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**VP ENGINEERING
& OPERATIONS**

SEPT 20, 2006

South Central Alaska Energy Forum



Kuukpik #5 drilling Endeavour 1 Well

AURORA GAS OPERATIONS SUMMARY

• **AURORA GAS OPERATES 12 PRODUCING GAS WELLS IN 5 FIELDS.**

• **6 Compression / Dehy Facilities**

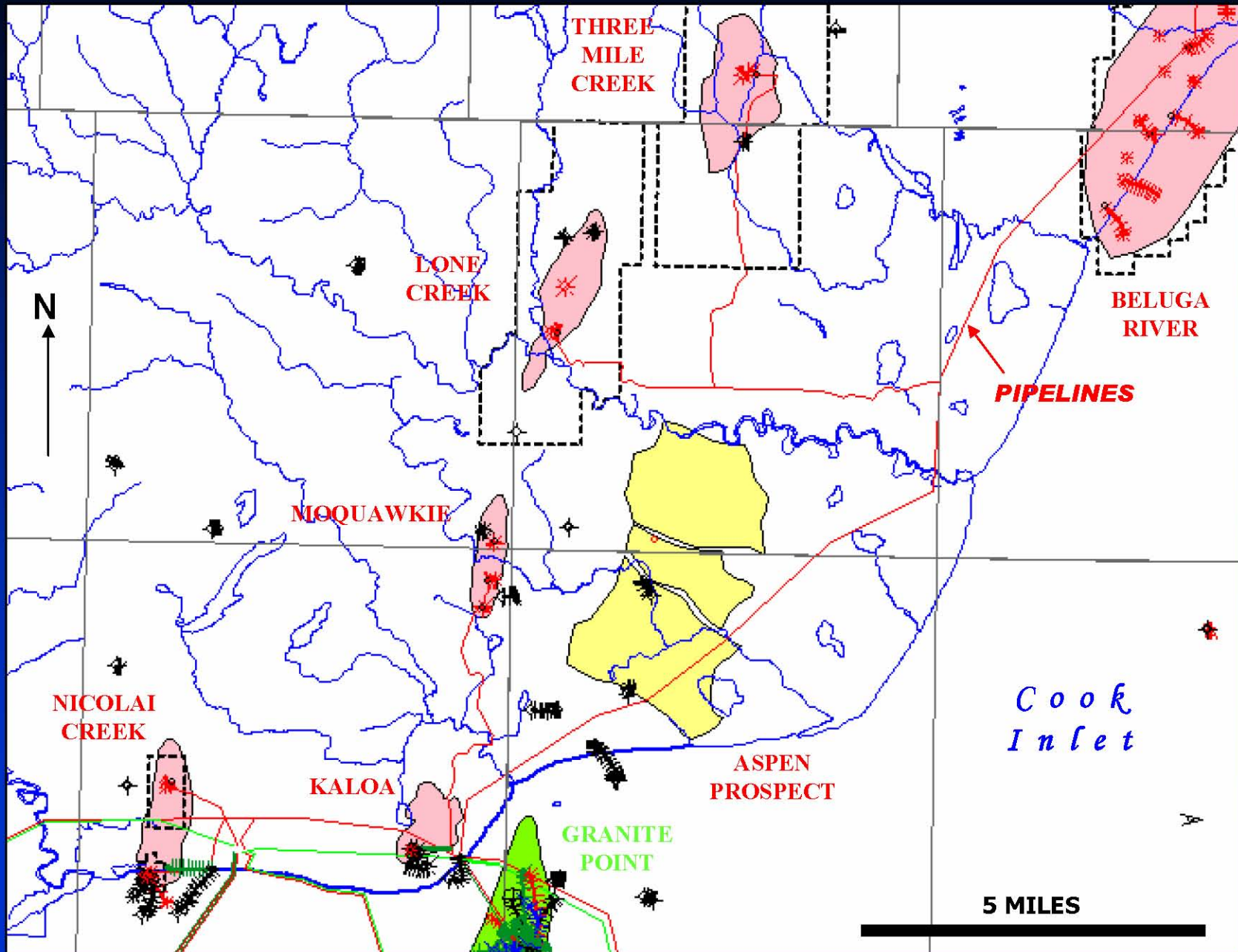
• **CURRENT PRODUCTION --- 6-10 MMCFPD (gross).**

