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Chapter 11

Oil and Gas Reserve-Based Lending


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Relative to other major industries, the oil and gas exploration and production (E&P) industry is a highly capital intensive industry. Not surprisingly, E&P companies utilise various financing tools to satisfy their capital demands, which vary based on numerous factors, including the credit quality of the borrower, the quality and maturity of oil and gas reserves and the physical location of such reserves. These tools include mezzanine debt, second lien term loans, unsecured high-yield bonds and synthetic lending structures, such as volumetric production payments and prepaid forward sales. The most common financing tool utilised by E&P borrowers, however, and the tool that is the subject of this paper, are “reserve-based loans” (RBLs) as understood in the US market.

Reserve-Based Loans and the Borrowing Base

RBLs typically take the form of a borrowing base revolving credit facility whereby lenders extend credit that is secured by liens on oil and gas mineral interests and related assets and rely, primarily, on the cash flow produced by the sale of hydrocarbons and, secondarily, on the sale of the underlying mineral interests for repayment. The most important feature of these facilities is the borrowing base, which represents the amount of credit that lenders will extend based on a subset of the borrower’s oil and gas assets, subject to a maximum commitment amount.

What that subset of assets excludes is as important as what that subset includes. For example, an E&P company may have an oil and gas acreage position for which it only has limited geological information. This “raw” acreage may represent a significant investment by the borrower, but will have no “borrowing base” value in a customary RBL, which only gives credit for “proved” reserves. Similarly, oil and gas reserves that are classified as “probable” or “possible” to reflect a diminished likelihood that oil or gas will be economically produced from these reserves are also given no “borrowing base” value. Within the universe of “proved” reserves, the customary RBL will risk adjust the various subcategories of “proved” reserves to limit advance rates, as described below, based on a number of variables assessed on a case-by-case basis. These variables include lease operating costs, reserve life and decline rates, the geographic location and diversity of the reserves and the quality of the hydrocarbon produced. Finally, equipment or personal property typically is given little, if any, borrowing base value.

As a general matter, a lender will assess the “present value” (or PV) of the future net revenue from the borrower’s interests in identified oil and gas properties using a 9% or 10% discount rate over the reserve life of such property. Future revenue will be based upon estimates of recoverable reserves, future production rates and future sales prices for the hydrocarbons being produced, net of identified costs of production. Future sales prices will be based on a “bank price deck” that will typically provide for prices for the relevant commodities that are below the then current market forward price curve to mitigate commodity price volatility. Where this price volatility is addressed through commodity price hedging agreements, lenders will use prices established in those hedging agreements in place of this bank price deck with respect to the hedged volumes. The amount of recoverable reserves and production rates will be provided in an engineering report or “reserve report”, which is a technical report prepared by a petroleum engineer.

Within the reserve report, proved reserves will be classified as “proved developed producing” reserves (PDP), “proved developed non-producing” reserves (PDNP) and “proved undeveloped” reserves (PUD). The present value of these three categories of proved reserves will then be given varying degrees of credit towards the overall borrowing base. For example, PDPs, the category of reserves with the highest certainty of recoverability, may be given borrowing base credit for 65% of their present value, while PDNPs and PUDs, may only be given borrowing base credit for as little as 25% and 10%, respectively, of their present value. A lender may further impose limitations on the amount of the borrowing base that PDNP and PUD reserves represent so that the concentration of borrowing base value attributable to PDNPs and PUDs is capped. Finally, it should be noted that other factors, such as the existence of other debt and its relative tenor and interest rate, can affect the amounts advanced. Consequently, given the various factors utilised in assessing the loan value of a pool of oil and gas assets, two borrowers with similar PVs but dissimilar assets may have very different borrowing bases. Likewise, two borrowers with similar PVs and similar assets, but different balance sheets, will likely have different borrowing bases.

Some RBLs may also contain an “over-advance”, “stretch” or “non-conforming” component to the borrowing base. This component represents an amount that exceeds the borrowing base value of the oil and gas properties that would result from the application of traditional underwriting processes. The stretch component may be justified as a decision to extend credit at a rate higher than ordinarily done on PDNPs or PUDs, provide credit for probable reserves, permit PDNPs or PUDs to constitute a larger share of the borrowing base than is typical or value other factors specific to the borrower such as there being collateral, other than reserves, that has significant value. The stretch component is typically documented as a separate tranche of debt within the RBL (with availability typically terminating within the earlier of (a) an interim period of six to eighteen months, or (b) an agreed upon event, such as the issuance of certain unsecured indebtedness) that is subject to higher pricing. In any event, it is commonly designed to be interim capital for the borrower, and the borrower is often subject to more restrictions during the period that the non-conforming borrowing base is outstanding.

