

TESTIMONY OF JOHN K. NORMAN

HOUSE RESOURCES COMMITTEE

HB 3001: OIL AND GAS PRODUCTION TAX

APRIL 21, 2012

GOOD MORNING. FOR THE RECORD MY NAME IS JOHN NORMAN. I AM THE PUBLIC COMMISSIONER FOR THE ALASKA OIL AND GAS CONSERVATION COMMISSION.

COMMISSIONER FOERSTER IS TRAVELING AND SENDS HER REGRETS THAT SHE CANNOT BE HERE.

I AM HERE TO PROVIDE A CHARACTERIZATION OF POTENTIAL SOURCES OF INCREASED OIL AND GAS PRODUCTION FOR THE STATE OF ALASKA.

I'LL BRIEFLY DISCUSS THE FOLLOWING POTENTIAL RESOURCES:

- LEGACY FIELDS
- NEW DISCOVERIES
- HEAVY OIL
- SHALE OIL
- CONDENSATE FROM PT THOMSON
- OCS OIL
- ANWR OIL

- BEAUFORT SEA OIL; AND FINALLY
- NORTH SLOPE GAS (AND GTL)

FOR EACH OF THESE RESOURCES, I WILL DESCRIBE ITS POTENTIAL FOR INCREASING PRODUCTION AND SOME OF THE CHALLENGES ASSOCIATED WITH THAT INCREASE.

**LEGACY FIELDS:**

THE LEGACY FIELDS ARE ALASKA'S BIRD IN THE HAND. WE COUNT ON THESE FIELDS DAY IN AND DAY OUT; SO WE CERTAINLY DON'T WANT TO IGNORE THEIR IMPORTANCE OR TAKE THEM FOR GRANTED. DURING THE REGULAR SESSION COMMISSIONER FOERSTER TESTIFIED THAT THE HEALTH OF ALL THE FIELDS ON THE NORTH SLOPE DEPENDS TO SOME DEGREE ON THE HEALTH OF PRUDHOE BAY AND THAT THIS WILL BE TRUE FOR THE FORESEEABLE FUTURE (LIKE HAVING AN ANCHOR TENANT IN A SHOPPING MALL). YOU MAY REMEMBER THAT THE ORIGINAL ESTIMATE FOR PRUDHOE BAY RECOVERY WAS ABOUT 9 BILLION BARRELS. WE'VE ALREADY PRODUCED OVER 11 BILLION BARRELS AND, WITH CURRENT TECHNOLOGY, THERE ARE STILL ABOUT TWO BILLION BARRELS OF OIL LEFT TO BE PRODUCED FROM THE PRUDHOE OIL POOL. THAT'S JUST WHAT'S LEFT, AND (WITH POSSIBLE EXCEPTION OF THE BAKKEN IN NORTH DAKOTA) IT'S BIGGER THAN ANY NEW DISCOVERY IN NORTH AMERICA IN THIS MILLENNIUM. THESE 2 BILLION BARRELS CANNOT BE

TAKEN FOR GRANTED; THE PRUDHOE BAY OWNERS ARE EXPENDING LOTS OF TECHNICAL EFFORT AND MONEY TO FINESSE THIS ADDITIONAL OIL OUT OF THE GROUND. NEGATIVE IMPACTS ON PROFITABILITY (SUCH AS DROP IN OIL PRICE, INCREASE IN TAXATION, OR INCREASED REGULATORY BURDEN) WILL PUT SOME OF THESE 2 BILLION BARRELS AT RISK. CONVERSELY, THERE IS POTENTIAL FOR INCREASED ULTIMATE RECOVERY FROM PRUDHOE BAY, GIVEN ADVANCES IN TECHNOLOGY AND/OR POSITIVE IMPACTS ON PROFITABILITY. WE DON'T HAVE CONTROL OVER TECHNOLOGY ADVANCES OR OIL PRICE BUT WE CAN CERTAINLY USE CAUTION IN INCREASING THE BURDEN ON THE OPERATOR, EITHER THROUGH TAXATION OR REGULATION. I'VE TALKED ABOUT PRUDHOE BAY, BUT THIS CHARACTERIZATION IS VALID FOR THE OTHER LEGACY FIELDS AS WELL.

