Terminology Solutions for Kazakh Translators in the Oil and Gas Industry

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Submitted in partial fulfillment of the requirements for the degree of

Master of Arts

In

Translation Studies

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School of Liberal Arts

May 2021

Word Count: 15,752

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Abstract

The research is devoted to oil and gas translation, an area of translation that is highly relevant to Kazakhstan, a country with the oil and gas industry being one of the leading industries in the economy. As part of this research, the survey was conducted of practicing translators working in the field of oil and gas translation in the English-Russian language pair. The survey was based on open- and close-ended questions. The purpose of the survey was to learn about the terminology problems which practicing translators in the field of oil and gas encounter in their work in this translation area of translation, as well as to collect terminology resources to overcome such identified problems. More than 50 practicing translators took part in the survey, and their responses were used to identify the most common terminology challenges and resources based on their reliability. The research resulted in a formation of a practical step-by-step guide, which defines the process of searching for the definition and translation of oil and gas terms. This guide outlines the process of dealing with oil and gas terms using specific resources. This guide and the resources listed therein will help to get introduced to the topic and delve deeper into its terminology, as well as to ensure accurate translation of oil and gas terms. The results of this research will be relevant for practicing translators, specialists working in the oil and gas sector, pursuing to achieve a more profession-oriented English level, and for students and teachers of translation studies programs.

Аннотация

Исследование посвящено нефтегазовому переводу – области перевода, весьма актуальной для Казахстана, страны, в которой нефтегазовая промышленность является одной из ведущих отраслей экономики. В рамках данного исследования был проведен опрос практикующих переводчиков, работающих в области нефтегазового перевода в языковой паре «Английский-русский». Опрос проводился на основе открытых и закрытых вопросов. Целью опроса было узнать о терминологических проблемах, с которыми сталкиваются практикующие переводчики в области нефти и газа в своей работе в данной сфере перевода, а также собрать терминологические ресурсы для преодоления выявленных проблем. В опросе приняли участие более 50 практикующих переводчиков, и их ответы были использованы для выявления наиболее распространенных терминологических проблем, а также ресурсов, на основании их надежности. В результате исследования было составлено практическое пошаговое руководство, определяющее процесс поиска определения и перевода для нефтегазовых терминов. В данном руководстве описывается процесс работы с нефтегазовыми терминами с использованием конкретных ресурсов. Данное руководство и перечисленные в нем ресурсы помогут познакомиться с темой и углубиться в ее терминологию, а также обеспечить точный перевод нефтегазовых терминов. Результаты данного исследования будут актуальны для практикующих переводчиков, специалистов, работающих в нефтегазовом секторе, стремящихся достичь более профессионально ориентированного уровня английского языка, а также для студентов и преподавателей переводческих программ.

Аңдатпа

Зерттеуіміз Қазақстан үшін өте өзекті жетекші өнеркәліптің бірі мұнайгаз аудармасына арналады. Осы зерттеу аясында «ағылшын-орыс» тіл жұпында мұнай-газ аудармасы саласында жұмыс істейтін тәжірибелі аудармашыларға сауалнама жүргізілді. Сауалнама ашық және жабық сұрақтар негізінде жүргізілді. Сауалнаманың мақсаты аударманың осы саласындағы жұмыс барысында мұнай және газ саласындағы тәжірибелі аудармашылар тап болатын терминологиялық проблемалар туралы білу, сондай-ақ анықталған проблемаларды меңгеру үшін пайдаланылатын терминологиялық ресурстарды жинау болды. Сауалнамаға 50-ден астам тәжірибелі аудармашылар қатысты және олардың жауаптары неғұрлым кең таралған терминологиялық проблемаларды, сондай-ақ олардың сенімділігі негізінде ресурстарды анықтау үшін пайдаланылды. Зерттеу нәтижесінде мұнай-газ терминдеріне анықтама мен аударманы іздеу процесін анықтайтын практикалық қадамдық нұсқаулық жасалды. Бұл нұсқаулықта нақты ресурстарды қолдана отырып, мұнай-газ терминдерімен жұмыс істеу процесі сипатталған. Осы зерттеудің нәтижелері ағылшын тілінің анағұрлым кәсіби бағдарланған деңгейіне қол жеткізгісі келетін тәжірибелі аудармашылар, мұнай-газ секторында жұмыс істейтін мамандар үшін, сондай-ақ аударма бағдарламаларының студенттері мен оқытушылары үшін өзекті болады.

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Chapter 1: Introduction

Relevance

In the era of the 21st century, the oil and gas industry is not just one of the leading sectors of the world economy, but also an instrument in international relations. Political and economic significant of the oil and gas industry has increased in the world against the backdrop of oil becoming the major type of energy. According to the data provided in the article of Kazakhstani news portal *Kursiv.kz*, "in 2019, 90.4 million tons of oil were produced in Kazakhstan" ("How much oil was produced in Kazakhstan last year", 2020, para. 1). Considering this figure, as well as that "oil production accounts for 17% of Kazakhstan's GDP" and "90% of the 30 largest companies in Kazakhstan operate in the field of oil production", the significance of the oil and gas sector in Kazakhstan is indisputable ("How much oil was produced in Kazakhstan last year", 2020, para. 3).

The reserves of oil and gas resources in own territory, the ability to export own products, determine the success of economic and social development of world's states, as well as allow them to establish economic and political contacts with other states. In this term, Kazakhstan being an oil-producing country has succeeded in establishing international contacts. Today, according to the data provided by one of the major Kazakh oil and gas companies, KazMunayGas, Kazakhstan is one of the world's 15 leading countries, with about 170 oil fields that are located in six of fourteen regions of Kazakhstan, which account for 3% of the world's oil reserves ("Oil and gas sector", n.d., para. 1). The fields discovered in the territory of Kazakhstan, including onshore and offshore ones, are developed by Kazakhstani companies in cooperation with international oil and gas companies such as Royal Dutch Shell (Anglo-Dutch), Eni (Italy), Chevron (United States), British Petroleum (Great Britain), Exxon Mobil Corporation (United

States), LUKOIL (Russian Federation), CNPC (China National Petroleum Corporation, People's Republic of China) and so on (“Oil and gas companies of Kazakhstan”, n.d.). This means a constant exchange of information, which is carried out between Kazakhstani and international companies mainly in English.

Given the above, oil and gas is one of the most demanded areas in the Kazakhstani market of translation services, both in written translation and oral consecutive and simultaneous interpretation. However, the specifics of this field and the complexity of terminology make it difficult for translators to provide adequate quality translation, requiring an understanding of numerous processes of the industry, from exploration of potential oil and gas fields, production, transportation, to refining. Understandably, translators need reference materials and glossaries to navigate in terms and concepts used in this field. In this regard, there is a need for high-quality terminology solutions corresponding to the needs and demands of the industry.

Moreover, with the development of the oil and gas industry, the language used in this sector of the economy develops and evolves. All this is accompanied by the emergence of new technologies, processes and materials in this industry, which, in turn, leads to the emergence of new terms, neologisms, and professionalisms. The operation of oil and gas companies, field development, production and processing, all these processes include constant cooperation with foreign partners, which entails huge volumes of materials that require high-quality translation into the languages of cooperation, Russian, English, Kazakh. In such conditions, a dialogue arises between experts from different countries, which must take place at a high level, and this, in turn, depends on the correct and adequate translation.

That is why in modern linguistics it is important to develop the direction of scientific and technical translation, which will contribute to the correct and adequate transmission of texts of a technical orientation with the emphasis on field-specific terminology.

Research Problem and Questions

The problem that served as the basis for this research is the lack of coverage of this topic in the researches on translation studies, which was revealed during the literature review. Oil and gas translation is a very extensive and complex direction, which is not taught in all higher education institutions and it is very difficult to start working in this area right away after graduation without taking specialized courses. It is problematic to immediately understand the terms and concepts behind them. Helpful and reliable sources are hard to find. This study is aimed at solving this problem, identifying the main terminology challenges in the field of oil and gas translation and identifying the most relevant, reliable and useful terminology resources.

In the process of reviewing the domestic and foreign literature on the topic of oil and gas terminology resources, self-instruction aids for translators and oilmen by Indira Serikbay were found which describe the main processes existing in the industry. This is a good source of information and it is very valuable for translators working in this field. But it is safe to assume that few translators are aware of the existence of this practical textbook. This textbook was found during the literature review on the topic of the study and not during the study in university or during practicing oil and gas translation. This handbook is definitely of practical significance to translators. And the purpose of this work is to highlight the existing developments in this area, to consolidate the available terminology solutions, to show their practical importance.

This also presents the novelty of this research, which is dedicated to terminology solutions that facilitate the work of translators in the oil and gas industry, which according to the conducted literature review has not been covered in researches on the oil and gas translation yet.

Terminology solutions, including glossaries, term bases, linguistic corpora and reference materials, are of great importance for every field of translation and interpretation. But they are of paramount importance in technical areas and highly specialized fields. The oil and gas topic can be referred to both, since this topic is divided into narrower sub-topics, and includes a huge amount of highly specialized knowledge on complex industrial processes. This topic also arouses my interest since it is of particular relevance for our country with a prevailing resource-based economy.

The main questions for the purposes of the research were as follows:

1. What resources can be applied to accurately convey the meaning of oil and gas terms? (overarching research question)
2. What are the basic challenges in the oil and gas translation? (subsidiary question)

The ultimate aim of this research was to consolidate the most relevant terminology resources and form a step-by-step guide for colleague-translators and oil and gas industry workers.

In order to achieve this aim, the following tasks were completed:

1. Conducting survey among practicing translators working with oil and gas terminology;

2. Identifying the terminology challenges that translators face when performing translation in the oil and gas field;

3. Identifying, analyzing and consolidating available and relevant terminology sources;

4. Forming the step-by-step guide for translators and interpreters working in the oil and gas field, instructors and students of translation studies programs, oil and gas industry workers pursuing to achieve a more profession-oriented English level.

Research Structure

The literature review chapter provides the analysis of existing researches on terminology resources in general and in particular in the field of oil and gas translation. This chapter discusses the developments in this area and the gaps that served as the basis for this research.

The methodology chapter provides the choice of research design and methods, as well describes the sampling strategy and survey structure.

The first section of the findings chapter provides the statistics on the popularity of oil and gas translation in the work of Kazakhstani translators, based on the quantitative part of the survey. Statistical data are presented in the form of charts with explanations.

The second section of the findings chapter provides the results of the survey on the terminology challenges that may be encountered in the oil and gas translation, with the qualitative examples from oil and gas materials. Practical materials on oil and gas from Kazakhstani companies were used to find examples.

