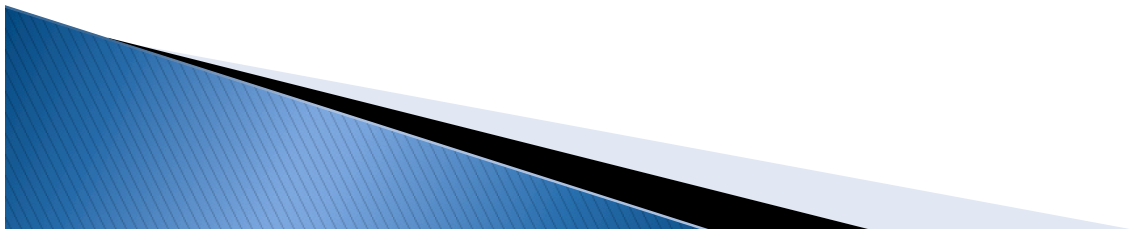


Cook Inlet Supply and Demand
PRA Forecast December 2009
with wells drilled through 2009



2010: Legislature Passed Cook Inlet Recovery Act to Spur Exploration

- ▶ Exploration Incentives have resulted in
 - 2 Jackups currently exploring
 - Additional new explorers working onshore
 - Seismic acquisition onshore and offshore
- ▶ Gas Storage Incentives resulted in
 - CINGSA Storage Project developed in Kenai



2011-12 Cook Inlet Gas Studies

▶ 2011 DNR Cost Study

- CI Basin, with investment, is capable of meeting needs until 2018-20 at prices below available alternatives
- Failure to make timely investments will result in need of alternative sources sooner.

▶ 2012 PRA Study Update

- Only 5-8 new wells per year were actually completed 2009-12
- Predicted potential shortfall now 2014

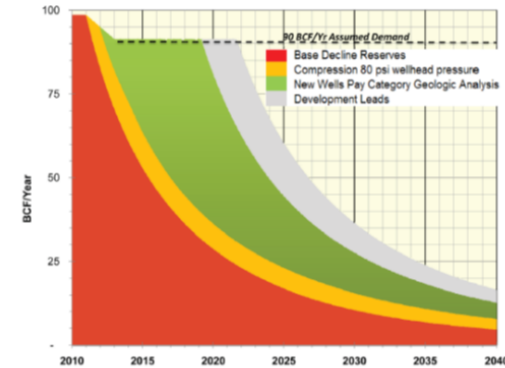
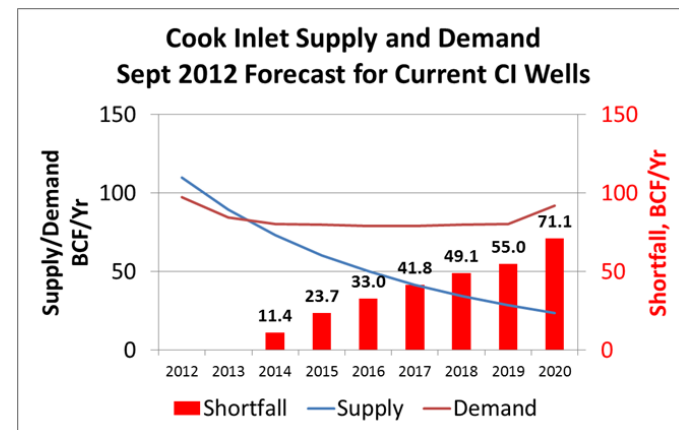
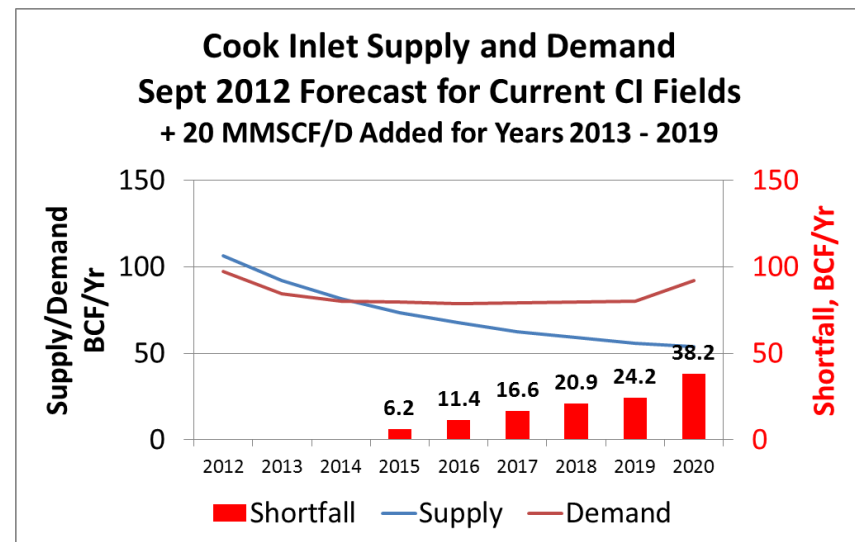


