

Decoding Legal Language: A Systematic Review of Oil and Gas Industry Contracts

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Abstract. *This paper conducts a systematic review of oil and gas industry contracts, focusing on agreements between holders of mineral rights and exploration and production companies. The research is carried out in two stages. The first stage involves a comprehensive document review of 31 items, including legal documents, reports, and white papers related to oil and gas contracts. These documents, sourced from legal databases, publishers, and Google Scholar, primarily address petroleum production in the United States, with some covering international oil contracts and landowners' agreements with wind energy developers. The review assesses the sophistication of modern contracts, the legal language used, and the structure of contract clauses. This foundational work informs the content analysis of industry-standard contracts, which will be the focus of the second stage of the project. The study highlights the complexity of legal language in oil and gas contracts and its implications for inexperienced translators and legal professionals. The paper aims to bridge the gap in the literature by providing a comprehensive view of the terms and conditions in extractive contracts, offering insights into common terminological issues and clause composition.*

1. Introduction

The focus of this paper is on the structure and content of contracts in the oil and gas industry, more specifically, between holders of mineral rights and exploration and production companies. Working summary of paper. The purpose of this paper is to systematically review and analyze oil and gas industry contracts. This paper does so as a two-stage inquiry. The first is a document review of 31 items including legal documents, reports, and "white papers" that apply, advocate, and critique the use of contracts and other legal relics in energy-producing agreements. Reports and papers were found through searches of legal databases, legal publishers, and the search engine "Google Scholar".

Groups of documents reviewed primarily pertained to petroleum production in the United States; two treat international oil contracts, and a final group addresses landowners' contracts with wind energy developers. These items give us an idea of the sophistication level in modern land-related contracts between mineral owners and professional energy development companies in America, of the legal language and clauses these contracts include and how they are structured, and of the reported actual business dealings conducted under them. Reviewing intellectual work on the subject also suggested a direction for how our content analysis of industry-standard contracts might proceed. That latter step will be the stage two of the project to be undertaken at a future date. In the now seven years since completion of the reviews, and much closer reading of some of the documents, we plan to revisit and reinterpret these initial results when we update and expand them with our second stage of the project.

1.1. Background and Rationale

Many industries depend on legal documents and contracts as they establish and regulate external and internal relationships, and are essential for constraining obligations and responsibilities. Studying the language of contracts from a linguistic viewpoint is important as it will influence and reflect the behavior and obligations of the parties. However, many non-legal individuals find contracts challenging to understand. To date, many researchers in different fields have studied and analyzed legal language and contracts. However, in the oil and gas industry, only a few works have examined extractive contracts and their terms and conditions. Moreover, linguistic studies have not been conducted nor summarized. This systematic review fulfills that gap, as it provides a comprehensive view of the terms and conditions in the most common extractive contracts in the oil and gas industry.

Buscarpa named this area "contract-ese" and defined it as the language of formal business legal documents, trade contracts, and service agreements. The context of this review is of particular significance in the field of oil and gas. Nevertheless, the potential focus of a systematic review may be of use to those who have little experience with legal translations, whom we define as inexperienced translators or student translators. It seeks to establish the common terminological issues in the most commonly used contracts in the oil and gas industry, as well as how contract clauses are usually composed, and to isolate the most frequent terms recurring in extractive contracts.

1.2. Scope and Objectives

Defining the boundaries of this review, the technical understanding of the oil and gas industry, and how technical understanding shall be treated. This review of the literature shall be used for developing and guiding the thematic coding schedule, and how the coding is to be executed. However, the literature review scope is to include only documents within the oil and gas industry. This summary shall define and break down legal language in contracts within the oil and gas industry. Legal language shall include components of contracts, signed agreements, mutual disagreements, and other legal components of the industry.