The third section presents the analysis, synthesis and generalization of terminology resources, that were offered by practicing translators in their responses to the survey.

Suggested resources were assessed for their reliability and relevance for use in the translation process.

The discussion chapter summarizes and explains the results of the survey and the responses provided, as well as this chapter offers the step-by-step guide, for translators, oil and gas industry workers, teachers and students of translation studies programs, on overcoming the challenges of translating oil and gas terms by using certain reliable and up-to-date terminology resources.

The conclusion chapter summarizes the key findings, limitations and provides opportunities of the research continuation.

Definitions

For the purpose of this study, it is needed to understand such concepts as terminology, glossary, term base, language corpora and reference materials and how they are formed in different fields of knowledge.

According to the definition, which can be found in the dictionary, term “is a word or expression used in relation to a particular subject, often to describe something official or technical” (Cambridge Dictionary, n.d.). Regarding the definition of terminology, the dictionary entry provides for that it is “the set of technical words or expressions used in a particular subject” (Oxford Learner's Dictionaries, n.d.). Glossary in its turn is “an alphabetical list, with meanings, of the words or phrases in a text that are difficult to understand” (Cambridge Dictionary, n.d.).

Terms are collected in terminology according to the specific field of knowledge, based on which glossaries are then formed, that include an explanation of terms, sometimes with examples of their use in context.

In the translation profession, glossaries are often presented as bilingual or even multilingual term bases, with the column containing the term in the source language and the column(s) with its equivalent in the target language(s). In addition, sometimes a comment column may be added, in which notes are made on the use of the term in context or the requirements for the use of prepositions along with certain terms. In the process of work, translators find useful both glossaries and term bases, with the definition and with the translation of terms into a target language.

Recently widely popularized language corpus (plural corpora) is “a collection of linguistic data, either compiled as written texts or as a transcription of recorded speech” (Crystal, 1992, n.d.). Language corpora are used to check the use of certain words, phrases, constructions in a wide base of texts in certain fields. Sometimes a corpus presents the collection of texts united by some common attribute (language, genre, author, period of creation of texts).

Reference materials present the sources that may be used to get background information or more in-depth understanding of a concept or a process.

Chapter 2: Literature Review

Purpose of Terminological Bases and Dictionaries

For the purpose of literature review, sources were searched using Google Scholar search system. The search was carried out using the following keywords:

a. Terms, terminology, terminological bases, glossaries, language corpora, term analysis, dictionaries, terminology solutions, terminology resources;
b. Oil and gas translation, oil and gas terms, oil and gas field, oil and gas industry, oil and gas dictionaries, oil and gas language corpora, oil and gas glossaries, oil and gas terminology solutions, oil and gas terminology resources.

The problem of studying terms and terminology remains one of the key problems of linguistics. The study of terms makes it possible to solve an important communication problem — to ensure mutual understanding between representatives of various fields of knowledge and activity — specialists in different fields, amateurs and professionals. Griniewicz (2006) emphasizes that “special vocabulary not only already comprises the major part of any advanced national language but is also the most dynamic strata of language” (p. 10). He conducted an in-depth analysis of such dictionaries as Encyclopedia Britannica, Webster’s Dictionary and some Russian dictionaries to solve the problem of finding out some effective linguistic means of international communication.

To delve deeply into the topic of significance of special terms Łukasik (2012) in his article presumes that “the clarity and effectiveness of professional communication depend on the precision of the term, i.e. the quality of the link between the term and the respective concept it represents” (p. 99). Łukasik bases his views on a case study of 600+ bi- and multilingual terminological dictionaries. The purpose of this study is to identify the role of the terminology dictionary as a tool to facilitate professional communication.

Many scholars place particular emphasis on the creation of dictionaries, recognizing the importance of quality assurance to ensure the quality of translation. For instance, Łukasik (2014) also considers the compilation of specialized corpus for terminographic purposes, where he claims that "the major advantage of incorporating corpora in lexicographic/terminographic work being objectivity of the results obtained" (p. 73). He also describes the process of creating a corpus from scratch by a non-field specialist. In his article he emphasizes that "the widespread use of corpora in lexicography will vastly improve the quality of dictionaries" (Łukasik, 2014, p. 81).

However, as the terminography advances, a huge number of dictionaries and terminology solutions appear. This raises the problem of typologization of such resources, the lack of uniform standards, which greatly affects the quality, reliability and applicability of such dictionaries. Griniewicz (2007) refers to shortcomings in lexicography and, first of all, the lack of uniform principles for the elaboration and design of dictionaries (p. 20). He assumes that "the creation of a typology of dictionaries involves the selection of certain lexicographic characteristics, parameters that serve as the basis for the classification, description and assessment of dictionaries" and the identification of such parameters will make it possible to formalize and simplify the technology of composing dictionaries (Griniewicz, 2007, p. 23).

Another problem noted by researchers in the field of lexicography and terminology is the accelerated rate of development of industries and the challenges associated with it. Šandrih, Krstev and Stanković (2018) state that "Terminology is rapidly developing in many research and technological fields" (p. 1). Thus, the translation and research community faces the challenge of producing and maintaining up-to-date terminology resources. They also present existing Natural Language Processing (NLP) resources and

tools that can help the development of terminology, on the example of the Serbian language, but that could be relevant for other languages (Šandrih et al., 2018, p. 2).

Continuing the topic of compiling dictionaries, Logar and Kosem (2013) describe the process of creation of an online dictionary. They analyzed the compilation process using various tools such as the LUIZ term extraction system and Sketch Engine. They believe that in connection with the constant "growth of scientific research, all disciplines must assure the development of terminology in their own language" (Logar & Kosem, 2013, p. 164).

To talk about the purposes of the dictionary, it has a variety of possibilities: its focus determines the structure and content of the dictionary entry, as well as the selection of terms in the dictionary. In her doctoral thesis Lovtsevich (2010) explores the way terminological dictionaries should be in order to optimize intercultural professional communication among specialists. She claims that "experts from different cultures mean different concepts and phenomena embodied in the same terms" (p. 3).

Many other linguists speak about the necessity of creating and using term bases and dictionaries in their articles and textbooks, especially in the technical spheres of translation, in view of the ambiguity of terms, and the corresponding complexity of defining the connotation of a term.

Oil and Gas Terminology

The oil and gas industry attracts many specialists, both with technical and humanitarian and other non-technical education. Both professional oilmen and other employees of oil and gas companies, especially translators and interpreters, have to deal with English terms in various specializations. The complexity of oil and gas terms also lies in the complexity of the processes that they mean. This is one of the main problems that

afflict the translator. Thus, Serikbay (2004) in her textbook *English in the Oil and Gas Industry*, which is also a self-study textbook, emphasizes "the great importance of the oil and gas industry for the present and future of Kazakhstan" (p. 6). In her book, she introduces readers to the specifics, terminology and operations in the oil and gas industry. This learning material is presented in simple, accessible language, with diagrams and illustrations designed to give a general understanding of the oil and gas industry. It also reveals the main problems of technical translation, in particular oil and gas translation.

Another difficulty in translating technical terms, particularly in the field of oil and gas, lies in the need to accurately convey the meaning of the term, to eliminate ambiguity, which can mislead the reader. Motin (2011) asserts that "terms express the deep meanings of extralinguistic reality... and are inevitably used in areas of knowledge where ambiguity is unacceptable — primarily in science and technology" (para. 12). He identifies and analyzes the problems of translation using the material of oil and gas terms, where the problem of ambiguity is highly critical.

The other problem in the process of translating terms in the field of oil and gas is the peculiarities of the formation of terms, in particular, the abundance of multi-component terms. Studying this problem, Gushchina and Sidelnikova (2007) consider the specifics of text translation in the oil and gas industry from Chinese and English into Russian highlighting the basic challenges that arise during translation. As they assert, "basically, these challenges are associated with the translation of terms, that are single-component and multi-component" (Gushchina & Sidelnikov, 2017, p. 247). They compare texts in the field of oil and gas in English, Russian and Chinese, highlighting not only technical but also linguistic features of the texts.

When working with highly specialized terminology, such as oil and gas, the problem of choosing between the strategies of Domestication and Foreignization also arises. Thus, Latysheva (2019) considers both strategies and analyzes which one is more effective and in what cases. Foreignization includes the preservation of original form, transliteration, loan translation and combined methods, while Domestication provides for the explication, functional replacement, generalization, specification, differentiation (Latysheva, 2019, p. 5). Based on her research, she assumes that the choice of the specific strategy depends on the semantic and functional features of terms (Latysheva, 2019, p. 7).

The issue of the formation, understanding, and application of terms in technical fields, and in the oil and gas topic, in particular, is widely studied in the works of Kazakh, Russian and foreign researchers. In such academic works, researches for the most part identify common features of technical terms, certain difficulties in their understanding and translation, providing some linguistic ways to transfer the meaning of such terms.

The overview of the literature on the topic of this thesis proves the assumption about the relevance of the topic of analysis of terminology solutions in the field of oil and gas due to the vastness of the topic, the complexity of terms, professional differences in the definition of terms, and many other challenges, which will be discussed in more detail in the main part of the thesis.

The topic of compiling and analyzing terminological dictionaries has been studied quite well by linguists, but it was difficult to find materials on terminological dictionaries for oil and gas topic, as well as other resources that could be used to accurately convey the meaning of complex oil and gas terms. This identifies the problems that lie in the center of this research, i. e. the complexity of the oil and gas topic and the lack of studies on the relevant and reliable terminology resources for the oil and gas translation.

In order to conduct work effectively, translators need as many reliable and accurate resources and materials as possible. During this research, very useful self-instruction aids written by Indira Serikbay were found. During the survey conducted among practicing translators, only a couple of respondents noted that guide. The respondents also suggested other resource categories and specific examples of terminology sources based on their practical experience in this direction of translation.

The analysis of terminology resources available in relation to oil and gas terms served as a basis for immersion in the topic of oil and gas to ensure the best quality of translation, both oral (consecutive and simultaneous) and written. Thus, this research will hopefully be of scientific and practical value as a source that consolidates and presents the best available terminology solutions in the field of oil and gas.

Chapter 3: Methodology

Research Design

The research was conducted on the basis of a survey using open and closed-ended questions. So, the research included qualitative and quantitative methods according to Creswell's classification. However, in order to answer the overarching and subsidiary research questions, identified in the introduction part, data obtained using open-ended questions and further in-depth search and study of various terminological sources and their analysis for reliability were used. Thus, the research is of a qualitative nature and is built on the questionnaire provided via the Internet.

