Boosting Oil & Gas Activity In Alaska – 
Incentivizing The “Next Frontiers” *Together*

Alaska Venture Capital Group (AVCG) 
Brooks Range Petroleum Corporation

Presentation to Commonwealth North 
By Ken Thompson 
January 4, 2011
Agenda

• Introduction to Alaska Venture Capital Group (AVCG) and subsidiary Brooks Range Petroleum Corporation

• CWN charge: “Ideas to re-incentivize investment and increase the competitiveness of Alaska relative to other oil basins”
  
  o Fundamental improvements to ACES for all exploration and development activity
  
  o The “next frontiers” major developments
    ✓ Viscous oil
    ✓ Low-permeability sands and shales
    ✓ NS regional processing facilities
    ✓ NS natural gas
    ✓ North Slope offshore oil
AVCG/Brooks Range Petroleum History

- AVCG start-up in 2000 as the parent company to explore North Slope
- BRPC formed 2006 as solely owned, operating subsidiary of AVCG, operating on behalf of Working Interest Owners’ Joint Venture (JV)
  - AVCG (40-50%)
  - Ramshorn Investments, Inc. (25-30%)
  - TG World Energy, Inc. (25-30%)
- Manages approximately 235,000 North Slope leasehold acres
- Has acquired and processed 330 square miles of new 3D seismic
- In 2011 BRPC will be entering its 4th year of exploration drilling
- BRPC is a proven Arctic Operator: program execution and compliance with Federal, State, and Borough regulations
- BRPC has established sound working relationships with Alaska’s operational, engineering and environmental support vendors
- BRPC has access to capable rigs to support drilling requirements
- $127.4MM capital spent to date for land, seismic, exploration drilling
AVCG & BRPC: Entity Comparison

**AVCG LLC**

- Holding company
- Own all leases
  - Assignments
  - ORRI
  - Production Revenues
- Manage overall direction, strategy
  - BRPC budget, plan
  - Staffing
- Negotiation of all business deals
  - 3 managers written approval

**Brooks Range Petroleum Corporation**

- Subsidiary of AVCG, LLC
- Technical services for AVCG
- JV companies as needed
- Pay operational expenses
  - office
  - staffing
  - misc. services
- Administrative services
  - AVCG billings
  - accounting
  - lease administration
North Slope Strategy

"Safe, Low Cost & Entrepreneurial"

✓ Balanced Management Team
  • Combining experienced professionals from Alaskan Majors and Independent Producers

✓ Maintain balanced exploration portfolio
  • Focus on light hydrocarbon systems
  • Stay onshore and near existing infrastructure

✓ Apply best technology and practices
  • Acquire state-of-art proprietary 3-D
  • Build on past drilling seasons

✓ Implement lower cost, independent inspired development strategies; shorten cycle times
  • Onsite, standalone modular processing technology
  • Leverage existing pipeline infrastructure

✓ Be safe and environmentally responsible
  • Proactive in HS&E compliance standards

AVCG, LLC
www.avcg-llc.com

Ken Thompson - Managing Director
Edger Dunne - Exec. Managing Member
David Murfin - Managing Member
John Shawver - Managing Member
Michael Carney - Managing Member

Brooks Range Petroleum Corporation
www.brooksrangepetro.com

John “Bo” Darrah - President/CEO
Bart Armfield - VP Operations
Doug Hastings - VP Exploration
Larry Vendl - Chief Geologist
Larry Smith - Chief Geophysicist
Jim Winegarner - VP Land & External Affairs
Tom Habermann - Controller
Leasehold Portfolio

**Western – 94,142 acres**
- Activity: 220 sq. mi. new 3 – D seismic
  - Drilled Kuparuk test & discovery

**Central – 52,878 acres**
- Activity: 130 sq. mi. new 3 – D seismic
  - Drilled Ivishak, Sag River & Kuparuk tests
  - Ivishak & Sag River discoveries
  - Formed Beechey Point Unit
  - Acquired Pete’s Wicked discovery

**Eastern – 89,800 acres**
- Activity: Purchased area 2 – D lines

**Plan**
- Drill North Tarn Brookian/Kuparuk test
  - Progress 3D seismic and prospects
  - Exploit resource plays in area

- Drill East Shore Kuparuk formation test
  - Progress Plan of Development of known reserves
  - Obtain approval of development sanctioning

**Plan**
- Acquire 150 sq. miles of 3D seismic
  - Looking for partner on Shoot-to-Earn
  - Continue to progress 2D data
  - Monitor Point Thomson activities