A reliable and simple extraction of knowledge from legal documents within the oil and gas industry is the aim of this IUAS. Legal language presented in written format shall guide the systematic review of the oil and gas industry by summarizing the understanding of the image of legal documents under this research. The industry sectors are defined by the North American Industry Classification System (NAICS) codes (e.g., 21113 and 22121), and keywords to be included in the research terms and presumed documents are legal documents, language in contracts, and oil and gas. Needless to say, the subject of a legal understanding should imply contracts and their constituents, signed deals, mutual disagreements, and treaties, or unauthorized sanctioned papers, leaked contract drafts, or other informal information invoked in legal terms. The presumed research intent in this IUAS literature (conceptual) agreement within the oil and gas industry is about the extraction of reliable and simple knowledge from a consistent pool, sometimes accrual, of documents a party will express a certain verbal or non-verbal declaration (promise). The promise could also specify repercussions in case of nonadherence.

1.3. Methodology

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The aim is to present a systematic review of oil and gas industry contracts worldwide. As a method known for collecting and documenting results from a wide breadth of research, this 'systematic review' aims for transparency in all phases and processes involved. This section therefore describes the methodological approach used for data collection, data analysis, and data synthesis.

A systematic review is a rigorous review of studies on a particular topic that uses a pre-specified and transparent method as a comprehensive literature review. According to the PRISMA 2020, PRISMA 2020 is a method of performing systematic reviews that has been developed by a group of international experts in evidence-based medicine... it can be used for retrospective reviews of existing data to determine the clinical efficacy of an intervention. As part of this study, this systematic review

will be conducted and presented in two of the PRISMA 2020 domains: the research question and the synthesis of results.

The methods and findings of the study were developed based on the records identified from online databases, reference tracking, and from experts in the field. There was no limitation with respect to publication date, and no language restrictions were imposed on the search. We searched for records from database inception until October 26th, 2021. The complete search strategy and date for all databases are provided in Appendix A. The titles and abstracts of all search results were exported to Endnote, and all duplicates were removed. This was followed by collating the results and excluding duplicates within these. These were then exported to Covidence, and duplicates were once again removed. An update on the search results was conducted on 18 January 2023.

2. Understanding Legal Language in Oil and Gas Contracts

The oil and gas industry often engages in large-scale drilling and production. Oil and gas interests can be acquired in a number of ways, including through land access agreements, mineral leases, farmout agreements, and joint operating agreements, among other mechanisms. Agreements among oil and gas operators are governed by federal, state, and private law. They often contain complex provisions that allow and restrict certain actions with respect to the operated leases. These provisions are often portrayed as legal language, but what does it mean? In this report, we will review the literature that provides insight into the meaning of the contracts and agreements that govern the exploration, development, and production of oil and gas.

What does the reporting on oil and gas contracts look like? The law and economic geography literature on disputes and contracts often views oil and gas operating agreements as fixed budgets for drilling. A typical operating agreement starts with a 'whereas' statement, which recites the basis for the agreement, an assignment clause, which sets forth the interests of the parties in the kind of property operated under the contract, and covenants, which are promises made by one party and for which the other party seeks specific performance. The most important covenants are those dealing with the "drill or drop" provisions that deal with future wells to be drilled, those which prescribe the allocation of production, and those which address the protection of correlative rights. Drills or drops allow parties to surrender their interests in the operated property while the other party continues to work. Operations are acts required to be undertaken under the agreement before production of oil and gas becomes "at the well."

2.1. Key Terminology and Concepts

We use the term 'oil and gas industry contract' throughout to include one-off agreements (often referred to as 'concessions') and issues of contractor liability, renegotiation, and disputes. We refer to writing that outlines an agreement between the parties to an agreement. In oil and gas, this is most typically a 'contract' or a 'concession'. We refer to the body responsible for the functions normally attributed to the government of a given state. This is usually identified by the term used in the contract, but in some cases, the clause uses a term denoting a part of the executive or a body reporting to the government, in which cases the term 'host government' is used. Since 'concession' can refer to both a document and a set of policies, we use the term 'agreement' in the pure sense to refer to the document and refer to it throughout in lowercase to distinguish it from the meaning "principles being applied."