Sampling Strategy

A survey was conducted among practicing translators working in Kazakhstan, who have translation experience in the oil and gas industry in the *English–Russian* language combination, and who do not have such experience to form statistical data on the popularity of the oil and gas translation among Kazakhstani translators. A questionnaire form was created using the Google Docs tool and the link was disseminated among practicing translators working in Kazakhstan. The survey was designed for both corporate and freelance translators. The selection process did not take into account gender or age categories, the important characteristics included the experience in the oil and gas translation (for part of the sample) and working with English-Russian language pair. Thus, a selective sampling method was used to select respondents for the survey. i. e. based on the certain requirement to the respondents. However, participation in the survey was voluntary, so the selection of respondents was also based on the nonprobability (or convenience) sampling, i. e., the method of selection in which participants are selected

based on their convenience and willingness to participate in the survey (Creswell, 2013, p. 267).

The total number of respondents amounted to 52 practicing translators. The survey was conducted in a completely anonymous way. Participants were not required to provide their name; they just needed to specify their work experience and answer the questions about the terminology challenges and terminology resources in the oil and gas field.

Survey Structure

During the survey, the respondents were invited to answer open and close-ended questions. Closed-ended questions related to the professional occupation of respondents and work experience in the field of oil and gas translation. The answers of all participants were used to generate statistics, with the data displayed in graphs for ease of presentation.

For the purposes of the overarching and subsidiary research questions, the answers of only practicing translators with experience in oil and gas translation were selected. Through open-ended questions, respondents with experience in oil and gas translation were asked to note terminology challenges when dealing with oil and gas topics, as well as to share their proven resources to overcome such challenges.

The results of the survey provide two main sections of the thesis. Both sections present the correlated parts of the research. The first part of the research reveals the problems that can be solved by the results of the second part of the research. Together, these parts of the research serve to shape the overall picture of work with oil and gas terms and provide guidance for translators.

The first part of the research is aimed at the analysis and synthesis of the difficult issues in the translation of oil and gas terms. In this part based on the results of the survey,

the main problems are summarized and covered in more detail with specific examples from documents of some Kazakhstani oil and gas companies.

The second part provides the analysis of responses to the survey on the ways to overcome the challenges that translators encounter when working with oil and gas terms. Based on these responses, the suggested terminology resources, i. e. dictionaries, terminological bases, reference materials, and so on are analyzed, which could be used to provide an adequate translation of terms and perform high-quality translation.

Purpose of the Research and Justification of the Chosen Research Methods

The purpose of this research was to analyze terminology challenges and ways to overcome them using the available terminology resources. For this purpose, obtained data were analyzed based on their relevance, credibility and applicability. Based on the proposed resources, which have been checked for reliability and applicability to specific terminology problems, a step-by-step guide has been compiled that describes the process of finding a definition and translation for terms using the appropriate resources.

The chosen research methods made it possible to get a better understanding of the problems in the field of translation of oil and gas terms based on the answers of survey respondents, as well as identify the most useful resources for solving such problems. Moreover, thanks to the quantitative method with closed-ended questions, it was possible to obtain statistics on the selected topic in the field of translation and assess the demand and competition for this field of work among Kazakhstani translators.

Chapter 4: Findings

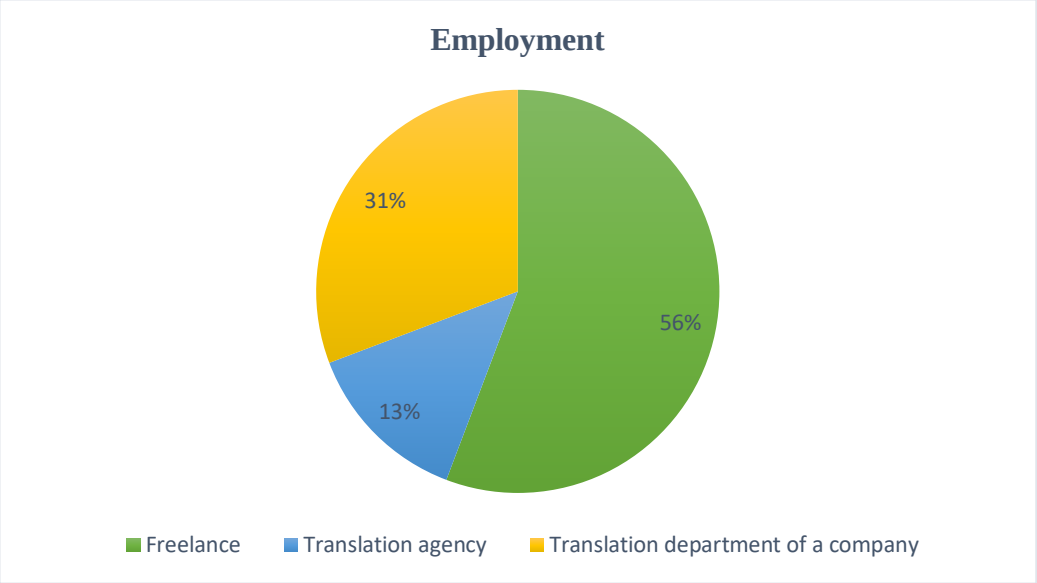
Statistical Data Analysis

The survey conducted for the research included closed-ended questions on work experience in oil and gas translation. The responses to those questions made it possible to generate statistics on the prevalence of that type of translation among practicing translators in Kazakhstan. Since no information on the popularity of this direction of translation has been found during the literature review process, there are no such statistics for Kazakhstan, these responses provided an opportunity to form own statistics and determine the relevance of this research.

For the survey, it was needed to involve as many translators with oil and gas experience as possible. However, in order to create statistics on the popularity of this kind of translation, translators with different backgrounds, working for translation agencies, in a translation department of non-translation companies, and as freelancers were invited to take part in the survey.

The composition of respondents according to their employment is presented in Chart 1.

Chart 1. *Employment*

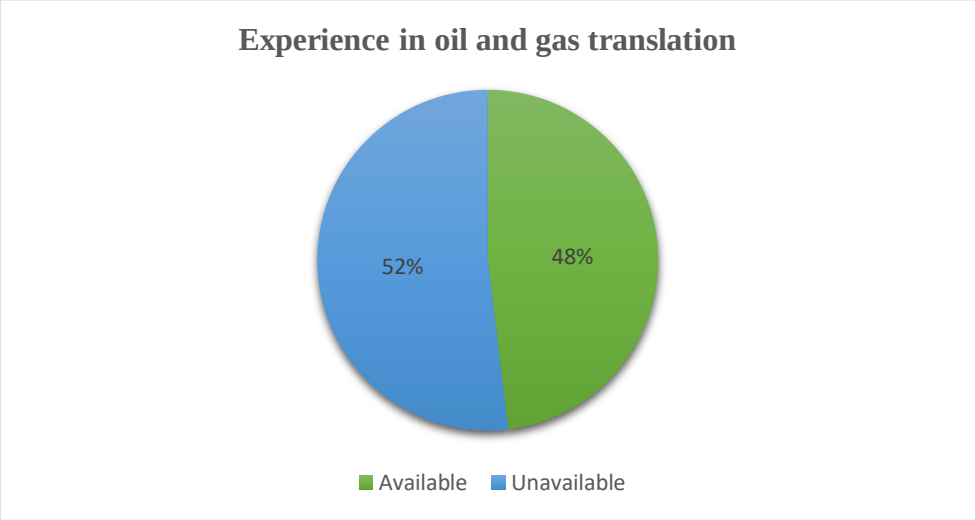


Note: Compiled by the author using the data obtained from the conducted survey.

According to the responses, the vast majority (56% or 29 respondents) are freelancers, 13% (or 7 respondents) work in a translation agency, and approximately one-third (31% or 16 respondents) work in translation departments of various companies.

The following questions were aimed at identifying information about experience with oil and gas translation. According to the responses, almost half of the respondents have experience in oil and gas translation (48%, or 25 out of 52 respondents) to varying degree (See Chart 2).

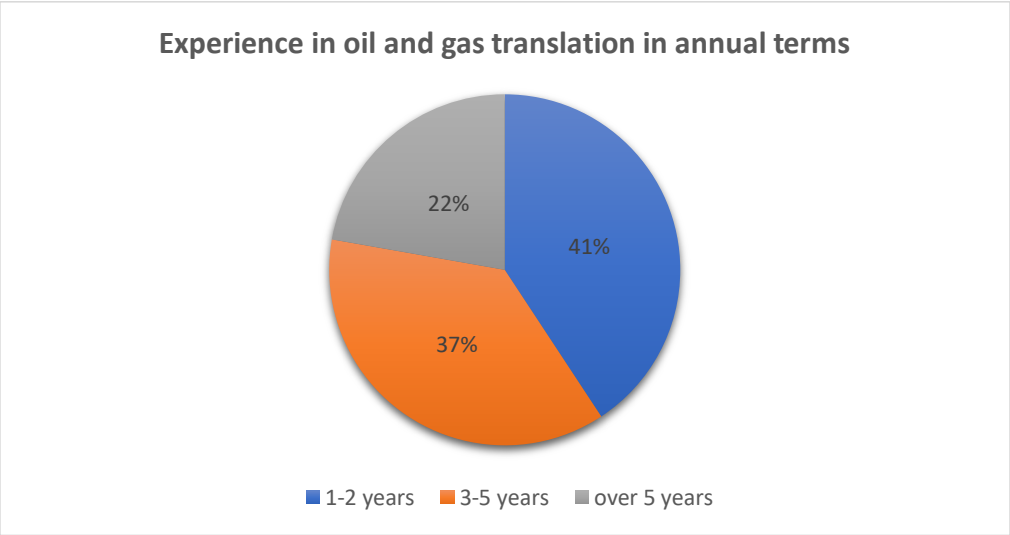
Chart 2. *Experience in oil and gas translation*



Note: Compiled by the author using the data obtained from the conducted survey.

Respondents who noted the availability of the experience in oil and gas translation also indicated the experience in annual terms. Thus, eleven respondents (41%) indicated that they had been dealing with the oil and gas translation for 1-2 years, ten respondents indicated 3 to 5 years of experience, and six respondents indicated more than 5 years of experience (See Chart 3).