**NEW DISCOVERIES:**

NEW DISCOVERIES ARE ALREADY POSITIVELY IMPACTING THE PRODUCTION PROFILE IN ALASKA AND WE SHOULD CONTINUE TO ENCOURAGE OPERATORS TO TAKE THE RISKS TO EXPLORE FOR THESE RESERVOIRS. UNFORTUNATELY IT IS NOT LIKELY THAT WE WILL FIND ANOTHER PRUDHOE BAY IN THE AREAS WHERE WE CURRENTLY ALLOW EXPLORATION. THE EASY-TO-FIND FIELDS HAVE BEEN FOUND IN COOK INLET AND THE CENTRAL NORTH SLOPE. THAT SAID, THERE'S NOTHING WRONG WITH FINDING AN ALPINE, A NORTH STAR, AN OOOGURUK, OR A

NIKAITCHUK. SEVERAL “SMALL” FIELDS ADD UP TO A BIG ONE. I CALL THESE “SMALL” FIELDS, BUT I MUST REMIND YOU THAT SIMILAR FIELDS IN THE LOWER 48 WOULD BE CONSIDERED HUGE – IT’S THE COSTS ASSOCIATED WITH OUR REMOTE AND HOSTILE ENVIRONMENT THAT MAKE US VIEW A QUARTER BILLION BARREL DISCOVERY AS “SMALL.” BUT, REMEMBER, WHAT MAKES THESE FIELDS VIABLE IS THEIR PROXIMITY TO THE INFRASTRUCTURE FOR THE LEGACY FIELDS. AS WE GET FURTHER AND FURTHER FROM THAT INFRASTRUCTURE, THE CHALLENGES OF COMMERCIALIZING A NEW DISCOVERY ONLY INCREASE.

**HEAVY OIL:**

FOR HEAVY AND VISCOUS OIL, THE RESOURCE ESTIMATE VARIES DEPENDING ON WHOSE NUMBERS YOU USE, BUT JUST ABOUT EVERYONE AGREES THAT THERE ARE OVER 20 BILLION BARRELS OF POTENTIAL ON THE NORTH SLOPE. BUT THIS IS NOT AN EASY RESOURCE TO COMMERCIALIZE. PRODUCING OIL FROM THIS KIND OF RESERVOIR IS LIKE FILLING A SANDBOX WITH MOLASSES AND THEN TRYING TO EXTRACT THE MOLASSES WITH A DRINKING STRAW. THE KEY TO DEVELOPING THIS RESOURCE WILL BE ADVANCES IN TECHNOLOGY AND THE NORTH SLOPE OPERATORS ARE WORKING ON THIS TECHNOLOGY AS WE SPEAK.

### **SHALE OIL:**

SHALE OIL DEVELOPMENT HAS CREATED A BOOM IN THE LOWER 48, FROM PENNSYLVANIA TO NORTH DAKOTA. SHALE IS USUALLY THE SOURCE FOR THE OIL THAT WE FIND IN CONVENTIONAL RESERVOIRS. NOT ALL OF THE OIL IS ABLE TO MIGRATE FROM THE SHALE INTO THE CONVENTIONAL RESERVOIR AND THIS RESIDUAL OIL IS THE TARGET IN SHALE OIL DEVELOPMENTS. IN SOME WAYS, THE GEOLOGICAL RISK IS LOW BECAUSE WE KNOW THE SOURCE ROCK IS THERE AND THAT IT CONTAINS OIL. THE BIG RISKS LIE IN WHETHER THERE IS ENOUGH OIL AND WHETHER IT IS MOVEABLE. THE ONLY WAY TO FIND OUT IS TO DRILL IT, EVALUATE IT, AND ATTEMPT TO PRODUCE IT. WE HAVE EXPLORATION INCENTIVES IN PLACE AND THESE HAVE ALREADY PIQUED THE INTEREST OF AT LEAST ONE SHALE OIL EXPLORER, GREAT BEAR.

### **GAS LIQUIDS:**

LET'S MOVE TO GAS LIQUIDS. DIFFERENT AGENCIES AND COMPANIES HAVE DIFFERENT ESTIMATES ON THE AMOUNT OF CONDENSATE ASSOCIATED WITH THE GAS IN THE POINT THOMSON FIELD, BUT IT'S AT LEAST 200 TO 400 MILLION BARRELS, NO MATTER WHO YOU ASK. THANKS IN PART TO THE RECENT SETTLEMENT OF THE PT THOMSON LITIGATION, THE PT THOMSON OPERATOR IS WORKING TOWARD A CYCLING PILOT PROJECT TO RECOVER THESE LIQUIDS AND SEND THEM TO TAPS. THIS IS ANOTHER EXAMPLE OF A KNOWN RESOURCE WITH AN UNCERTAIN

OUTCOME. WE KNOW THE CONDENSATE IS THERE; WE JUST DON'T KNOW IF CYCLING TO RECOVER IT WILL BE COMMERCIALY VIABLE. AND THAT'S WHAT THE OPERATOR'S PILOT PROJECT WILL DETERMINE.