Finally, certain credit facilities will opt for a more transparent, formula-based calculation that utilises predetermined pricing assumptions promulgated by the SEC or forward price curves based upon NYMEX futures prices. Such formula-based borrowing base calculations are most often seen in the context of term loan facilities with institutional investors who have fewer internal technical and engineering resources and may be more passive than traditional commercial bank lenders.

RBL Collateral and Title Diligence

In the US, state laws treat oil and gas mineral interests in place prior to extraction or severance of the mineral from the ground as real property. And, like any real estate, a mortgage or deed of trust is the instrument that is used to create a state law mortgage lien on such mineral interests. After extraction, the mineral and the related account receivable generated from its sale at the wellhead is transformed into a category of personal property governed by the Uniform Commercial Code (UCC) known as "as extracted collateral". As-extracted collateral is the combination of the hydrocarbon molecule extracted and the account receivable generated by its sale at the wellhead. Analogous to a "fixture", however, while this type of personal property asset falls under the ambit of Article 9, non-possessory security interests attaching to as-extracted collateral must be perfected by filing a UCC-1 financing statement affecting as-extracted collateral in the county where the wellhead is located. A UCC-1 financing statement filed with a Secretary of State of the relevant State (or other appropriate filing office) will not be effective to perfect the security interest created in the as-extracted collateral.

As oil and gas mineral interests are a species of real estate, RBL lending raises title concerns that are analogous to those raised in typical real estate lending. However, where a typical real estate loan may relate to a single property or relatively discreet pool of properties upon which diligence efforts need to be focused, because of the highly concentrated risk of title failure, reserve-based lenders can be more flexible in their diligence efforts depending on the relative concentration of value in their collateral pool and the corresponding effect of such concentration on the risk of title failure. As an example, consider an E&P company that owns a portfolio of oil and gas leases that numbers into the thousands, with no single well or lease representing a statistically significant percentage of the entire portfolio value. Given that title failure is rarely catastrophic (i.e. a total loss), the risk of simultaneous catastrophic title failure across this large portfolio of assets would be low and further mitigated if the assets have been producing without a title dispute for a long period of time. As a result, the cost-benefit analysis of undertaking a review of title of such a large number of properties may not be considered cost-beneficial. Accordingly, the procedure for diligence in lending to such a company might be an "audit" of the borrower's lease or well files for a number of high value assets and some other randomly chosen lesser value ones, recognising that the borrower's interest in ensuring that it has good title are aligned with the lenders' interests. However, where significant concentration of value exists and a higher risk of title failure is presented, reserve-based lenders may require additional diligence in the form of county level title searches and even updated title opinions from an oil and gas title attorney. With respect to oil and gas mineral interests, owner's or mortgagee's title insurance, however, is not commonly available in most states and is rarely required even where available. Finally, surveys of the surface estate related to the mineral estate are typically not relevant to the lender's analysis and are not required.

Another nuance of RBL lending is that, analogous to the turnover of inventory and accounts receivable, a borrower's portfolio of oil and gas assets will be constantly changing, whether by means of acquisitions, divestitures, depletion of old reserves, discovery of new reserves or revised reserve engineering. As a result, a lender will need to assess whether incremental title diligence is warranted on those new assets.

Notable RBL Structural Protections

The dynamic nature of the asset pool in RBLs requires that the lenders take a more active role in managing the loan credit than they might take for other types of facilities. As the portfolio changes, the reserve report and other engineering reports which the lenders initially analysed in making their credit assessment must be updated and re-evaluated at periodic intervals. These periodic reevaluations called "redeterminations" are done on a semi-annual schedule, causing some practitioners to refer to RBLs as "six-month deals". In addition to these scheduled redeterminations, it is also typical for the borrower or the lenders to have the ability to request redeterminations on an interim or "wildcard" basis or in connection with a significant event such as a major acquisition. Occasionally, in cases where a borrower is rapidly acquiring and developing proved reserves, a borrower may also be able to request quarterly redeterminations to reflect its development activities and make incremental capital available more quickly. At least one of the scheduled redeterminations in each annual period will require an independent approved petroleum engineer to prepare or audit the reserve reports. Increases to the borrowing base in connection with a redetermination will require the consent of all or nearly all of the lenders and decreases to, or the maintaining of, the borrowing base traditionally will require the consent of two-thirds of the lenders. A borrowing base may also be "adjusted" (distinguished from a redetermination by the absence of new reserve and other engineering reports) to exclude assets which are sold or which have title deficiencies, or to reflect the monetisation of a favourable commodity price hedging arrangement.