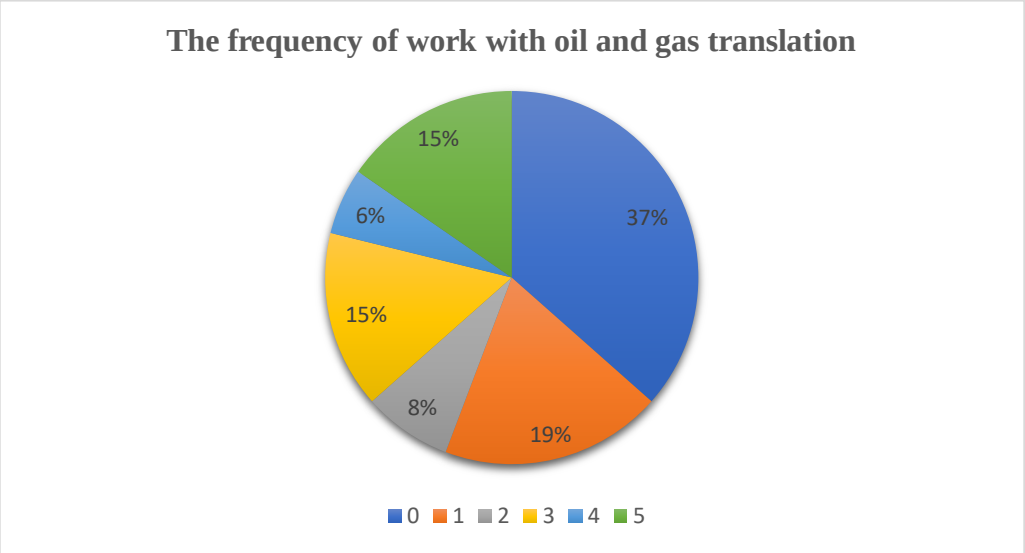
Chart 3. *Experience in oil and gas translation in annual terms*



Note: Compiled by the author using the data obtained from the conducted survey.

Further respondents were asked to indicate how often they had to work with oil and gas translation, marking from 1 to 5, where 1 – very rarely, 5 – very often. Those who did not have any experience in the oil and gas translation indicated 0 (See Chart 4 for results).

Chart 4. *The frequency of work with oil and gas translation*



Note: Compiled by the author using the data obtained from the conducted survey.

According to the responses to that question, even those who indicated that they had no experience in oil and gas translation had still had the opportunity to work on this type of translation. Only 19 respondents said they had never encountered oil and gas translation in their work, compared to 27 respondents who indicated no experience in that field. Based on this, it can be summarized that more respondents have oil and gas translation experience than was determined by the responses above, and the total number of respondents with oil and gas translation experience exceeds 50%.

In addition, Chart 4 shows that 21% of respondents encounter oil and gas often or very often in their work, 15% of the respondents answered that they deal sometimes with oil and gas translation, and 23% – rarely or very rarely. It follows that for at least a third of respondents (and the share of the translation community they represent) the results of this

research will be interesting and hopefully useful in practice. Perhaps this research will also be useful for beginning translators who are afraid to work with oil and gas translation because they find it too challenging and do not know where to start and what resources to use to translate complex oil and gas terms.

The remaining questions (open-ended) in the survey focused directly on the issues of this research, namely the problems of translating oil and gas terms and the resources for solving such problems. The responses and accordingly the results of this research will be discussed in detail in the following chapters.

Challenges in Translating Oil and Gas Terms

In the process of professional practice, translators always face certain difficulties, no matter how long a person has been working in the field of translation. This is especially true for technical translation, in particular translation in the oil and gas industry, which is considered in this research. The correct translation of terms used in the oil and gas industry is one of the most important aspects of any translation project. Accurate transmission of terms and preservation of their consistency in the text underlies the understanding of the meaning of the original material. This directly defines the quality of the translation, which greatly determines the success of business issues of companies that use the services of translators. That is why translators are lumbered with a very tough task.

In the course of this research, a survey was conducted among practicing translators. They were asked to briefly summarize the main difficulties of working with oil and gas terms. The respondents presented their various options, which will be presented below with specific examples to ensure greater clarity. For such examples, terms with the translation of various Kazakhstani oil and gas companies will be used.

1. *Wide range of knowledge required.* One of the challenges noted by the respondents is that terms from different areas of knowledge can be found in one direction of oil and gas operations. For instance: Geology, Physics, Cartography, Chemistry, Petrochemistry, etc. In order to properly translate the terms, the translator is required to have background knowledge not only in Petrochemistry but also in related areas of knowledge, which means that the translator needs to know the basics and understand the processes expressed by such terms.

As an example, the translation of some terms will be considered from documents on oil field exploration, which involves lots of different operations, surveys, researches, samplings, and tests. In such kind of documents, the translator may come across the term "*rifting*", which has different variants of translation in Russian, such as "*расщепление, раскалывание, дислокация, разрыв, рифтинг*" and some other variants of translation. In fact, in the oil field exploration, this term is translated in Russian as "*рифтогенез*", which means "the process of horizontal stretching of the earth's crust, leading to the emergence in it or its upper part of very extended, elongated, morphologically distinct depressions, limited (at least on one side) and complicated by deep longitudinal faults" (Milanovsky, 1999, para. 1). This term refers to geology but as it can also be found in the oil and gas translation.

Further, in the same text, the translator may find the term "*well intervention*". In terms of oil field exploration this term means geological and technological operations and is translated as "*геолого-технологические мероприятия*", and not as "*вторжение в скважину*" if the translator by mistake chooses a literal translation. This is an oil and gas term that refers directly to oil and gas operations, but it requires an understanding of some technological processes.

Besides, in such a document on exploration, the translator will most likely come across such a term as "*towed streamer*" which is translated not just "*буксируемая коса*", the translator must understand that it means "*буксируемая сейсмическая коса*", which is designed for onshore/offshore seismic surveys. This term refers to Geophysics.

2. *Narrow-field terminology and complex production processes***.** Taking into account the wide range of branches of knowledge that are involved in this industry, practicing translators also note such a problem as the narrow focus of terms and the complex processes that they define. Oil and gas translation is one of the directions in translation, for which it is not enough just to know two languages in order to understand what is being said, and also to be able to convey the meaning to the target audience. There are a lot of complex processes and narrowly focused terms in this field, and without understanding the process itself, it is not difficult to make a mistake in translating the term. For instance, even if a client provided the translator with the glossary and he/she knows that "*cone penetration testing*" means a method of determining the geotechnical and engineering properties of soils and is translated in Russian as "*испытание коническим пенетрометром*". If he/she does not understand the process that underlines this term, he/she will experience certain difficulties in translating materials provided by the client on this process.

3. *Abbreviations and acronyms.* One of the common answers of the respondents was such a problem in the translation of terms from the oil and gas industry as abbreviations. Those translators who have worked with oil and gas translation at least once have probably noticed how often abbreviations and acronyms can be found in documents on this topic. Documents and presentations are often very full of these units of speech. The use of abbreviations serves two main purposes: to save space on the medium of text information (paper and electronic documents, presentation slides), and the possibility of

faster writing the text, that is, to save time. The use of abbreviations is undoubtedly convenient for those who know exactly their meaning and very inconvenient for translators who need to understand what is hidden behind these abbreviations and acronyms. It is great luck if there is a table with the definition of abbreviations at the beginning of the document, but even in this case, it is quite possible that some abbreviations will not be presented in this list. For instance, the translator may come across the abbreviation "*SBP*" in the next context:

*The **SBP** data has allowed the definition of the stratigraphic features of the survey area down to a depth of about 8.0 m b.s.b.*

It is very difficult to translate this abbreviation even in the given context and may still require the definition. In English, this abbreviation means "*Sub-Bottom Profiler*". Having received a transcript of the abbreviation, it becomes much easier to find its translation, which will be in Russian "*профиломер*".

As the other example, the translator working with the materials on oil field exploration may face such a sentence with an abbreviation, with no definition given:

*Relatively low friction values were measured at certain **CPT**'s.*

In this context, the translator may just assume that given the word "*measured*", this abbreviation may mean some test or testing instrument, but he/she cannot be sure, and the provided definition of this term would greatly simplify his/her work and help to accurately convey the meaning of the sentence. Without the proper definition, the translator may assume that this is "*Casing Pressure Test*", but in fact, this is "*Cone Penetrometer Test*" – in Russian "*испытания с помощью конического пенетрометра*". These examples perfectly demonstrate the trickiness of abbreviations and the complexity of translating them.

4. *Jargonisms.* Another feature of the oil and gas industry, like any stand-alone industry, is the presence of certain well-established jargon. This challenge in the oil and gas translation was also noted but some of the respondents of the survey conducted for the purpose of this research. Professional jargon is used by a group of people united by a certain profession. Often it is a set of simplified (abbreviated, shortened or figurative) words to denote concepts and terms that are often used by people of a certain range of activities (generally accepted literary and exact terms are usually long and therefore inconvenient for use in oral speech, or do not exist at all). In the oil and gas field, jargonisms may refer to such terms as "*X-mas tree*" – in Russian "*фонтанная арматура*", "*monkey*" – in Russian "*верховой рабочий*", or "*pig*" – in Russian "*скребок для очистки и инспекции трубопроводов*". At first glance, these words seem absurd and even rude, but they are already well-established jargonisms in the industry used for a more concise and laconic expression of some concepts. Such words and expressions should never be translated verbatim.

5. *Idioms / figurative expressions.* Another problem, similar to the previously discussed one, is the translation of idioms and figurative expressions, which are especially difficult for those uninitiated in the topic. Idioms are difficult in any field, even in ordinary speech, but there are quite enough of them in the oil and gas field, as if other complexities weren't enough. Example of figurative expressions might include "live pipeline" which means the pipeline operating under pressure, in Russian "трубопровод под давлением". As another example, "hot tapping" which means repair work on an operating pipeline, without termination of its operation, in Russian "холодная (безостановочная) врезка". The last example is especially fascinating because this expression is translated using an antonymous translation, literal translation "горячая врезка", which is proposed at Multitran, is incorrect.