Figure 7. Hypothetical production forecasts resulting from this study for the Cook Inlet basin assuming a constant 90 BCF/Year demand after 2011. Production from future resource wedges could begin in any year. The projected “pay” volumes (green wedge) for this study are greater than that of the 2009 study (Figure 2) due to an error resulting in the understatement of McArthur River Grayling Gas Sands new well pay reserves potential. This error is corrected in this Figure.



2012 PRA Supply Sensitivity

- ▶ If 6-8 new gas wells added per year 2013-19
 - ~20 MMSCF/Yr added
- ▶ Shortfall still predicted in 2015



CI Gas Activity in the Last Year

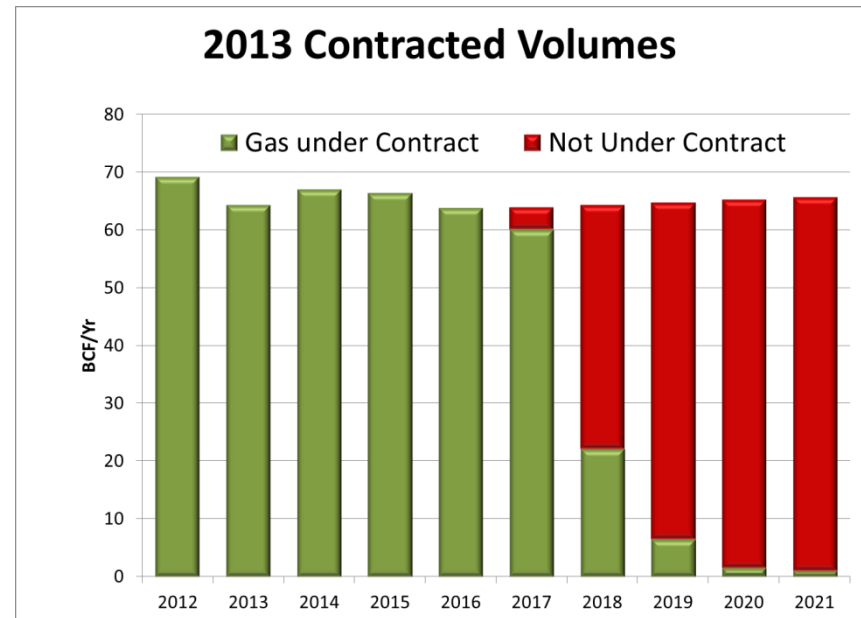
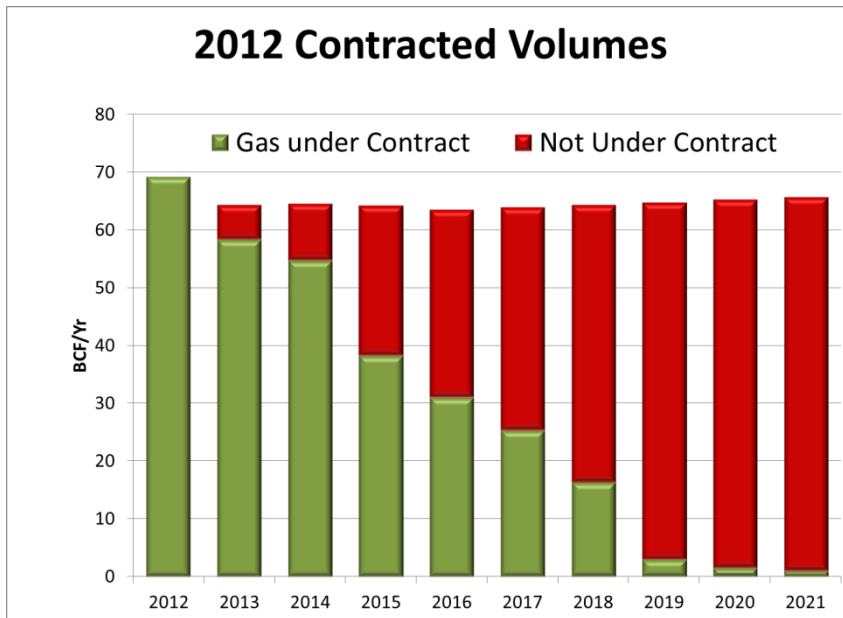
- ▶ Hilcorp acquired Marathon
 - Consent Decree sets gas sales prices to 2018
 - Hilcorp has contracted with most CI Utilities to meet their demands until 2018
 - Continues development drilling & some exploration
- ▶ Furie continued exploration & delineation
 - Permitting platform at Kitchen Lights; startup 2014
- ▶ Buccaneer continues to explore offshore and develop & explore onshore
- ▶ Apache, CIE & Nordaq exploring
- ▶ COP and Armstrong drilled development wells