• **MAXIMUM PRODUCTION --- 25 MMSCFD**

• **7 FIELD and 5 OFFICE EMPLOYEES (plus 6 shared Staff).**

• **ACREAGE POSITION --- 125,000 Gross/78,000 Net Acres.**

AURORA GAS'S WEST SIDE ACTIVITIES



2005 ACTIVITIES

● DRILLED 6 WELLS


- 4 Producing Gas Wells, including an Exploration discovery
- 1 Suspended Well (Potential SWD)
- 1 Exploratory Dry Hole

● SPENT \$18.5 MILLION CAPITAL

- \$15.5 MM on Drilling, Completion, and Testing
- \$2.2 MM on Pipelines and Production Facilities
- \$0.4 MM on Inventory
- \$0.4 MM on Support Equipment

EXPECTED 2006 ACTIVITY

- NO CAPITAL BUDGET (WE WORK ON A PROJECT BY PROJECT BASIS)
- WEST SIDE:
 - DRILLED 1 SHALLOW EXPLORATION (GAS) WELLS (<4000')
 - 4 RIG WORKOVERS OF EXISTING PRODUCERS
 - INSTALLED 1 SATELLITE FACILITY and FLOW LINE
 - EXPECT TO DRILL 1 TO 3 MORE <5000' GAS WELLS
- NEW AREA: ENDEAVOUR (OIL) PROSPECT DRILLED NEAR ANCHOR POINT (9200' Hemlock Test)
- CAPITAL SPENDING OF UP TO \$18 MILLION (Gross)



**SINCE 2000 AURORA GAS HAS
BEEN INVOLVED IN 18 WELLS (ALL OPERATED)**

- **Drilled 5 Exploration**
- **Drilled 5 Development**
- **Re-entered 6 Suspended or P&A'd**
- **Purchased 2 Ready to Produce (Except Facilities and Gathering Lines)**
- **Worked Over 5 Wells**
- **PRODUCED 13.3 BCF OF GAS**

CHARACTERISTICS OF COOK INLET SHALLOW GAS RESERVOIRS AND OPERATING

- **Multiple Pays**
- **Varied reservoir Quality**
- **High Costs Relative to Lower 48**
- **Lower But Improving Gas Prices**
- **Steep Reservoir Declines**
- **Limited Reservoir Extent**
- **Water and Sand Production**

EXTENDING PRODUCTION

HOW DO WE AS OPERATORS EXTEND SC ALASKA PRODUCTION?

- Use of Evaluation Technology
 - 3-D Seismic
 - Enhanced Seismic Interpretation
 - Get Lots of Log Data
 - Log Analyses / Interpretation
- Re-entering or Redrilling Old Wells
- Development Drilling