6. *Multiple attributive nouns.* One of the respondents noted a specific problem such as multiple attributive nouns. These are the word combinations in which nouns serve as an adjective to describe another noun. Such phrases can consist of two or more nouns, and sometimes it is difficult to determine the main word and the defining one and unravel the chain of nouns by understanding the attributions. A good example of such a multiple attributive nouns phrase is "*Shell Kazakhstan Development Country Security Manager*". This phrase consists solely of nouns, six nouns. In order to correctly translate this phrase, first it is needed to find the main word. In this example, it is not so difficult to understand that the main word is "*manager*". Then, when the main word has been identified, it is needed to find the words that define it and gradually unravel the chain. It is possible to isolate "*security* + *manager*" and "*country* + *manager*", i. e. it means the manager responsible for security issues in a particular country. As for "*Shell Kazakhstan Development*", this is the name of a company Shell Kazakhstan Development B.V. So, here the phrase denotes the manager responsible for security issues in a particular country working for Shell Kazakhstan Development. Thus, in Russian, it is "*Региональный менеджер по вопросам безопасности Шелл Казахстан Девелопмент*". As another example, let's consider the phrase "*Seismic Attribute Analysis*". In this phrase, it is also possible to easily determine the main word "*analysis*". Then it is needed to determine the attribution. Is this "*seismic* + *analysis*" or "*attribute* + *analysis*", or "*seismic* + *attribute*". In this example, it is not so easy to determine an attributive connection, because there is "*seismic attribute*" – "*сейсмический параметр*", and "*seismic analysis*" – "*сеймический анализ*". To understand the meaning of this word combination, of course, the translator needs a context and understanding of the processes. In this example, this term means the seismic analysis of attributes and translates in Russian as "*сейсмический анализ*

атрибутов". Such phrases can be very tricky and require not only the knowledge of the subject and understanding of processes, but also a little bit of logic.

7. *Differences in terminology among oil and gas companies.* Freelance translators working with different companies note such a problem when translating terms in the field of oil and gas, as discrepancies in the translation of one and the same term in different companies. Many companies have their own well-established equivalents for terms, which is why dictionaries provide find several translation options for one term, and that is why it is so difficult to work in this field. For instance, the term "*геолого-технологические мероприятия*" that was discussed above as an example for the range of knowledge fields demanded to explore from translators, which means geological and technological operations. This term has various equivalents in English such as "*well intervention*", "*well work*", "*routine maintenance*". As another example, the term "*обвязка*", which means the equipment for oil wellheads, providing control over the liquid level in the pipes themselves and in the annulus, preventing accidental emissions and preventing the flow of fluid produced from the formation, has even more equivalents. These are "*piping*", "*flow line*", "*hook up*", "*wellhead connections*", "*well ties*". These terms all have the same meaning, but different companies use a different translation. Using an alternative translation instead of the one commonly used in a particular company may be a mistake.

8. *Lack of reliable resources.* One of the main problems when working with oil and gas translation, according to the responses of the practicing translators who took part in the survey, is the lack of reliable sources, including dictionaries and reference information. Many translators note that they use online dictionaries when searching for the meaning and translation of terms, but different dictionaries give different definitions and it is very hard to understand, which source provides the correct information. To a great extent, this problem lies at the heart of this research and defines its main goal – the search for reliable

resources to overcome terminology challenges when working with oil and gas translation. This is exactly the focus of the thesis in the next chapter of this research.

The survey also revealed the problem of the uneven progress of the industry and the emergence of appropriate new terminology in different languages. Thus, one of the respondents noted “we must not forget the development of technology: the problem here is primarily that the terminology is only present in English – you have to go through the search phase in another language through English sources” (respondent No. 1).

In addition, a quite nontypical problem was highlighted, as “the compilation of the English text by non-native speakers, in view of which the terms may be used incorrectly” (respondent No. 2). It should be added that the problem of illiterate use of terms exists not only in English, but also in Russian. Such errors can be associated not only with the fact that the texts are composed by non-native speakers, but also with the fact that such compilers may not have the proper knowledge in the required field. This necessitates an in-depth study of technical processes and terminology not only for translators, but also for oil and gas specialists.

During the survey for this research, respondents were asked to note not only the challenges in translating oil and gas terms, but also the resources that help them to overcome such challenges. The next chapter will provide the responses of practicing translators with experience in the oil and gas industry, who, in the course of the survey, shared various sources that they used in practice and which had shown their effectiveness in working in the field of oil and gas translation. After all, the exchange of knowledge and experience is very important in the translation community and leads to an increase in the quality of the services provided and thereby increases respect for the profession of translator.

Terminology Solutions to Overcome the Difficulties with Oil and Gas Terms

In the course of the survey, respondents were asked to list the resources they used in the process of translating oil and gas materials to find the exact translation of terms. Practicing translators with experience in the field of oil and gas translation shared some resources that they applied in practice and which had shown their usage value and allowed them to find an accurate translation for the terms they were looking for and provide the translation of adequate quality. However, the resources presented had varying degrees of reliability. In view of this, it was necessary to assess each proposed resource for credibility.

Needless to say, the Internet is a repository of a huge amount of information, both reliable and doubtful, because the spread of access to it also gives rise to the possibility to publish materials in it. And it is not possible to adequately moderate these volumes of information. Therefore, it is very important to find reliable sources of information.

When processing the respondents' answers, the proposed resources were assessed with respect to their reliability. This was done taking into account the attributes of the reliability of the source, i.e. the availability of the following:

1) Resource authorship;
2) Authors' contact details;
3) Sources of information;
4) Purpose of creating a resource;
5) Neatness in providing information;
6) Data relevance.[1]

[1] The list was formed by the author using the article of E. Yakushina E. (2013). Mediaobrazovanie: kak proverit dostovernost informatsii v Internete [Media education:

Of these, the most important are authorship with the contact details, sources of information and relevance of information. When conducting research and studying something, it is advised to use resources that clearly provide these parameters. For instance, the reliability of books, articles and web resources can be determined by their authors/compilers, sources used, and the relevance of the data provided, because these data can be verified.

It is always better to work with the books and articles of well-known, reputable researchers. Websites in this case can be used if they provide extracts from such printed sources with exact links to them, page numbers.

According to the obtained responses, resources for working with oil and gas terminology can be divided into two basic groups:

1) Reference materials, providing background information and explaining various processes in the oil and gas industry;

2) Thematic dictionaries, monolingual and bilingual, as well as glossaries providing definitions and translation equivalents of the terms in question.

These kinds of resources will be discussed separately with examples below.

Reference Materials

As mentioned in the last chapter, to work in the oil and gas sector, it is not enough just to know two languages in order to understand all the processes and terms that define them and find the appropriate translation. For the same reason, the use of only thematic

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how to check the accuracy of information on the Internet] *Media. Information. Communication*, 6.

dictionaries may be not enough for effective work in this direction of translation. This requires at least basic knowledge of the industry, which needs to be constantly updated in order to successfully navigate the terms and processes they express. For this purpose, reference materials can be used, which may include various guides, manuals, handbooks, thematic articles, specifications, data sheets and so on. Such reference materials are ideally compiled by experts in the industry and provide factual information about processes, practices, and norms.

One of the examples of such resources is Indira Serikbay's textbooks *English in the Oil and Gas Industry* and *English for Oilmen*. These tutorials will be helpful to get started and get an idea of the industry. The textbooks provide information on a range of processes from exploration and production to refining, transportation and marketing, the so-called upstream and downstream processes. In addition to specialized terminology, the book contains extensive illustrative material, maps of oil and gas regions of the world, background information on the oil and gas industry of Kazakhstan, Russia and other oil-producing countries so that readers have more information about the oil and gas industry in general. This guide is recommended for all translators who are going to work on oil and gas translation and who want to master the basic concepts and terms and get acquainted with the history of the issue. However, more specific processes cannot be found in them. Other materials will be required for this. These books can be found both in printed and electronic format.

The reliability of these resources is determined by the availability of information about the author (contact details included), editors, reviewer and publishers, the availability of a list of used sources (in Russian and English), as well as the relevance of the data provided. In the course of the survey, only a couple of translators wrote about these books in their responses, which suggests that they are not widely known in the translation

community. Although these texbooks are a very useful source of information and strictly recommended for all oil and gas translators, especially beginners.

A similar learning aid was also created by our Russian colleagues with the support of the Ministry of Education and Science of the Russian Federation. This is the textbook by A.O. Nosenko *English for Oil and Gas Industry. Reader.* The purpose of this work is to expand the terminological vocabulary and develop communication skills in the professional and scientific spheres. The advantage of this textbook is the presence of an English-Russian dictionary and a dictionary of abbreviations used in the oil and gas industry. This textbook can be found both in printed and electronic format and includes information about the author, editor, reviewer, publisher, and references. This resource was not recommended by the survey participants but was found in the process of studying resources compiled by Indira Serikbay.

Comparing these two resources, it can be said that the information in the books of Indira Serikbay is better systematized and has a more convenient presentation, and Indira Serikbay's tutorials are more extensive and more relevant for Kazakhstan. However, the glossary presented in Anna Nosenko's book is more extensive and includes useful abbreviations with their definition and translation.

As mentioned above, such tutorials offer basic knowledge of the topic and industry but do not offer descriptions of more specific processes. Many translators who took part in the survey noted *Wikipedia*, which can be useful for this purpose as it is constantly replenished with up-to-date information.

As far as credibility is concerned, the well-known *Wikipedia* encyclopedia is supplemented by different people willing to participate in this process. It may contain some errors, but not more than reputable encyclopedias since it has a group of moderators that

constantly monitors its replenishment. *Wikipedia* can be considered not the most reliable source of data, because the articles in it may differ in more or less deep rationale. When searching for information in *Wikipedia*, one should pay special attention to the sources of information on which this data is based. Sometimes it is more useful to find the original sources and study the issue in more detail. Thus, *Wikipedia* represents the source of the accumulation of references on the topic in question.

A frequent response to the questionnaire was the use of oil and gas company websites to search for information. Such a source is useful because it contains the information that has been approved by a company to be published on the company's website. This means that the terminology used in it meets the expectations of that company representatives. This is the resource that translators definitely need to turn to when working on documents for a particular company. In addition, in case of controversial issues and comments from the client, translators can always refer to specific materials from the website of this company. In addition to the website of the client company, useful information can also be found on websites of other oil and gas companies, competitors, and partners in joint projects. Through the websites of other companies working in this area, translators can find references to the same processes that are mentioned in the client's documents. The websites of foreign companies are usually better filled and offer more information.

In the translation process, the translator needs to use resources in both languages. Sometimes, in order to find a translation for terms, it is needed to look through the information in the source language, understand the meaning, and only then proceed to the search of equivalents in the target language. Many companies also create websites in multiple languages. For instance, KazMunayGas offers information on its website in

Russian, English and Kazakh[2]. This does not always mean that any information can be found in all three languages, but certain material is published in all language versions and can be useful in the search process.

Standards and technical specifications represent the other useful resources that have been found in the responses of practicing translators and will be discussed further. Standards are the most reliable sources of information, as they are compiled by industry experts and are adopted on an international level. Industry companies use approved standards directly in practice to ensure the quality and conformity of their products for safety purposes, increase the efficiency of their processes and meet the expectations of customers. The main organizations that develop and approve standards in the oil and gas industry are American Petroleum Institute (API) and International Organization for Standardization (ISO).