If, at any time, the total credit exposure under the RBL exceeds the borrowing base then in effect a "borrowing base deficiency" results. The existence of a borrowing base deficiency will typically trigger certain covenant limitations on the borrower and certain limited lender rights and remedies. The main ramification, however, will be mandatory prepayments in an amount equal to the borrowing base deficiency. Typically, this prepayment is not immediate, but due in one or more installments over a period ranging from 90 to 180 days (so that any borrowing base deficiency has been cured prior to the next scheduled redetermination of the borrowing base). This period enables the borrower to reduce its capital budget and use production proceeds to reduce the deficiency and/or pursue an orderly liquidation of assets to generate cash proceeds to repay the deficiency. Some RBLs will also offer the borrower the opportunity to cure a deficiency by supplying engineering reports on previously unevaluated assets so that credit can be given to those assets to supplement the borrowing base asset pool.

Hedging Covenants

Given that E&P companies are subject to commodity price volatility, it is not surprising that RBLs may include affirmative covenants requiring the borrower to enter into various commodity price swap agreements or utilise other hedging techniques to reduce exposure to this volatility. A typical hedging covenant will require the borrower, either as a condition to closing or within a short time period thereafter, to enter into commodity price hedging arrangements for an agreed upon minimum percentage of its projected production over an agreed period. Both the minimum volume and tenor will be based upon the incremental amount of borrowing base credit the borrower desires, or on a credit analysis of the borrower's "base case" cash flow for both debt service and budgeted expenses, including its forecasted drilling costs. These commodity swaps are typically entered into with the RBL lenders themselves and rank *pari passu* with the principal of the loans and are secured by liens on the same oil and gas properties constituting collateral for the loans. Hedging with RBL lenders is beneficial to the borrower and the lenders because it avoids the need to provide separate collateral to secure hedging exposure and reduces the borrower's liquidity needs. It also provides the lenders with knowledge of the credit profile of the hedge counterparties. In addition to minimum affirmative hedging requirements, RBLs typically feature negative hedging covenants limiting the maximum volume a borrower may hedge and a maximum tenor for those hedges. The goal of these limitations is to avoid speculative hedges and the adverse effect of having commodity hedges with notional volumes in excess of actual physical production.

Specific Oil and Gas Representations, Warranties and Covenants

Along with those provisions which practitioners expect in any credit facility, RBLs contain several other oil and gas specific provisions. The representations and warranties tend to focus on items related to oil and gas properties, with the borrower representing that it has good title to the properties evaluated in the reserve report, that all wells are drilled in compliance with any governmental requirements and that the properties are free of any material environmental issues. Another common representation is that the borrower has no material gas imbalances, which are discrepancies that result from a difference between the amount of natural gas being taken by one working interest owner over the volume to which it is contractually entitled. Similarly, the borrower typically represents that it is not party to any contract such as a "ship or pay" contract or volume or throughput guarantee (in favour of midstream assets such as a pipeline or processing facility) requiring the borrower to utilise and pay for capacity on the pipeline or at the facility, whether or not hydrocarbons are actually physically transported or processed. In general, these representations may be viewed as diligence mechanisms designed to help lenders understand arrangements that would impact their determination of the borrowing base. Negative covenants restricting the borrower from entering into marketing contracts or engaging in marketing activities in respect of hydrocarbons produced by third parties, or from entering into contracts for the purchase and/or sale of hydrocarbons of third parties where the producer takes commodity price risk on volumes to which it is not itself producing are also common and meant to give the lenders comfort about the nature of the borrower's business activities. A RBL will also contain affirmative covenants that require the borrower to deliver certain types of information relating to its oil and gas assets to assure the lenders that the collateral is being adequately maintained and to assist in the regular evaluations conducted in the context of the reserve report. These covenants include delivery of production information on a periodic basis, lease operating statements, reserve reports in connection with the semiannual redeterminations, title information in connection with the delivery of reserve reports and lists of buyers who purchase hydrocarbons from the borrower. Additionally, a borrower will be subject to affirmative covenants which require it to operate and maintain its oil and gas properties in accordance with typical industry standards.

Conclusion

RBLs continue to be the predominant senior capital funding tool for E&P companies. The flexibility that this tool provides to both the borrowers and the lenders creates an instrument conducive to the various risks inherent in the oil and gas industry and the use of oil and gas reserves as collateral.

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Matthew recently represented Templar Energy, a First Reserve portfolio company, in connection with its $300 million revolving borrowing base facility and its $700 million second lien facility to finance its acquisition of oil and gas assets. In addition, he represented JPMorgan Chase Bank, N.A., in connection with a $2.0 billion revolving borrowing base facility for Exco Resources, Inc. in connection with its acquisition of oil and gas assets.

Matthew received his J.D. from University of Virginia School of Law in 2005, and was on the Editorial Board of the *Virginia Law Review*, and his B.S. from Columbia University in 2000 in applied mathematics.

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