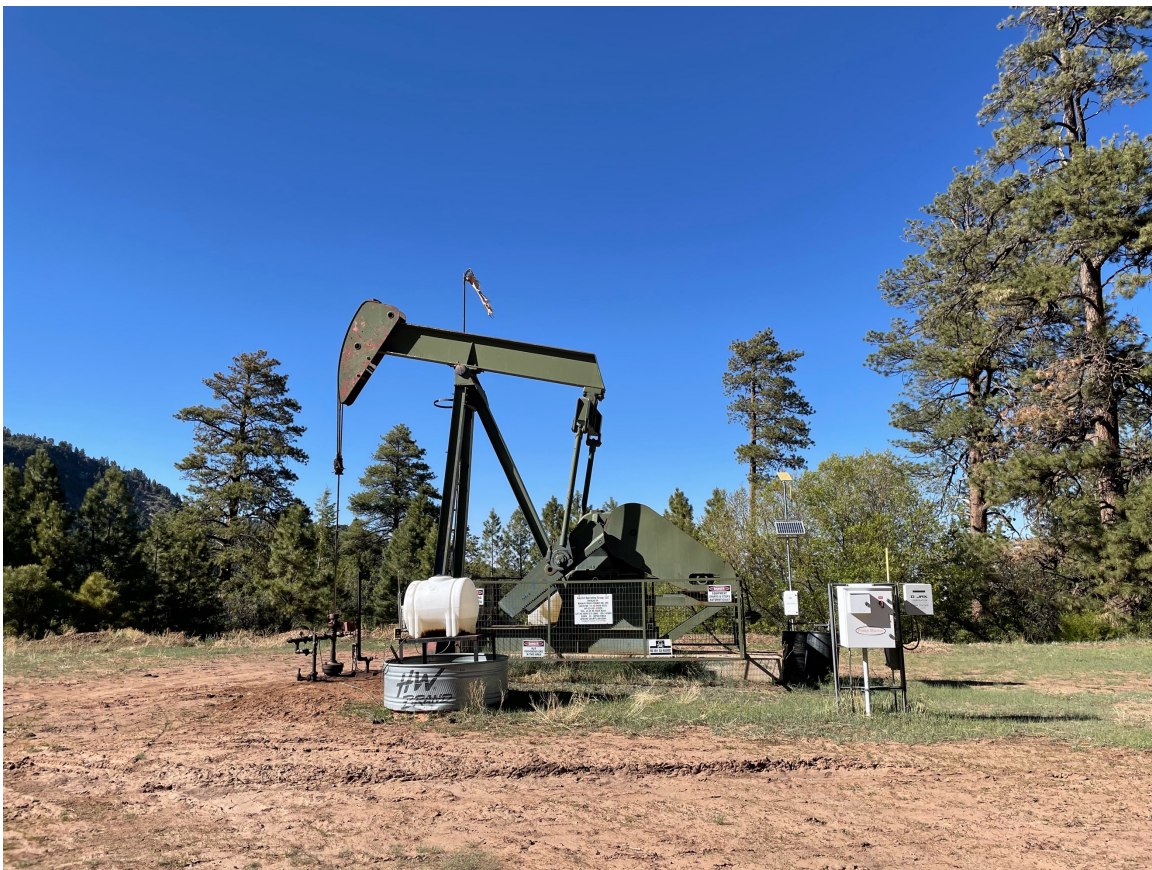


OIL, GAS, AND HELIUM OPERATIONS IN THE DINEH BI KEYAH FIELD

COMMUNITY CONCERNS AND FINDINGS



A REPORT BY DINÉ CARE

2021



Prepared by Sonia Grant, Ph.D. for Diné CARE. September 2021.

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Contact Diné CARE for questions regarding distribution and ongoing work in Red Valley.

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ACRONYMS AND ABBREVIATIONS

AQCP	Navajo Nation Air Quality Control Program
AZOGCC	Arizona Oil and Gas Conservation Commission
BLM	U.S. Bureau of Land Management
DBK	Dineh Bi Keyah
Diné CARE	Diné Citizens Against Ruining Our Environment
ESL	Effects Screening Levels
H ₂ S	Hydrogen sulfide
JOA	Joint Operating Agreement
MCF / MSCF	One Thousand Cubic Feet / One Thousand Standard Cubic Feet
Minerals	Navajo Nation Minerals Department
NNDNR	Navajo Nation Division of Natural Resources
NNEPA	Navajo Nation Environmental Protection Agency
OGI	Optical Gas Imaging
OSHA	U.S. Occupational Safety and Health Administration
ppm	Parts Per Million
SEC	Securities and Exchange Commission
TNSR	Tribal New Source Review
U.S. EPA	United States Environmental Protection Agency
WELC	Western Environmental Law Center
WRAP	Western Regional Air Partnership

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1. INTRODUCTION

The purpose of this report is to inform Navajo Nation citizens, the general public, the Navajo Nation Council, the Office of the President and Vice President, the Navajo Nation Division of Natural Resources and departments therein, the Navajo Nation Environmental Protection Agency and departments therein, federal agencies, and other relevant offices and personnel within Navajo Nation government of concerns that Diné CARE has about oil, gas, and helium extraction happening in the Dineh Bi Keyah (DBK) field located in Apache County, Arizona.

Diné CARE, Citizens Against Ruining our Environment, is an all-Navajo environmental organization, based within the Navajo homeland. We strive to educate and advocate for our traditional teachings as we protect and provide a voice for all life in the Four Sacred Mountains. We promote alternative uses of natural resources that are consistent with the Diné philosophy of Beauty Way. Our main goal is to empower local and traditional people to organize, speak out and determine their own destinies. Diné CARE - an indigenous environmental organization to protect and preserve the Diné way of life.