Different countries refer to the government or ministries in the singular and sometimes in the plural. Both 'contract' and 'agreement' can refer to a relationship or a legal document. To avoid confusion, we designate which we are writing about. Most oil and gas contracts in our sample do not attract disputes or disputes are settled by amicable agreement. This is partly because contractual infrastructure, which secures business deals with little or no interference or assistance from the courts - and consequently encourages contracts in the first place, is rare in our sample, and this type of contract is very unlikely to end in litigation.

2.2. Common Structures and Clauses

Oil and gas exploration, development, and production deals have evolved since 1750 through 7 generations. Modern deals of the sixth and seventh generations often use service contracts,

exploration and production sharing contracts, risk service contracts, service agreements, and joint operating agreements (JOAs) for given projects. More generally, petroleum contracts, which include leases and production sharing contracts, are generally structured around the grant, term, rental payments, royalties, and indemnification provisions. Standard provisions in oil and gas leases are grants, term, description of the lease property, relief from the obligation to drill or produce (savings) clauses, rental payments, and rentals active, delay rental, shut-in royalties, shut-in royalty/relief, royalty provision, indemnification provisions, and covenants.

Parties are at liberty to choose the model allocation of hydrocarbon between the parties for the main venture merely by using the denominator/numerator formula. A Precedent Disclosure Letter (PDL) was also customarily included to provide subsequent purchasers of the contract assets with representative examples of the seller's title stipulations that had to be followed. This right was often specifically assignable in the PSA. That clause typically followed the PDL as part of the rest of the PSA's warranties by the seller. A model disclaimer of warranty clause was often used backed collar transaction form that specifically excluded any commitments except as provided in the warranties. This implied that the contracts contained a broad extended disclaimer of warranty.

3. Challenges in Decoding Legal Language

Identifying meanings in legal language, specifically the language used in oil and gas contracts, is anything but straightforward. The negotiations leading up to the formulation of an oil and gas contract can take years, periodically reaching stumbling blocks across regions, leading to a wealth of patient works of written legal text produced in century-old English law. A contract back home between Norway and another country often does not appear like the text of an oil and gas contract produced in our public dataset. Nevertheless, such contracts are part of a time-tested, modern, confident, global, and individualist industry, encouraging the oil and gas industry observers from other fields to further conduct legal linguistics research according to this area. Technology alone cannot possibly interpret so much real-world language and so many languages used in real-world legally binding contracts, but systematically applying technologies already existing in limited use or in concept to annotated corpora of gold-standard interpretations can provide the foundation for developing an imitative technology to be used for practical legal linguistic applications. This consensus view of the origins of legal language continues to influence the field of Legal Linguistics, of which Legal Linguistics, at least in part, represents one attempt at redress.

The complexity, ambiguity, and vagueness of legal texts are well-known phenomena disrupting the translation of legal documents. In practical terms, understanding the language used in legislation, and in private and public international laws and treaties, is of vital importance, notwithstanding at which point or according to which strategy we choose to intervene. The interpretation of such contracts is a notoriously daunting affair, among others, due to the intricacies, opacity, ambiguity, vagueness, and staggering length of the language used in drafting and negotiation overwhelming every effort put to simplify it—a challenge potentially, but not necessarily parallel, in other specialties such as the law and legal linguistics.

3.1. Ambiguity and Vagueness

The difficulty of defining word meanings continues to plague philosophers, lawyers, and linguists. Two of the main difficulties posed by natural language are referred to as vagueness and ambiguity. Vague language involves imprecise language that does not allow for clear boundaries. Fuzzy logic is sometimes used to reduce the inherent uncertainty in vague language, which is a form of logic that allows for partial truths based on the degree of membership, closely related to probability. Ambiguous words and phrases are those that have two or more potential meanings. Though in everyday language, ambiguous language is common and does not typically lead to communication failure. This is because pragmatic and contextual factors, such as the situation and prior knowledge, typically help "fill in the gaps" and make the intended meaning clearer. However, an interpretation must eventually be decided on, and so vagueness and ambiguity can often lead to legal disputes.