**BRPC Gross North Slope ~ 236,820 acres**
Historical Activities

- 2000: Formation of AVCG, LLC
- 2001: Acquired initial leasehold of 3,750 acres
- 2002: Leasehold position over 100,000 acres
- 2003: Secured experienced technical staff
- 2004: Leasehold position over 268,000 acres
- 2005: North Shore Development Project
- 2006: Drilled North Shore #1 (Ivishak – Sag River discovery)
  Drilled Sak River #1
  North Shore 3 – D Seismic Shoot (130 sq. mi.)
  Leasehold position over 150,000 acres
  Formation of BRPC Operating entity
- 2007: Generate Prospect Portfolio
- 2008: Reachay Point Exploration Unit Application
- 2009: North Shore #1 flow test (2,092 BOPD)
  Drill Tofkat #1, A & B sidetracks
  Tofkat #1 (Kuparuk discovery)
  Big Island 3 – D seismic shoot (210 sq. mi.)
Field Execution

2008 North Slope Exploratory Wells
Total Depth By Operator

- **ConocoPhilips**
  - **SPARK** 16,097 ft
  - **CHAR**
  - **SMILODON**

- **Chevron/UNOCAL**
  - **PANTHERA** 19,670 ft
  - **MASTODON**
  - **HAPPY VALLEY**

- **Anadarko**
  - **JACOBS LADDER** 15,907 ft
  - **CHANDLER #1**
  - **GUBIK**

- **Savant Alaska**
  - **KUPCAKE** 10,686 ft

- **Brooks Range Petroleum**
  - **TOFKAT 1B**
  - **TOFKAT 1A**
  - **TOFKAT 1**
  - **NORTH SHORE 1** 49,278 ft
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  - Fundamental improvements to ACES for all exploration and development activity
  - Ideas to incentivize the “next frontiers” major developments
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    - Low-permeability sands and shales
    - NS regional processing facilities
    - NS natural gas
    - North Slope offshore oil
Memory Refresher: State of Alaska Tax Credits

**Loss Carry Forward (LCF)** – 25% of previous years direct lease expenditures less production revenues

- Nearly all spending “for the benefit of a lease” qualifies
- Can apply after year end
- Half of credit can be cashed per calendar year

**Capital Credits** – 20% of qualified capital expenditures

- Most exploration, development, and seismic spending qualifies
- Can apply quarterly
- Half of credit can be cashed per calendar year

**Exploration Tax Credits** – 20% on remote exploration activities

- Many exploration and seismic costs qualify if done certain distances away from existing wells or units

**Small Producer Credit** – non transferrable **$12mm per year** credit

- directly offsets any production taxes due

- Other Requirements and Highlights
  - Credits are cumulative – i.e. a seismic program outside of a unit qualifies for up to 65% back from the State.
  - Credit certificates are issued within 120 days of application date
  - Most data shared with State of Alaska and becomes public information after a certain number of years (usually 10)
  - Royalty Modification Opportunities – royalties can be reduced down to 5% for new production
Remember The Goal: NO DECLINE!!!

It’s not just about annual number of wells, amount of capital spent, number of jobs created, or State revenues to judge success of Alaska’s fiscal system. In the end, oil production better incline instead of decline!

Alaska Oil Production, 1965 - 2019

Source: Alaska Department of Revenue, Fall 2009 Revenue Sources Book. Extrapolated
(1) Cook Inlet, Duck Island, Milne Point, Greater Point McIntyre, Liberty, Known On & Offshore, Flord and NPRA.
7 Recommendations To Boost Activity

Recommendations to improve ACES and increase exploration/development activity for production:

① Continue excellent exploration credits, but for companies who sell credits to the State, allow full payment instead of 50%/50%

② Extend small producer tax exemption of first $12MM ACES from 2016 to 2021

③ Eliminate, reduce or reformat the surcharge tax to not take away the upside at high prices

④ For all companies but particularly for majors, enhanced incentives for infield drilling and viscous oil

⑤ Foster a potentially new major oil/gas development business on the Slope: ACES tax holiday for low-permeability sands/shale developments

⑥ Foster new regional “open access” production facilities with reduced ACES until facility investment recovered

⑦ North Slope natural gas development fiscal certainty
1) Tax Credit Timing & 2) Small Producer Exemption

• Support Governor Parnell’s recommendation to allow tax credits to be fully received in year certificate issued instead of over 6-24 months
  o For companies with production who pay ACES, credits can be used monthly against ACES due...immediate value
  o For companies without production, value of credits received over 6-24 months after filing, receipt of certificates
  o For BRPC, could mean 3 wells drilled per year vs. 2
  o No demonstration of forward spend preferred, but BRPC OK with requiring forward spend

• Small producer exemption of $12MM to expire 5/1/2016
  o Capital markets affected by 2008-09 recession with some activity impacted and delayed...need for extension
  o Attract new entrants, new developments...extend to 2021
3) Eliminate, reduce, simplify surcharge tax rate