The International Organization for Standardization has many committees that bring together experts from different industries from around the world. These technical committees create industry-related standards, which describe industrial practices and technologies. The working languages of ISO are English, Russian and French. That means that some information can be found in these three languages, but English still prevails. On the ISO website[3], certain information can be found in English, Russian and French. On the website, in the *Standards* section, there is a search bar in which one can enter the standard number and get access to this standard or articles thereon in an accessible language. Access to standards is provided on a paid basis. Therefore, this option is not suitable for

[2] Leading oil and gas company in Kazakhstan. Link to the official website: https://www.kmg.kz/eng/

[3] Link to the official website: https://www.iso.org/

everybody. However, in order to ensure high quality of translation, in-house translators can request resources from the company to acquire these standards for their work. However, on the organization's website, a lot of other useful information can be found on standards and new developments in a particular field, and this information will be reliable and up-to-date since the organizational committees unite teams of specialists from different industries who collect and monitor information and who create these standards.

In addition to the ISO website, on the website of the International Association of Oil and Gas Producers[4] the list of ISO standards on oil and gas in English can be found, as well as a lot of articles on oil and gas practices.

As for the American Petroleum Institute (API), it is a non-governmental organization in the United States aimed at researching all aspects and providing regulatory activities in the oil and gas industry. Despite the fact that this is an American organization, its website[5] is available in English, Spanish, Russian, Chinese and Portugal, certainly not to the same extent, but an inquisitive translator can also benefit from the available materials.

Some of the respondents answered that when working with oil and gas terms, they turn to their colleague-translators through forums or fellow specialists from the oil and gas industry. Both are examples of consultation through networking. However, pieces of advice from forums are less reliable than other sources of information listed above, as users usually register under pseudonyms, without providing contact information, and this is a bad sign for reliability purposes since the source cannot be verified.

[4] Link to the official website: https://www.iogp.org/

[5] Link to the official website: https://www.api.org/

Communication on a forum is more like an exchange of opinions in a team of colleagues, but the result of such a consultation needs further verification. It is great luck if, in the process of such a consultation, colleagues can provide links to useful resources, where the reliability of the information can be checked and let the translator to delve into the topic if it proves to be trustworthy and relevant. Anyway, forums may be a useful tool for translators, so here are some examples. In addition to the forum from everyone's favorite *Multitran*, there is the *Petroleum Engineers* forum[6] which is not primary for translators but can be useful for them as it unites the industry workers who can share their experience and some reference materials. It is acting and includes over 6,000 registered users and contains over 8,000 open topics. Another one is the *City of Translators* forum[7], which unites translators from different fields and provides a platform for an exchange of experience and opinions, as well as contains lots of useful materials for translators/interpreters. These platforms serve not only to find answers and help but also to network and find work.

Advice from industry familiar experts will be more helpful if one is confident in the skills and experience of those people. It is always good to have such a specialist in friends, if not to search for answers to some questions, then to check the result of the work. A more experienced translator in the field of oil and gas can be such a fellow expert as well. In the modern world, networking is not such a difficult task. It is enough to register in LinkedIn, Instagram, Twitter, freelance platforms and so on and subscribe to people that prove to be trustworthy and helpful. On LinkedIn people can be found using their career information, on a freelance platform they can be found according to internal rating and

[6] Link to the official website: https://www.petroleumengineers.ru/

[7] Link to the official website: http://www.trworkshop.net/forum

recommendations and even see through their works. Many freelance translators maintain social media pages to exchange experiences and promote their services.

The cumulative information on the suggested terminology resources presented below in Table 1.

Thematic Dictionaries

Almost every answer from respondents mentioned dictionaries and glossaries as a source for solving terminological challenges. The well-known and beloved by many translators *Multitran* was indicated more often than any other. However, *Multitran*, being an extensive, constantly updated online dictionary, may not always be useful in finding a translation for oil and gas terms, and is not always accurate, since it is replenished by translators whose suggestions are not always moderated, and the proposed translation options may only be suitable for a specific context. As mentioned in the last chapter, *Multitran* may offer several translation options for one term, which is due to differences in the terminology of different companies, but also to narrow-contextual options that translators and other compilers may offer.

From the point of view of reliability, *Multitran* is not the most reliable source, as it is the result of the work of a huge number of translators and other contributors who offer their options, and it is not always possible to check the accuracy. Some contributors provide information about the source they used, which is a very rare case, but hardly anyone provides personal contact information. That is why this information is difficult to check and rely on.

Some practicing translators suggested using illustrated thematical dictionaries in their responses. One of these dictionaries is *Imagetranslation* online illustrated dictionary that provides translation of terms into another language using pictures, drawings,

photographs, diagrams and other images[8]. With the help of images, one can easily and quickly reveal the semantic meaning of any term, visualizing the object or phenomenon that it denotes. This is especially important for ambiguous terms that can denote several different objects or phenomena at once, depending on the context or field of use. The correct translation of such terms depends on their semantic meaning, which is much easier to establish with the help of visual images. The *Imagetranslation* project solves one of the main problems of translation – the problem of terminology ambiguity. The dictionary offers materials in various fields, mainly technical, including the oil and gas industry. The website of this online dictionary also lists the authors, sources of information, publisher and contact information, which is a good sign for the reliability of the information provided. For instance, the terminology for the oil and gas industry was taken from the book by Wolfgang F. Prassi *Drilling Engineering*. On the topic of oil and gas, this dictionary mainly describes parts of equipment in Russian and English with detailed illustrations. This online dictionary also provides a glossary on standards with the translation of abbreviations and acronyms.

In addition, respondents noted that some industry companies provide glossaries on their websites. These glossaries include terms for their products, processes and technologies. In the process of studying the websites of domestic and foreign oil and gas companies, several companies were found that offer their bilingual and monolingual glossaries with a definition of the meaning of terms used in their field. One of such companies is TMK[9]. The company has posted on its website a glossary of products

[8] Link to the official website: http://imagetranslation.org/

[9] Russian manufacturer and supplier of steel pipes. Link to the official website: https://www.tmk-group.com/

manufactured and supplied by the company, as well as some other related oil and gas terms, with a description of the meaning. The glossary is presented separately in Russian and in English[10].

On the website of the independent oil and gas portal OilGasInform one can find the dictionary of oil and gas terms and abbreviations, with definition and translation. The website also contains lists of oil fields of Russia, Kazakhstan, and other CIS countries. Thus, this resource can be used both as a dictionary and as a source of reference information. The purpose of this portal is stated as "integration into a single, global information environment of all representatives of the oil and gas industry (manufacturers of oil and gas equipment, sellers of oil and gas equipment, companies providing services in the oil and gas industry)"[11]. As far as the reliability is concerned, the glossary provided on OilGasInform portal is based on *Dictionary of Oil, Gas, and Petrochemical Processing* by Alireza Bahadori et. al., which provides the information about author, editors, publisher and sources used.

Another such company that offers a glossary on its website is Schlumberger, a leading global provider of technologies for integrated reservoir assessment, well construction, hydrocarbon production and processing management, that was based in France and provides its services worldwide. It provides its own glossary of oil and gas terms in English and Spanish with clear definitions[12], some even with support graphical information. In this glossary, there is no translation into Russian, but it provides the

[10] Link to TMK's glossary: https://www.tmk-group.ru/glossary

[11] Link to OilGasInform portal: https://oilgasinform.ru/

[12] Link to Schlumberger's glossary in English: https://www.glossary.oilfield.slb.com/en/

meaning of the term in English, which will help in finding the meaning and translation in Russian.

In addition to the glossaries from oil and gas companies, the oil and gas glossary was also found on the website of the Oil and Gas Commission in British Columbia (a province in western Canada)[13]. This commission regulates the activities of resource-producing companies in order to ensure public and environmental safety. On the commission's website, in the News & Publications > Factsheets section, one can find a monolingual glossary of oil and gas terms in PDF format entering *glossary* in the search bar[14]. The glossary was updated in December 2020 and provides terms on LNG and other facilities, oil and gas measurements, pipelines, regulations and legislation and acronyms.

As far the reliability of such glossaries is concerned, then these sources correspond to the attributes of reliability, since they are compiled by industry experts of those companies that post them on their website, and describe directly the products, processes and technologies of these companies and are used in the documentation of these companies. In addition, these companies provide their contact information for correspondence purposes. So, they can be contacted for the verification of the provided data and for additional information. This is the same as getting a glossary from a client when translating its materials. Obviously, when translating, one should, first of all, rely on the glossaries and materials of the client (if they are provided), or from the website of this company. However, as additional sources, one can refer to websites of other companies

[13] Link to the official website: https://www.bcogc.ca/

[14] Direct link to BCOGC's glossary: https://www.bcogc.ca/files/publications/Factsheets/Documentation-Glossary-v1.12-Dec-Release-2020.pdf

working in the same field, in particular, to websites of direct partners of the client. When using terms from third-party glossaries, do not forget to check the use of the translation of the term on the client's website or materials (if any).

In their responses, practicing translators also indicated some printed dictionaries. These are *Oil and Gas Illustrated Glossary* by V.S. Belousov and *New Comprehensive English-Russian Dictionary of Oil and Gas* by E.G. Kovalenko. Unfortunately, no online versions of these dictionaries were found, and printed versions are also unavailable in online stores. Perhaps they can be found in offline stores, although both dictionaries were released in 2010. According to descriptions provided in online stores, *Oil and Gas Illustrated Glossary* by V.S. Belousov contains about 1,000 terms and definitions most commonly used in the oil and gas industry, as well as more than 500 illustrations. The dictionary offers not only the term and its translation, but also its explanation in English and Russian. As far as *New Comprehensive English-Russian Dictionary of Oil and Gas* by E.G. Kovalenko is concerned, according to the description it contains about 250,000 terms, combinations, equivalents and meanings, as well as 2,250 abbreviations related to the oil and gas industry. The dictionary includes terminology from some related fields: ecology, economics, environmental protection, reliability, transport, as well as the names of relevant organizations.

Some respondents also noted that they maintain their own terminology databases that are used during the translation process. Some translators maintain such databases in the old-fashioned paper form, some in digital form. However, it is best to use the resources of CAT tools. Various CAT tools (SDL Trados, Memsource, Smartcat, etc.) that allow translators to save translation memory and maintain terminology databases on specific companies and topics have already become increasingly popular. Own databases of

translations and terms help not only to optimize the process of work, but also to improve the quality of translation. CAT tool skills have become a professional advantage.

To summarize the information on the sources presented above Table 1 is provided, which in a more systematic form presents the cumulative data for all the sources described in this chapter.