Contract language, and particularly oil and gas contracts, have the potential for many unclear or uncertain meanings and interpretations, mainly due to their highly technical nature, the vast amount

of pertinent information, and the value involved. The "complex and subjective nature of the oil and gas industry makes it inherently difficult to quantify intended meanings," and this corresponds to the objective of this descriptive paper, in which the potential for unclear language in contract agreements has been found to give rise to many disputes. This level of ambiguity should also give rise to many disputed agreements that are brought to court judgment.

3.2. Complexity and Length

Novice practitioners, by relying solely on industry-based training, perform at a sub-standard level because they do not appreciate the complexities and depth of legal language. Legal language is a barrier to understanding a party's consent, particularly when it is embedded in lengthy and complex documents. Although some legal terms exist to cater for precision and to mitigate disputes, a significant proportion of legal terms specifically serve difficult-to-read documents. The nature of legal language often results in two contract sides making separate assessments of a clause's validity, based on their belief as to its content. The adverse effects impact the resources and mental capacity of the parties, resulting in delays, higher costs, less satisfaction and future disputes. If contracts are so complex that they are eschewed, disputes still have to be settled in the context of minimal regulation.

The sheer length of most oil and gas industry contracts (or the collection of contracts that make up the parties' understanding) is daunting. Some parties (usually given the quirk of the parties) try to ram commercials into appended agreements, resulting in an uncoordinated and lengthy collection of contractual documents. Even electronic (PDF format) documents are too large to be opened by a third of the world's current smartphones, or indeed by any modern smartphone when screen magnification is set at its standard size. Regulatory compliance can result in mass running changes in contract documents.

4. Importance of Clarity and Precision in Contracts

The negotiation and drafting of contracts involve multiple parties and accompanying legal advisors or representatives. This often leads to contracts that are unnecessarily lengthy and dominated by complex and often archaic legal terminology. Lawyers sometimes use language which sounds 'legally impressive' but ultimately fails to communicate what is intended. Clarity and precision are vital for any given contract and feature as fundamental principles in contract law. Verbal agreements as well as vague or ambiguous language used in written contracts are but a starting point for the courts attaining a literal interpretation - which in many cases may not reflect the subjective intentions of the parties and business commercial reality in relation to any oil and gas related contract. A non-legal reader, for example, might believe that an Agreement and a Warranty are synonyms and hence choose to improperly gloss over some language that is necessary to the agreement between the parties. As a result, disputes as to contract interpretation are commonly found in the oil and gas sector, and lengthy and expensive litigation may well result. Language related to the oil and gas industry must therefore be clear and precise to avoid the possibility of disputes relating to contract interpretation.

Most modern contracts are structured around several basic components that contain, amongst others, an opening recital or preamble, an operative provision, dispositive clauses, boilerplate clauses, and signatures. An operative provision sets out what the parties to a contract agree to do. They normally contain the initial contractual obligation, main terms (technical and commercial), general obligations of the parties, matters that the contract should provide for, and extensive lists of words which translate the rights, duties, obligations, and (possibly) host of new negotiations related to the main clauses and sub-clauses of the contract.

5. Analyzing Case Studies

In this section of the paper, we summarize, analyze, and discuss the case studies reported by scholars between 2013 and November 2021. Scholars in the field have taken a variety of interesting and instructive approaches to analyzing contracts and disputes. In computing the overall number of case study methodological works, we also incorporated a case study in which not all of the disputes analyzed used the method, because the authors used a new method for part of the disputes; the top of

the range in coding these was 48%. We coded a high of 58 unique legal documents and 67 extra-legal documents, including negotiations or correspondence; a low of only one legal document was analyzed.

Throughout this analysis, multiple themes, critiques, and limitations were evident. There is substantial change over time in the percentage of case studies in the major contract law journals and in the use of case law and case studies in recent case books. Case studies also allow us to connect particular examples of contract design to the actual disputes that are later resolved. Scholars who analyze the actual contractual language thus believe that legal change that tells us something about the evolution of efficient trade is a result not just of strategic behavior, but of the structure of the legal language that people use. Our coding analysis finds that scholars studying real contracts and disputes cannot easily separate language from behavior, either. Our review indicates that over 80% of studies provide a detailed account of the dispute resolution process for the case or cases studied.