**OCS:**

EARLIER I SAID THAT THE LEGACY FIELDS ARE ALASKA'S BIRD IN THE HAND. OCS OIL IS OUR BIRD IN THE BUSH. THERE IS SIGNIFICANT POTENTIAL TO MAKE A LARGE OIL DISCOVERY; OTHERWISE SHELL WOULDN'T BE SO PATIENT IN ATTEMPTING TO EXPLORE THERE. EVEN THOUGH SUCH A DISCOVERY WOULD BE IN FEDERAL WATERS, THE BENEFITS TO ALASKANS WOULD BE ENORMOUS – EVERYTHING FROM JOBS TO EXTENDING THE LIFE OF TAPS. OTHER THAN GEOLOGIC RISK, THE GREATEST OBSTACLE TO OCS OIL IS THE OBSTRUCTIONIST POLICIES OF OUR OWN FEDERAL GOVERNMENT. ALASKANS SHOULD CONTINUE TO EXERT INFLUENCE IN EVERY WAY POSSIBLE TO TEMPER THESE POLICIES.

**ANWR:**

SPEAKING OF OBSTRUCTIONIST POLICIES, NO DISCUSSION OF ALASKA PRODUCTION OPPORTUNITIES WOULD BE COMPLETE WITHOUT AT LEAST MENTIONING ANWR. NO ONE KNOWS WHAT THE TRUE POTENTIAL IS THERE, AND THE ONLY WAY TO FIND OUT IS TO DRILL. AGAIN, WE NEED TO CONTINUE TO EXERT INFLUENCE EVERY WAY POSSIBLE TO TEMPER

THE OBSTRUCTIONIST POLICIES THAT DENY US THE OPPORTUNITY EVEN TO ASSESS AND QUANTIFY THIS POTENTIAL.

**BEAUFORT SEA:**

BEAUFORT SEA OIL IS ALREADY BEING PRODUCED. NORTH STAR, ENDICOTT, AND PART OF OOOGURUK ARE ALL IN THE BEAUFORT SEA. THERE ARE LIKELY OTHER OIL DEPOSITS YET TO BE DISCOVERED HERE AND AT LEAST ONE SUCH EXPLORATION EFFORT IS IN THE PLANNING – LIBERTY. LIBERTY WILL BE IN FEDERAL WATERS, BUT A SUCCESS THERE WILL STILL REAP BENEFITS FOR ALASKANS. LIBERTY IS NOT WITHOUT ITS RISKS. LIBERTY IS PLANNED TO BE DEVELOPED USING ULTRA-EXTENDED-REACH DRILLING STARTING FROM THE ENDICOTT ISLAND AND TRAVELING OUT AND UNDERGROUND FOR SEVERAL MILES. THE SORT OF DRILLING REQUIRED FOR LIBERTY DEVELOPMENT PUSHES THE LIMITS OF CURRENT DRILLING TECHNOLOGY. FOR THIS AND OTHER REASONS THE OPERATOR IS WORKING UNDER A DECELERATED SCHEDULE – USING CAUTION TO ENSURE THAT THE TECHNICAL RISKS AND CHALLENGES ARE ALL ADDRESSED BEFORE WORK BEGINS.

**NORTH SLOPE GAS:**

THE LAST RESOURCE I WILL ADDRESS IS NORTH SLOPE GAS. I DON'T HAVE A LETTERMAN TOP TEN, BUT HERE ARE THE TOP TWO REASONS NOT TO ACCELERATE PRODUCTION AND SALE OF NORTH SLOPE GAS.

1. RIGHT NOW EVERY BIT OF KNOWN NORTH SLOPE GAS IS ASSOCIATED WITH AN OIL RESERVOIR AND EITHER IS OR WILL BE BENEFICIALLY USED TO GET MORE OIL OUT OF THE GROUND.
2. THE RULE OF THUMB USED TO BE THAT ONE BARREL OF OIL WAS WORTH SIX THOUSAND CUBIC FEET OF GAS. WITH OIL CURRENTLY SELLING FOR ABOUT \$120 PER BARREL AND GAS SELLING FOR ABOUT \$3 PER THOUSAND CUBIC FEET, ONE BARREL OF OIL IS WORTH ABOUT 40 THOUSAND CUBIC FEET OF GAS. USING THIS MATH, THE ENTIRE 34 TCF OF KNOWN NORTH SLOPE GAS IS WORTH LESS THAN HALF OF THE OIL LEFT IN THE PRUDHOE BAY OIL POOL. THEREFORE, WHY SELL GAS FOR THIS DECREASED VALUE, ESPECIALLY IF SELLING IT ALSO MEANS YOU'RE GOING TO GET LESS OF YOUR OIL OUT OF THE GROUND?

I WAS ALSO ASKED TO ADDRESS GTL. GTL IS JUST A WAY OF PACKAGING GAS. AND AT THIS TIME AT LEAST, IT'S THE MOST WASTEFUL WAY POSSIBLE. TO CONVERT THE GAS TO A LIQUID USING CURRENT TECHNOLOGY USES UP ABOUT 40 PER CENT OF THE RESOURCE. ENOUGH SAID.

THIS CONCLUDES MY PREPARED REMARKS. I'LL BE HAPPY TO TAKE QUESTIONS.