Table 1. *Cumulative data on the discussed terminology resources*

Type of source	Name of source	Access	Applicability for terminological problems	Reliability*	Additional information
Reference materials	*English in the Oil and Gas Industry* and *English for Oilmen* by Indira Serikbay	Printed and available online (https://www.geokniga.org/bookfiles/geokniga-serikbayoilgasterminology.pdf and http://translators-group.kz/images/book_English_For_Oilmen.pdf)	✓ Wide range of knowledge required ✓ Narrow-field terminology and complex production processes ✓ Abbreviations and acronyms	High	Provide information relevant for Kazakh oil and gas companies
Reference materials	*English for Oil and Gas Industry. Reader*. by Anna Nosenko	Printed and available online (https://pnu.edu.ru/media/filer_public/60/e8/60e820e3-d6c3-4d44-9c33-4fb0feca6449/english_for_oil_and_gas_industry_reader_.pdf)	✓ Wide range of knowledge required ✓ Narrow-field terminology and complex production processes ✓ Abbreviations and acronyms	High	Being a textbook for students, it also includes exercises and questions on topics.
Reference materials	*Wikipedia* articles	Available online (https://ru.wikipedia.org)	✓ Wide range of knowledge required ✓ Narrow-field terminology and complex production processes ✓ Abbreviations and acronyms	Medium	Requires verification or serves as the accumulation of links to references

Type of source	Name of source	Access	Applicability for terminological problems	Reliability*	Additional information
Reference materials	International Organization for Standardization (ISO) standards and articles	Available online (https://www.iso.org/) Although standards are available on a fee basis	✓ Narrow-field terminology and complex production processes ✓ Abbreviations and acronyms	High	List of ISO standards on oil and gas in English can be found on the website of International Association of Oil and Gas Producers (https://www.iogp.org/)
Reference materials	American Petroleum Institute (API) standards and articles	Available online (https://www.api.org/)	✓ Narrow-field terminology and complex production processes ✓ Abbreviations and acronyms	High	Articles are available in available in English, Spanish, Russian, Chinese and Portugal
Reference materials	*Petroleum Engineers* forum	Available online (https://www.petroleumengineers.ru/)	✓ Wide range of knowledge required ✓ Narrow-field terminology and complex production processes	Medium	Unites over 6,000 registered users and hosts over 8,000 open topics
Reference materials	*City of Translators* forum	Available online (http://www.trworkshop.net/forum)	✓ Wide range of knowledge required ✓ Narrow-field terminology and complex production processes	Medium	Also provides a job search opportunity
Dictionary	*Multitran* online dictionary	Available online (https://www.multitran.com/c/m.exe?a=1)	✓ Abbreviations and acronyms ✓ Jargonisms ✓ Idioms / figurative expressions	Medium	Also provides a forum
Dictionary	*Imagetranslation illustrated dictionary*	Available online (http://imagetranslation.org/)	✓ Wide range of knowledge required ✓ Narrow-field terminology and complex production processes	Medium	Provides glossaries for a wide range of technical fields

Type of source	Name of source	Access	Applicability for terminological problems	Reliability*	Additional information
			✓ Abbreviations and acronyms ✓ Jargonisms ✓ Idioms / figurative expressions		
Dictionary	TMK's glossary	Available online (https://www.tmk-group.ru/glossary)	✓ Wide range of knowledge required ✓ Narrow-field terminology and complex production processes	High	TMK is a Russian pipe products manufacturer. The company's website contains separate monolingual glossaries in Russian and English, that include the same terms.
Dictionary	OilGasInform's glossary	Available online (https://oilgasinform.ru/)	✓ Wide range of knowledge required ✓ Narrow-field terminology and complex production processes ✓ Abbreviations and acronyms	Medium	The website also contains lists of oil fields of Russia, Kazakhstan, and other CIS countries.
Dictionary	Schlumberger's glossary	Available online (https://www.glossary.oilfield.slb.com/en/)	✓ Wide range of knowledge required ✓ Narrow-field terminology and complex production processes ✓ Jargonisms ✓ Idioms / figurative expressions ✓ Multiple attributive nouns ✓ Abbreviations and acronyms	High	Also includes illustrations for some terms

Type of source	Name of source	Access	Applicability for terminological problems	Reliability*	Additional information
Dictionary	BC Oil and Gas Commission's glossary	Available online (https://www.bcogc.ca/files/publications/Factsheets/Documentation-Glossary-v1.12-Dec-Release-2020.pdf)	✓ Wide range of knowledge required ✓ Narrow-field terminology and complex production processes ✓ Abbreviations and acronyms	High	Updated in December 2020
Dictionary	*Oil and Gas Illustrated Glossary* by V.S. Belousov	Not available online, printed copy is not available in online stores	N/A**	High	According to the description, the dictionary contains about 1,000 terms and definitions most commonly used in the oil and gas industry, as well as more than 500 illustrations. The dictionary offers not only the term and its translation, but also its explanation in English and Russian.
Dictionary	*New Comprehensive English-Russian Dictionary of Oil and Gas* by E.G. Kovalenko	Not available online, printed copy is not available in online stores	N/A**	High	According to the description, the dictionary contains about 250,000 terms, combinations, equivalents and meanings, as well as 2,250 abbreviations related to the

Type of source	Name of source	Access	Applicability for terminological problems	Reliability*	Additional information
					oil and gas industry.

Note: Compiled by the author.

*The score of the reliability is assessed based on the availability of the reliability attributes discussed earlier in this chapter. High score means the availability of all reliability attributes, medium score means the availability of some reliability attributes.

**Applicability to terminology problems could not be checked due to the lack of access to the dictionaries. However, according to the description of the dictionaries in online stores, they are applicable to the main terminology problems noted by the respondents.

Table 1 shows that the resources described in this chapter can be used to solve the terminology challenges identified and discussed in the previous chapter of this research. All of the provided resources are useful tools that, in the hands of a skilled and inquiring translator, open up vast possibilities to explore the topic and find the most appropriate translation.

This list of resources is not exhaustive but represents a particular fraction of the resources available to translators in the era of global knowledge sharing. And this research was aimed to conduct knowledge exchange between practicing translators through a survey.

Chapter 5: Discussion

Summarization of Results

To summarize the results of the survey among practicing translators in Kazakhstan, it can be noted that translators mostly identified the same problems in the translation of oil and gas terms, namely the abundance of abbreviations and acronyms, complex technological processes and the vastness of the topic, the multiple meanings of terms and different interpretations. All of these problems can be encountered by the translator in a single document and take a lot of time and effort to address. To solve these problems, the translator has to use not just one but many different sources, because some sources are suitable for certain problems, while others can help with other problems. For instance, various oil and gas translation textbooks (e. g., Indira Serikbay's textbooks, Anna Nosenko's textbook) help in understanding some of the general processes in the industry, while industry standards (e. g., ISO, API standards) can help in understanding certain narrow processes. To translate abbreviations or to define them, monolingual dictionaries can be useful (e. g., Schlumberger's glossary). To search for the translation of a term that matches the client's terminology, the translator may use the website of this company.

There are plenty of opportunities to address terminology issues in the oil and gas field. However, in the survey, when asked about the terminology resources used, many translators indicated broad categories of resources, without identifying the specific ones (e. g., online dictionaries, random articles in google, forums, technical specifications and so on). Based on the respondents' answers, further independent search for specific resources had to be conducted, taking into account the relevance, applicability, and reliability of the sources. Thus, resources in different categories were considered. For instance, in the category of online dictionaries, monolingual and bilingual dictionaries were found with translations or definitions of terms, with transcriptions or translations of

abbreviations and jargon expressions, with graphic images and various descriptions. As far as the reference materials category is concerned, the ISO and API standards for the oil and gas industry were found, as well as manuals by Indira Serikbay and Anna Nosenko.

Regarding the reliability of terminology resources, respondents noted the resources they used with no regard to reliability principles (i. e., availability of authors' contact details, sources of information, purpose of creating a resource, data relevance, etc.). For instance, many respondents mentioned *Wikipedia*, *Multitran*, which have a medium reliability score, due to the open nature of these sources. In other words, these sources can be updated by anyone. Sure, the websites of *Wikipedia*, *Multitran* provide for moderation, but at the same time, the author's details are rarely indicated in *Multitran*, and not all articles have an equal degree of validity in *Wikipedia*. When searching for the translation of a term, it is better to use more reliable sources, such as industry standards (ISO, API), reputable dictionaries and reference information that provide the author's data, sources of information, which can be verified. Sources of medium level of reliability can serve as a starting point for further search and verification of provided information.

Step-by-Step Guide

In order to help translators in the process of solving terminology problems, navigating among the available sources, a step-by-step guide will be provided below which describes the process of searching for a definition and translation for oil and gas terms.

1. Before starting to work with oil and gas topic, one need to obtain the background information on the industry. To be able to translate in this field, one need to have an understanding of the basic industry processes. Indira Serikbay and Anna Nosenko's textbooks on the oil and gas industry will help in this direction.

2. If the translator has started working with oil and gas translation, then when dealing with oil and gas terms, the first thing to read is the client's glossaries, if provided,

or a list of terms, abbreviations and acronyms that may be given at the beginning or end of the document to be translated.

3. If the client did not provide any information, first of all, translators usually address dictionaries. For the oil and gas industry, *Imagetranslation illustrated dictionary* or the bilingual glossary from NeftGasInform portal, or printed bilingual oil and gas dictionary by Belousov, if there is access to the one, can be used. These are all bilingual dictionaries in which direct translations of terms in the field of oil and gas can be found.

4. If no translation can be found in bilingual dictionaries, monolingual dictionaries can be used to find the definition for an abbreviation, acronym, or term. Such dictionaries include Schlumberger's online dictionary, or pdf dictionary from the Oil and Gas Commission in British Columbia. Once the definition for the abbreviation, acronym, or term has been found, a suitable term in Russian can be picked up, or a descriptive translation can be applied.

5. The selected translation of a term must be checked for applicability. The client's website, if any, is an ideal source for this purpose. If the client has a website with information in several languages, the available materials presented in different languages can serve as a language corpus. This language corpus can be used to find and check the applicability of certain terms in context.

6. If the client does not have its own website, one should check the availability of the websites of its direct partners. Large companies, especially foreign ones, create and maintain their own websites on a regular basis. Websites of partners, or companies working in the same field can be used as a source to find or check the translation or definition for certain terms. To search for a term on a particular website through google, the following query form can be used – term site: name of the website (e. g., reservoir site:kmgep.kz). The client's website will be a more reliable source, since it provides

information approved for publication by the client, and in case of disputes, one can refer to the client's website as a source. When using terms from websites of other companies in the same field, one may face a term discrepancy problem. This should be noted and checked as well, if possible, directly through the client or other materials provided by him/her.

