the majority of our proved developed properties. Proved developed reserves accounted for 47% of our total reserve base as of December 31, 2018. Assigning monetary values to such estimates does not reduce the subjectivity and changing nature of such reserve estimates. The uncertainties inherent in the reserve estimates are compounded by applying additional estimates of the rates and timing of production and the costs that will be incurred in developing and producing the reserves. We cannot assure you that our internal controls sufficiently address the numerous uncertainties and risks that are inherent in estimating quantities of natural gas, oil and NGL reserves and projecting future rates of production and timing of development expenditures as many factors are beyond our control. We refer you to "Our proved natural gas, oil and NGL reserves are estimates that include uncertainties. Any material change to these uncertainties or underlying assumptions could cause the quantities and net present value of our reserves to be overstated or understated" in Item 1A, "Risk Factors," of Part I of this Annual Report for a more detailed discussion of these uncertainties, risks and other factors.

In conducting its audit, the engineers and geologists of NSAI study our major properties in detail and independently develop reserve estimates. NSAI's audit consists primarily of substantive testing, which includes a detailed review of major properties that account for approximately 99% of the present worth of the company's total proved reserves. NSAI's audit process consists of sorting all fields by descending present value order and selecting the fields from highest value to descending value until the selected fields account for more than 80% of the present worth of our reserves. The fields included in approximately the top 99% present value as of December 31, 2018, accounted for approximately 99% of our total proved reserves and approximately 100% of our proved undeveloped reserves. In the conduct of its audit, NSAI did not independently verify the data we provided to them with respect to ownership interests, natural gas, oil and NGL production, well test data, historical costs of operation and development, product prices, or any agreements relating to current and future operations of the properties and sales of production. NSAI has advised us that if, in the course of its audit, something came to its attention that brought into question the validity or sufficiency of any such information or data, NSAI did not rely on such information or data until it had satisfactorily resolved any questions relating thereto or had independently verified such information or data. On January 16, 2019, NSAI issued its audit opinion as to the reasonableness of our reserve estimates for the year-ended December 31, 2018 stating that our estimated proved natural gas, oil and NGL reserves are, in the aggregate, reasonable and have been prepared in accordance with Standards Pertaining to the Estimating and Auditing of Oil and Gas Reserves Information promulgated by the Society of Petroleum Engineers.

Assets and liabilities held for sale are subject to an assessment of fair value which includes many key valuation estimates, inputs and assumptions including but not limited to: production forecasts, pricing, basis differentials, operating and general and administrative expense forecasts, future development costs, discount rate determination and tax inputs. In the third quarter of 2018, we recognized certain assets and liabilities as held for sale related to the Fayetteville Shale sale requiring a comparison of their respective carrying cost and fair value less costs to sell. Our full cost pool assets were excluded from held for sale accounting treatment as they are governed by SEC Regulation S-X Rule 4-10. The fair value of our gathering assets to be sold was estimated using an estimated discounted cash flow model along with market assumptions. The assumptions used in the calculation of estimated discounted cash flows included future commodity prices, projections of estimated quantities of natural gas reserves, operating costs, projections of future rates of production, inflation factors and risk-adjusted discount rates. We believe the assumptions used were reasonable.

Under full cost accounting rules, sales of oil and gas properties, whether or not being amortized currently, shall be accounted for as a reduction of the full cost pool, with no gain or loss recognized, unless such adjustments would significantly alter the relationship between capitalized costs and proved reserves of oil and gas attributable to a cost center. For instance, a significant alteration would not ordinarily be expected to occur for sales involving less than 25 percent of the reserve quantities of a given cost center. Judgments are required around the determination of whether a divestment is deemed significant. Such judgments include an assessment of the of the reserve quantities sold as compared to total reserve quantities and other qualitative and quantitative assessments of the relationship between capitalized costs and proved reserves. We did not recognize a gain or loss on the sale of our oil and gas properties as the divestment was deemed not significant. Please refer to Note 3 – "Divestitures" to the consolidated financial statements included in this Annual Report for further detail.

**Derivatives and Risk Management**

We use fixed price swap agreements and options to reduce the volatility of earnings and cash flow due to fluctuations in the prices of certain commodities and interest rates. Our policies prohibit speculation with derivatives and limit agreements to counterparties with appropriate credit standings to minimize the risk of uncollectability. We actively monitor the credit status of our counterparties based on their credit ratings and credit default swap rates where applicable, and to date have not had any credit defaults associated with our transactions. In 2018, 2017 and 2016 we financially protected 77%, 70% and 28% of our natural gas production, respectively, with derivatives. The primary risks related to our derivative contracts are the volatility in market prices and basis differentials for our production. However, the market price risk is generally offset by the gain or loss recognized upon the related transaction that is financially protected.