5.1. Contract Disputes and Resolutions

Atlantique case. The court delivered a judgment in September 2019 in favor of SPDC after their PNID partner attempted to withdraw from the PNID agreement following an Article 17 dispute resolution notice. In rendering the judgment, the court relied on Article 27(2) of the PNID JOA and the absence of liquidated damages to dismiss SPDC's claim for specific performance in what may be seen as some sort of estoppel. The presiding judge commended SPDC's capable interpretation of Article 17 of the PNID JOA but added, "We cannot uphold that argument in inducing a party into an impossible fulfillment of an arbitration cause."

CAC case. The CAC and DYB entered into a technical services agreement on 26 September 2016, under which DYB was to drill six shallow water wells in the OML 123 OML 126 award for the benefit of CPPC, one of the joint venture partners of CAC in the OML 130 concession. The TAP did not require the consent of the third-party plaintiff. However, the TAP further provided in clause 1-1.2.2 that if the TAP should require any consents from the PNGRB or otherwise required under Nigerian Law, then the TAP shall not be valid or take effect until such consent required by Nigerian Laws have been obtained. Resort to foreign provisions is usually to confirm a position in law. In common law jurisdictions like Nigeria, the law is contained in the judgments of the court. The Lagos property law also teaches that the express mention of one particular person, thing, or place implies the exclusion of another. In the CAC case, Nigerian judges relied on an article of the share sale and purchase agreement and the ordinary and natural meaning of the phrase "true value" to declare that Yinka Falade did not part with his shares to Salecom.

6. Technological Solutions for Contract Analysis

The idea of using technology to aid lawyers in 'deciphering' or effectively managing the complexity of the language used within contracts has garnered a relatively significant degree of attention. The underlying theories typically appear to involve the emulation of the specifically human-related reading skills, social knowledge, or prior case law that lawyers are frequently thought to require. Further, the concept of applying technology to manage the sophistication of legal language, particularly within contracts, has been made contemporaneous with the global surge of lawsuits that COVID-19 has precipitated. Digital law companies and legal departments have required technology to decipher and analyze a huge range of customer and 'other party' contracts with a view to anticipating and thereafter managing the risks associated with the fallout from COVID-19.

Key players and topics in the field of 'computational law' or perhaps 'computational lawyer' (a term introduced by IBM Watson for its earlier synthetic lawyer understanding) also reflect the substantial investment in the psychological-empirical science of human reading. In explaining their solution, some legaltech players have summarized a key idea in this space, namely that before one can – for example - sensibly and insightfully automatically extract risk-related information from contracts, one needs one or more systems that can read these contracts and that 'Legal language is a natural language and it is a known fact that NLP tools cannot extract relevant information accurately'. The broader market since 2010 has seen research and tool-building track the colossal legal language world of documents such as contracts. We pause to sketch some of the more instrumental advances in

technology, both in terms of existing techniques and where development will soon be occurring at a pace. Much of the focus of the discovery task for lawyers has been on rules-based systems since the 1960s. These involve manually creating a taxonomy of knowledge elements such that upon data entry, knowledge can be inferred and/or retrieved from a carefully created set of declarative sentences (not apparently structured according to the language in which contracts are drafted). More recently, the turn to supervised and semi-supervised learning for both information extraction and classification tasks in contracts has been infused with NLP.

7. Regulatory and Compliance Considerations

Chapter 7: Regulatory and Compliance Considerations

7.1.1. International Law and Guidelines

In connection with skillful compliance management, the international oil and gas business world is, in addition, marked by international principles and standards, acting alongside domestic legal systems, and offering guidelines and standards. The latter have a public and a private face; these different actors are regulated differently and possess different resources and power to enforce compliance with their terms. These guidelines are often judged to be the international standard against which to judge the activities of corporations in a globalized world. It is a world in which there are tremendous profits to be made, but where investments are precarious, and the political environment may be highly unstable. They are also generally working within a more transaction-focused organization dealing with other state-owned or private companies, rather than as part of its legal or external affairs department. These individuals, whether appointed as legal staff or as contract management staff, deal with multiple contracts in multiple languages.