7. If the search on websites was unsuccessful, reference information can be used. For this purpose, one can refer to industry standards (ISO, API). The websites of these standardization organizations provide not only the standards themselves, but some articles on them. In addition, information on these standards can be found in several languages and can be used as a language corpus to find and check the usability of the translation for the term in question. Industrial standards are a reliable source of information because they are compiled, reviewed, revised and adopted by industry experts and applied on an international level.

8. Reference information can be looked for on everyone's favorite *Wikipedia*, but it is better to use the original sources directly mentioned in the article, which provide information about the author, references and relevance of data provided.

9. One can also turn to forums for help or ask for advice from familiar specialists who work in the field of oil and gas. For the purpose of consultation on the subject of oil and gas, the *Petroleum Engineers* forum can be singled out, which brings together specialists in the field of oil and gas, as well as includes topics on various industrial processes and technologies. It is also advisable to ask for help from fellow translators through the *City of Translators* forum. One can use various social networks, LinkedIn, Facebook and so on, to find the specialists.

Following these steps and using reliable resources will help find solutions to any terminology problems and provide quality translation. Even the most complex terminology

problem can be solved if one has a variety of reliable and relevant resources, good contacts, and gives the proper attention and time to solve the problem.

Chapter 6: Conclusion

Key Findings

In the course of the research among practicing translators, it was confirmed that this research, followed by the formation of the guide, is relevant for translators working in the field of oil and gas translation. First, according to the statistics from the survey, more than half of the translators engaged in the survey have (ever had) the experience with oil and gas topics and have encountered certain problems with oil and gas terminology. This shows the prevalence of this topic in the translation services market in Kazakhstan. Second, translators who are experienced in oil and gas translation indicated useful resources for overcoming terminology problems, indicating general categories of resources. In other words, their translation search process for oil and gas terms is unsystematic, and they do not have certain proved and trusted resources to turn to in the process of work with the oil and gas terminology, and they search from scratch through *Google*, *Wikipedia* in every particular case. The generated guide provides a step-by-step process for overcoming terminology problems and ensuring a quality translation that would satisfy a demanding client.

The research of available terminology resources for oil and gas terminology challenges also revealed a gap in the field of full-fledged language corpora. Neither the literature review, nor the analysis of respondents' responses, nor further resource searches resulted in finding any full-fledged language corpus on oil and gas topics. As such a set of texts from the oil and gas industry in Russian and English which could provide an opportunity to find or check the translation and usage of oil and gas terms is not available in the public domain. Only websites of oil and gas companies and related organizations that publish information about their activities in different languages can be used for this purpose. In this way, it is possible to compare materials presented in different language

versions of websites. In the context of globalization, many companies create several language versions of their websites. Since Kazakh and Russian are official languages and English is the language of international communication in Kazakhstan, many Kazakhstani companies, including oil and gas companies, create websites with three language versions – Kazakh, Russian and English, i. e. KazMunayGas, Tengizchevroil. In addition, the websites of standardization organizations present information in several languages. For instance, on the website of the International Organization for Standardization (ISO), one can find information in Russian, English, French, as these languages are the working languages of this organization. However, the problem is that the language versions of such websites have different filling rates, not all materials are translated and published in all the languages presented on the website. According to Łukasik, the use of corpora will significantly improve the quality of dictionaries (Łukasik, 2014, p. 81). However, language corpora are also valuable tools in the hands of translators, allowing them not only to find a definition of a term, abbreviation or acronym, but to study certain technological processes and technology using them as reference materials. Thus, language corpora that include materials on oil and gas topics could also improve the quality of oil and gas translation. Perhaps in the near future, some language corpora on the oil and gas subject will be created to facilitate the work of translators and interpreters, but for now, it remains to use the data available on the websites of client companies, their partners, competitors, as well as standardization organizations.

It is worth noting that dictionaries (monolingual, bilingual) remain the main source for translators to find meanings and translations for terms. It was in this category of resources that respondents were able to provide specific examples that met the requirements of relevance and reliability. The responses from the practicing translators who took part in the survey show a shift from paper dictionaries to online dictionaries,

which are naturally gaining popularity because of the convenience of the electronic format and access from anywhere via the Internet. While paper dictionaries are hard to find, they often have small print runs and the online stores where they are presented, rarely have them in stock. However, with the trend toward digitalization, we can all soon expect the digitization of more dictionaries and materials that are currently available only in paper format. As is the case with major reputable dictionaries, such as the Oxford Dictionary, Cambridge Dictionary, Merriam-Webster Dictionary.

A literature review, as well as an analysis of the answers of the respondents who took part in the survey, revealed several textbooks to introduce the topic of oil and gas for translators and for professionals from the oil and gas industry who wish to deepen their knowledge of specialized oil and gas terminology. In the translation job, it becomes important to obtain a narrow specialization in order to concentrate one's professional resources on a specific subject in order to learn it better and provide better quality translation. Because of this, more reference resources on specific translation topics and specialized courses appear. For many topics, particularly technical ones, such as oil and gas translation, knowing only two languages is not enough to be successful. This field of translation requires a broader knowledge of narrower topics. As part of the results of this research, several such reference textbooks are presented that are relevant to translators from Kazakhstan. They are compiled by our fellow countrywoman Indira Serikbay, who is a certified petroleum engineer and has extensive experience in the field of oil and gas. The textbooks were edited and reviewed by N.D. Karimov, who is an oilman and also an academician of the National Academy of Sciences of the Republic of Kazakhstan. After several years of working in an oil company, Indira Serikbay is dealing with the problems of translation of specific oil and gas terminology. To promote the development of oil and gas translation in Kazakhstan, she has compiled two textbooks in which she introduces

readers to the basics of the oil and gas industry and individual processes, also offering a glossary of terms and additional resources for studying the topic. For translators who are interested in oil and gas translation, the topic that is very relevant to Kazakhstan, it is worth starting their way in this direction with these textbooks.

Limitations

As far as limitations of the research are concerned, due to the heavy workload, not all the translators who were invited to participate in the survey were able to do so. However, the responses provided were sufficient to identify the main terminology challenges in the oil and gas topic, collect the list of terminology resources and analyze them for reliability and applicability to the identified challenges, provide a step-by-step guide and form conclusions. The other limitation concerned the availability of suggested resources. Some respondents indicated paper versions of thematic dictionaries, which could not be found and accordingly analyzed for reliability and relevance. These are *Oil and Gas Illustrated Glossary* by V.S. Belousov and *New Comprehensive English-Russian Dictionary of Oil and Gas* by E.G. Kovalenko – hardcover print edition dictionaries. However, according to the description provided at the online store, *Oil and Gas Illustrated Glossary* by V.S Belousov contains about 1,000 terms and definitions most commonly used in the oil and gas industry, as well as more than 500 illustrations. The dictionary offers not only the term and its translation, but also its explanation in English and Russian. As far as *New Comprehensive English-Russian Dictionary of Oil and Gas* by E.G. Kovalenko is concerned, according to the description it contains about 250,000 terms, word combinations, equivalents and meanings, as well as 2,250 abbreviations related to the oil and gas industry. The dictionary includes terminology from some related fields: ecology, economics, environmental protection, transport, as well as the names of relevant organizations. This also includes limited access to ISO standards, which are provided on a

fee basis. Freelance translators would not buy them, only corporate translators may request the funding to get access to these standards. Within the framework of this research, standards that were in the public domain and articles and materials on them presented on the ISO website were considered. In general, these limitations did not have a significant impact on the study.

Research Continuation

To talk about the continuation of the research in the future, the topic for further study may include the possibilities of forming a language corpus with oil and gas texts. As noted, no such language corpus has been found neither during the literature review, nor in the responses of the survey participants, nor in the follow-up independent search of terminology resources. Meanwhile, the language corpus is a valuable resource for identifying the definition and translation of terms and checking the use of terms in contexts. The other topic may concern the process of keeping dictionaries of oil and gas terms up-to-date. The oil and gas industry is constantly evolving, new technologies and standards appear, and dictionaries that were published ten years ago can no longer help with the translation of new terms. In the course of the literature review, this problem was described by some researchers. It would be interesting to consider this topic deeply, in particular, the processes and technologies that can be used to collect new terms. These two topics, the creation of language corpora and keeping dictionaries up-to-date, can be interrelated. As language corpora can be used to create dictionaries.

To summarize, the topic of oil and gas is undoubtedly very broad and complex. Similar to any other technical topic, the oil and gas topic requires additional background knowledge and constant updating of knowledge in the wake of new technologies and new processes. This is why this topic is difficult for translators, and in order to help translators in their tough work, this research was conducted, and a list of applicable reliable resources

was compiled and formatted into the step-by-step guide. All of the research questions have been thoroughly answered, and the results of this research provide practical value to working translators and to those who are still learning in translation studies departments. Terminological resources collected during the research will also be of use in the work of interpreters, to prepare for consecutive or simultaneous interpretation on the oil and gas topic, to form thematic glossaries. Overall, the results of this research can be used to get introduced with oil and gas topics, for teaching this area of translation as part of educational programs of higher educational institutions and directly to carry out translation activities.

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Appendix

Questionnaire for the Survey

This survey was created to conduct research for a master's thesis in Translation Studies. The survey is conducted among practicing translators working with the English-Russian language combination with experience in the field of technical translation, namely in the field of oil and gas.

If you do not have experience in the oil and gas field, you are kindly requested to complete this questionnaire for the purpose of generating statistical data.

The questionnaire is fully anonymous.

Let's get started

Where do you work?

- ☐ Translation agency/bureau
- ☐ Translation department of a company
- ☐ I am freelancer

Do you have experience in the oil and gas field translation?

- ☐ **Yes**
- ☐ **No**

Questions on the oil and gas field translation

If you do not have the relevant experience, please put "-" in the following fields.

How long have you been dealing with the oil and gas translation? Please specify the period.

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How often do you have to work with oil and gas translation? Choose from 1 to 5, where 1 is very rare and 5 is very often. Choose 0, if you don't have the relevant experience.

- ☐ 0
- ☐ 1

- 2
- 3
- 4
- 5

What challenges in the oil and gas translation can you note? Please specify shortly one or a few challenges.

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What resources do you use to overcome the identified difficulties? Please specify one or a few sources.

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The end!

Thank you for your participation!

Your responses will be a valuable contribution to the research.