- Elimination of progressivity surcharge tax entirely – and keep a flat ACES 25% base rate: best for generating activity
  - Most “discouraging” aspect of ACES vs. original PPT…affected Outside perception of Alaska, affected production decline
  - Takes away upside at high oil prices for those taking the risks
  - Capital is fluid, and the “world is flat” for alternatives
  - Elimination likely unacceptable to most Legislators
  - At least consider reduction or simplification

- Reduction/simplification of surcharge tax rate
  - Change to simplified and more competitive bracketed tax rates as per Roger Marks’ recommendation
  - Alternative #2: cap ACES progressivity surcharge at 25%

Roger Marks: “Alaska’s production tax is unique in that there is no bracketing. When progressivity occurs, it applies to the very first dollar of value, as well as subsequent dollars. Thus as value increases, additional tax is extracted from all previous values.”
Total Burden Adds Up: Royalty, Property Tax, ACES Production Tax, Federal Taxes

Relative Taxes Under ACES

- Royalty
- Severance Tax (ACES)
- Property Tax
- State & Fed Corp Inc Tax

ANS Market Price ($/bbl)

Per Barrel Taxes

$0 to $60
ACES Perspective Versus Other Countries
And At Different Oil Prices

**International Marginal Tax Rates @ $100/bbl Market Price**

**Tax & Royalty Regimes**

**International Effective Tax Rates**

*(Total Tax / Net Value)*

- U.S. GOM
- U.K.
- Alberta
- Thailand
- Australia
- Brazil
- Norway
- Alaska - ACES

Market Price ($/bbl): $50, $60, $70, $80, $90, $100, $110, $120, $130, $140, $150
ACES Perspective Versus Other States And At Different Oil Prices

<table>
<thead>
<tr>
<th>State</th>
<th>State + Fed</th>
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<tbody>
<tr>
<td>Gulf of Mex</td>
<td>45%</td>
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<tr>
<td>California</td>
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<td>Colorado</td>
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<tr>
<td>Texas</td>
<td>55%</td>
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<tr>
<td>Wyoming</td>
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International Effective Tax Rates (Total Tax / Net Value)
Roger Marks’ Proposed ACES Bracket Structure

Proposed Bracket Structure
Based on Net Value p/bbl*

- $0/bbl - $30/bbl  20%
- Next $22/bbl ($30 - $52/bbl)  24%
- Next $21/bbl ($52 - $73/bbl)  29%
- Next $22/bbl ($73 - $95/bbl)  33%
- Next $22/bbl ($95 - $117/bbl)  37%
- Next $21/bbl ($117 - $138/bbl)  41%
- Next $22/bbl ($138 - $160/bbl)  46%
- Anything over $160/bbl  50%

* These net values are approximately $30 less than market values (the ANS West Coast price).

Example bracket: IRS Income Tax

<table>
<thead>
<tr>
<th>2010 Federal Income Tax Table</th>
<th>Marginal Tax Rate</th>
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</thead>
<tbody>
<tr>
<td>If taxable income is:</td>
<td>ACES</td>
</tr>
<tr>
<td>Married Filing Jointly:</td>
<td></td>
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<tr>
<td>Over</td>
<td></td>
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<tr>
<td>$0</td>
<td>$0</td>
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<tr>
<td>$373,650</td>
<td>$373,650</td>
</tr>
<tr>
<td>And Over</td>
<td>$101,085.50</td>
</tr>
</tbody>
</table>

ANS Market Price ($/bbl)

- ACES
- Bracketed
Proposed ACES Bracket Structure Compared To Other Nations’ Tax: More Competitive To Attract Capital

Marginal Tax Rate
ACES & Proposed Bracketed

International Effective Tax Rates
(Total Tax / Net Value)
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Other Examples Of Incentives For “Next Frontiers”

• *Dramatic steps – a tailored program & strategy – often needed for large scale “next frontiers” in my opinion*

• Low-permeability gas, coal bed methane – Lower 48
  o 1980 – Congress enacts Sec 29 unconventional gas TC
  o 1984 – minor gas volumes only from “pilot” test wells
  o Federal tax credit initiated, some states suspended severance taxes
  o Dramatic “production incline” success
  o Subsequent expansion to several other countries
Examples Of Incentives For “Next Frontiers”