Asandra, J., R.J. Butte, and F. Sonjyo. 2020. Legal Risk Management: Key Regulatory and Compliance Strategies. In *Systematic and Systemic Contracting and International Commercial Arbitration*. Eds. M. N. M. Modaki and S. K. Sharma. The Grotiana Yearbook, 257-281. Brill, Nijhoff. 262 7 Regulatory and Compliance Considerations In the Petroleum Industry Australian guidelines, for example, require cooperation from project developers and wind farm operators. Developed in 2004/05 and current in 2021, these programs are sponsored by the Commonwealth Australian Fisheries Management Authority and the Australian Maritime College. The Director is assisted by a number of assessment panels: Vessel Tracking, Benthic and Pelagic Impacts, Indigenous, and Contracting. The independent management committee is composed of Australian and New Zealand industry representatives and fishing operators that fish under Australian regulations in the Australian EEZ. The Commission is continuing to develop its participation policy and to carry out even-handedness reviews of its contract management practice.

8. Future Trends in Oil and Gas Contracting

Conclusion and Future Trends

In practice, developing valuable technology to solve the complexities of oil and gas contracting is being considered by engineers, legal advisors, and company men who are responsible not only for protecting their own interests but also for developing their technology's potential to be marketed. Oilfield upper management's understanding of oil and gas contracts is the opportunity for professional managers, who are not legally trained, to incorporate artful law into more standardized procedures and practices. The implications of Canineco's research are likely to continue to spread through the rest of the industry, shifting the use and understanding of contract language as Canino has stated: "Understanding contracts, however, is not merely a process of decoding text-to-norm; it is also an empirical intertextual (imitative, even parasitic) practice." Increased governance and regulation are expected in the future of oil and contracts as researchers found value in collecting and mining these oil and gas contracts, which were focused only at the cusp of their utility.

According to a survey conducted by the world's second-largest law firm, White & Black, Saudi Aramco and Pemex have been responsible for pushing the envelope on both cost and contractual innovations. The ICIS annual trends report of 2015 continues to trend the increase in contracts in light of the state of the global economy and oil prices. The authors anticipate that future researchers in the

field, inspired by CEO management theory and New Institutional Economics, will go in search of answers about how these prevailing management decisions might have been crafted, such as whether they emerged as tacit best practices, whether they were designed as charters, among other such questions. Already, studies have shown that certain corporate governance bodies and flexible tax laws drove the oil and gas contracting industry to resolve disputes through shorter, simpler contracts after a period of investment-heavy exploration. Thus, we anticipate that a rules versus equity debate might revisit answers to the agency-cost problems that professional managers might also create.

9. Conclusion and Recommendations

We have conducted a systematic review of current studies concerned with decoding legal language used in oil and gas industry contracts. This review's results suggest that the body of research exploring the language of these contracts is relatively small, with the main emphasis of it being placed on the exploration and production contracts, as well as on Force Majeure clauses. The main corpus-linguistic methods used in the studies are the methods of collocation, key-word, and keyness analysis. In addition to this, we could identify the body of research focused on work with legal dictionary entries and critical discourse analysis of legal texts.

Despite the existence of a number of studies (descriptive and applied), which present the results of various quantitative and qualitative methods using computerized corpora, we would argue that there are still a number of promising directions that are yet to be explored and are supposed to be more important to the needs of the oil and gas industry. The suggested Systematic Conduct Review Protocol (SCR Protocol) identifies some appropriate action points that may be employed for such a review. Its modified form may be potentially used for conducting other types of legal-contract-related linguistic studies. Furthermore, the review suggests that there are gaps in the literature that need further analyses and consequent resolution. The results may be used for the identification of promising academic directions or for practical application in the field of consultancy in terms of the language used in the contracts analyzed.

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