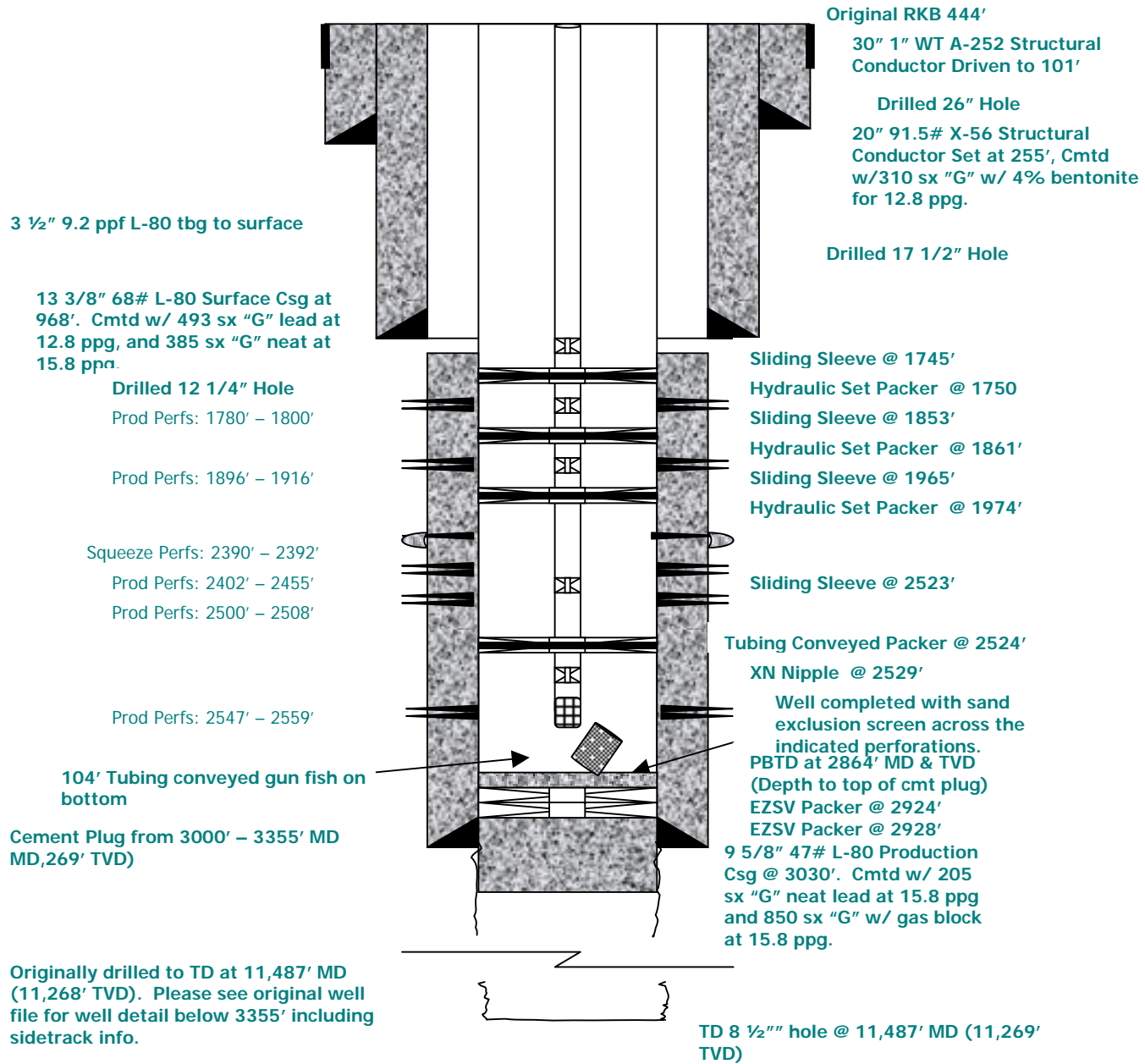
EXTENDING PRODUCTION

● Completions / Recompletion / Workovers

- Multiple Selectives
- Stand-Alone Sand Control Screens
- Stimulation
- Prevent Formation Damage

● Compression

● MOST NEEDED: Exploration



3 1/2" 9.2 ppf L-80 tbg to surface

13 3/8" 68# L-80 Surface Csg at 968'. Cmtd w/ 493 sx "G" lead at 12.8 ppg, and 385 sx "G" neat at 15.8 ppg.

Drilled 12 1/4" Hole
Prod Perfs: 1780' - 1800'

Prod Perfs: 1896' - 1916'

Squeeze Perfs: 2390' - 2392'
Prod Perfs: 2402' - 2455'
Prod Perfs: 2500' - 2508'

Prod Perfs: 2547' - 2559'

104' Tubing conveyed gun fish on bottom

Cement Plug from 3000' - 3355' MD (11,269' TVD)

Originally drilled to TD at 11,487' MD (11,268' TVD). Please see original well file for well detail below 3355' including sidetrack info.

Original RKB 444'
30" 1" WT A-252 Structural Conductor Driven to 101'

Drilled 26" Hole
20" 91.5# X-56 Structural Conductor Set at 255', Cmtd w/310 sx "G" w/ 4% bentonite for 12.8 ppg.

Drilled 17 1/2" Hole

Sliding Sleeve @ 1745'
Hydraulic Set Packer @ 1750'
Sliding Sleeve @ 1853'
Hydraulic Set Packer @ 1861'
Sliding Sleeve @ 1965'
Hydraulic Set Packer @ 1974'

Sliding Sleeve @ 2523'

Tubing Conveyed Packer @ 2524'
XN Nipple @ 2529'

Well completed with sand exclusion screen across the indicated perforations. PBTd at 2864' MD & TVD (Depth to top of cmt plug) EZSV Packer @ 2924' EZSV Packer @ 2928'

9 5/8" 47# L-80 Production Csg @ 3030'. Cmtd w/ 205 sx "G" neat lead at 15.8 ppg and 850 sx "G" w/ gas block at 15.8 ppg.

TD 8 1/2" hole @ 11,487' MD (11,269' TVD)

CHALLENGES

● COST CONTROL

- Drilling Waste Disposal (mud and cuttings)
- Rig Efficiency (fewer days)
- Logistics

● EFFECTIVE COMPLETIONS

- Prevention of Formation Damage
- Avoiding Water and Sand Production
- Cost-Effective Stimulation

CHALLENGES

REGULATORY MATTERS

- Gas Well Spacing
- Bonding Requirements

MAINTAIN HIGH LEVEL OF ACTIVITY

- Stay Ahead of Steep Production Declines
- Need Drilling / Capital Activity to Offset
- Need Access to Opportunities
- Funding of Activities