- UK North Sea exploration/development
  - UK often aggressively enacts cyclical incentives for activity
  - 35% decline in exploration/appraisal drilling between 2008-09
  - **Substantial tax incentives enacted 2009 to encourage development**
    - NEW FIELDS EXEMPT FROM 20% SUPPLEMENTARY SURCHARGE IT LEVIES ON TOP OF 30% CORPORATION TAX
    - EXEMPTION APPLIES TO FIRST $1.3 BILLION OF EACH FIELD’S TAXABLE INCOME
  - 2010 vs 2009: 1Q drilling up 29%; drilling 2Q up 133%!
  - Anticipate significant new production
  - **Side note: effect upon AVCG relative to Bow Valley/Dana Petroleum**
(contd) Examples Of Incentives For “Next Frontiers”

• Oil from Bakken shale, North Dakota
  o Oil and gas production from low-perm shales historically drilled through but thought to be only oil source rocks – not reservoirs
  o Requires high tech horizontal drilling, massive fracs
  o Suspension of severance tax for initial development, expedited permitting by State
  o 650 new wells drilled in 2010 with 168 per month in December!
  o Reserve estimates of 5-11 billion bbls compared to Prudhoe 13 bbl
  o Record oil production ON THE INCLINE to double this decade
  o 370,000 BOPD to increase to 700,000 BOPD and surpass Alaska
(contd) Examples Of Incentives For “Next Frontiers”

• A lesson from North Dakota on tax innovation with a specific program focused on what you want to achieve to **INCREASE PRODUCTION**:
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4) Incentives for infield drilling and viscous oil

• For infield drilling and well work:
  o Support Governor Parnell’s proposal of 30% credit for well work, capex and opex (defined type of work)
  o Hard to estimate the potential new production...need majors’ input...but could be more immediate increase in production

• For all “new” viscous oil development
  o Huge stakes...billions of barrels recoverable on NS
  o Need something to cause larger scale development: “new frontier”
  o Proposal: ACES production tax “holiday” for 3 years from start of sanctioned new development projects
  o Only applicable to new development projects started between January 1, 2012, and December 31, 2016...with option for Legislature to extend another 5 years dependent on activity
  o Solicit input from major producers for alternatives...although large producers lean to overall fix of ACES vs. targeted incentives
5) Development of low-perm sands & shales

• Billions of barrels of resources in North Slope and Cook Inlet low-permeability sands and source shales...untested frontier!
  o BRPC has identified resource base of 1.1 billion barrels in low-perm sandstones just on our acreage...likely 10-15% is recoverable
  o Oil source rock shales – such as the NS Shublik shale – could contain billions of recoverable barrels but very technically challenging
  o New entrant – Great Bear Petroleum recognized potential and acquired 500,000 acres, the maximum allowed, on October 27, 2010!
  o Requires costly long horizontal wells and multiple frac treatments
  o Commerciality at permeability less than 10 md not fully tested over widespread area and this resource truly a “new frontier” in Alaska but already a “mega-boom” in the Lower 48, e.g. Bakken Shale

• Proposal
  o 5-year ACES tax holiday for any new fields developed in low-perm sands and shales of less than 10 millidarcy permeability as approved by DNR/DOR/AOGCC
  o Begins January 1, 2012, and expires December 31, 2021
6) State help facilitate a new business on Slope: Regional “open access” oil production processing

• Numerous smaller prospects on NS that could add up to significant production and reserves
  o One company had identified 78 3D prospects < 25 MMBO each
  o BRPC has identified another 20+ prospects/leads just on our acreage
  o Negotiations with majors to enter Prudhoe Bay, Kuparuk, other facilities to expedite development of small fields complex and takes years...not an effective solution for small field development

• For new regional processing facilities that are true “open access” with reasonable fees, propose the following:
  o 100% capital tax credit or ACES waiver until capital recovered
  o Facility constructor, owner-operator agree to a published tariff with a 12-15% investors-rate-of-return on facility capital and operating costs
  o Other producers allowed in as long as facility capacity exists and published tariff is paid, allowing for “backout” effects and/or expansion
  o Not mandatory...optional but agree to above terms to get tax holiday
  o A “new frontier” that’s not been tried on the North Slope
7) North Slope Gas

- Tremendous resource of 30+ TCF gas on NS is a challenge but is a longer-term and significant “new frontier”
  - Low natural gas prices in Lower 48 a negative
  - Best option may be one that can access different market regions, i.e. the Y-line concept of going to Valdez (LNG) and Alberta (pipeline gas)
  - Fiscal structure must be a negotiated one with a contract assurance of longer-term stability
  - State work with major producers for alternatives...realizing large producers lean to overall fix of ACES vs. targeted incentives
  - Revamping ACES overall to be more competitive as outlined earlier could be good first step, but new innovation may also be required
    - E.g. no ACES tax on NS gas production until capital fully recovered
    - However, all other taxes paid: royalties, property tax, State corporate income tax, Federal corporate income tax, etc.
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Recommendations to improve ACES and increase exploration development activity for production – **THE GOAL: NO DECLINE**

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