New CI Gas Wells Completed since August 2012

- ▶ 11 New wells currently producing
- ▶ Multiple operators
- ▶ Average rate = 2.5 MMSCF/D

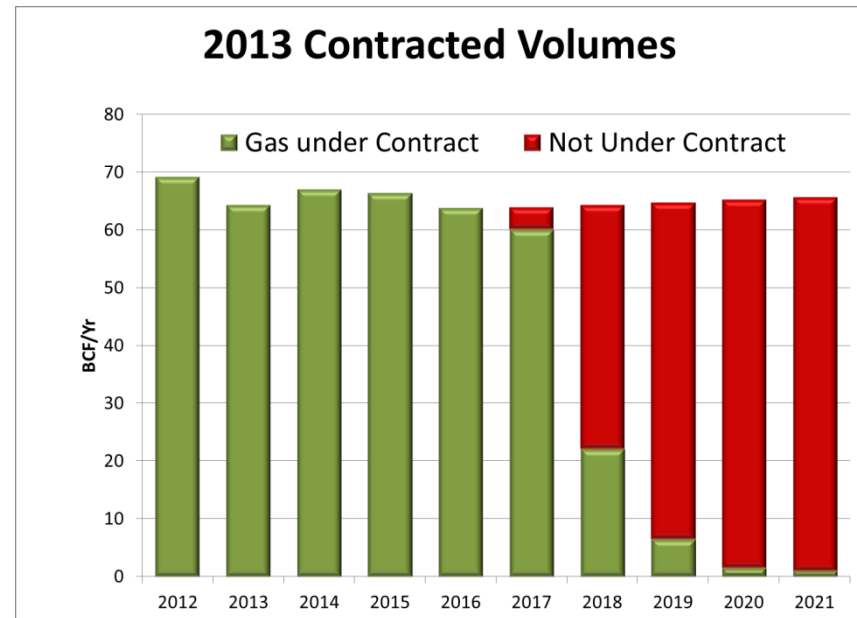
Well	Avg. Rate, MMSCF/D
NINILCHIK UNIT S DIONNE 7	1.3
TRADING BAY UNIT M-16RD	2.4
KENAI LOOP 1-3	3.8
BELUGA RIV UNIT 212-24T	3.2
BELUGA RIV UNIT 244-23	2.6
NORTH FORK 34-26	1.9
NORTH FORK UNIT 14-25	0.5
NORTH FORK UNIT 32-35	3.1
NORTH FORK UNIT 22-35	4.9
HAPPY VALLEY B-14	2.5
HAPPY VALLEY B-15	1.8
Total of 11 Wells	28.0

Total CI Utility Contracted and Not Contracted Gas Demand 2012 vs. 2013



2014–2018 Outlook

- ▶ Significant development activity required to meet new contracts
- ▶ Exploration to meet demand beyond 2017



2018 and Beyond

Filling the supply/demand gap in 2018 will depend on:

- ▶ Exploration success and new CI gas development
 - Is restarting LNG Export feasible to market uncontracted newly discovered gas?
- ▶ NS Gas Pipeline after 2020
- ▶ If not the above - LNG import?

Thanks