In the Fall of 2017, Diné CARE staff began hearing concerns from community members in Red Valley about increased truck traffic, chemical odors, and industrial activity in the Chuska Mountains and surrounding valley. Some residents no longer felt comfortable bringing their sheep up to camps in the mountains due to the odors and health symptoms they would experience with prolonged exposure, like headaches. Diné CARE began researching what was happening in the area. We visited sites in the DBK oil field, took air samples from sites that emitted strong odors, and conducted optical gas imaging (OGI) in partnership with the organization Earthworks. When OGI and independent lab analyses revealed concerning levels of air pollutants, we notified Navajo Nation EPA (NNEPA), the United States Environmental Protection Agency Region 9 (U.S. EPA), and the Navajo Nation Minerals Department (Minerals).

This report summarizes Diné CARE's findings from over four years of research and community discussions in Red Valley.

2. BACKGROUND: THE DINEH BI KEYAH FIELD

A) FIELD GEOLOGY AND EARLY EXPLORATION

Oil was discovered near Red Valley (Apache County, Arizona) in 1967 by Kerr-McGee Oil Industries (Kerr-McGee). Both Kerr-McGee and Humble Oil & Refining Company had begun acquiring leases in this area from the Navajo Tribal Council in 1964, but their first test wells were dry.

Kerr-McGee drilled its first successful well in January of 1967. The well hit promising quantities of oil, which prompted Kerr-McGee to expand its operations in the area, eventually defining an oil field. Located on the Toadlena Anticline of the Colorado Plateau, the ~3,000-acre field was given the name Dineh Bi Keyah (DBK), "The People's Field", upon the suggestion of Raymond Nakai, then Chairman of the Navajo Tribal Council.

Called "Navajo #1", Kerr-McGee's first well began producing 648 barrels of oil per day and later produced more than 1,800 barrels of oil and 135,000 cubic feet of gas per day.ⁱ

Kerr-McGee had first attempted to extract petroleum from Navajo #1 in 1965. At the time, the company had drilled into granite nearly 4,000 feet deep, and again into sandstone at 590-880 feet. When these attempts were unsuccessful, the company temporarily abandoned the well.

In early 1967, Kerr-McGee decided to reenter Navajo #1 at a different depth. This decision was based on a review of well logs and the hunch of a geologist on the Kerr-McGee team. The well interval at 2,860-2,885 feet was perforated and came up dry. Engineers decided to acidize the well. It still came up dry. Finally, Kerr-McGee authorized a frack job. The well was fracked with 10,000 gallons of oil and 10,000 gallons of sand, which opened the rock containing oil.ⁱⁱ

Test it. Acidize it. Frac it.

John A. Masters, who worked for Kerr-McGee in the 1960s, reminisced on his "discovery" of the DBK field as follows. His recollections show how, from the early days, the DBK field has been a site of experimentation.

"In 1967, I found Dineh-bi-keyah, Field of the People, on the Navajo Reservation, right in the uranium area I had worked so intensively. I did this by myself, with an idea that came to me alone on a Saturday afternoon in the Kerr-McGee office in Oklahoma City. I had left Arizona 14 years before and hadn't thought much about the area since then. But that Saturday afternoon, my subconscious mind finally put together a geologic picture it had probably been wrestling with for the whole 14 years. Suddenly, in a single flash, I saw all the data in my memory rearranged into a convincing regional structural picture. It formed a huge buried anticline 35 miles long under most of the uranium area I had worked so long ago. It was probably the largest undrilled anticline left in the United States. It was virtually invisible to anyone who had not walked and jeeped over nearly every mile of that structure. Indeed, it had stayed invisible to me for 14 years.

On that Monday, I went to Mr. McGee. He asked me about 20 serious, probing questions and then said, "OK." He was the clearest-thinking, most decisive man I've ever known. We drilled it and found no conventional reservoir rock, but it did have an igneous sill at 2,800 feet — with good oil shows. Everyone wanted to plug it. McGee had sat a lot of wells as a young geologist for Phillips. This time, he didn't pay much attention to the rock type, the correlations, or the structural position. He was fixated on the oil show. He said, "**Test it.**" No oil. He said, "**Acidize it.**" No oil. Then he said, "**Frac it.**" The well came in for 648 BOPD of 45° API gravity oil. We drilled 31 wells which produced an average of more than 500,000 barrels each from 2800 feet. Total production was nearly 20 million barrels.

That was my igneous intrusive field, mine and Mr. McGee's — a **screwball, one of a kind**. The rule learned from that was that you don't have to be entirely right — just right enough, and ahead of everyone else. And work for someone like Dean McGee".ⁱ

The discovery of oil at this depth, in an igneous rock, came as a surprise to geologists at the time. Most hydrocarbons are found in sedimentary rock formations, like sandstone, limestone, and shale. These formations tend to be porous, meaning that they contain small empty spaces where oil and gas can be trapped. Igneous rocks, on the other hand, tend to be non-porous, with some exceptions.

In the case of the DBK field, oil is produced from a syenite sill that intruded into limestones and shales formed during the Pennsylvanian era, some 300 million years ago.ⁱⁱⁱ The sill itself dates to the Tertiary era, some 66-2.6 million years ago, and is unusually porous.^{iv} Kerr-McGee geologists suspect that the intrusion of the sill raised the temperature of the shale, which was the source rock, and caused hydrocarbons to migrate into the syenite sill where it was found.^v

Sedimentary rocks form from the accumulation of the Earth's matter, when particles settle out of water, precipitation, or air. Hydrocarbons are typically extracted from sedimentary rocks, including limestone, sandstone, and shale. These rocks tend to be porous, to a greater or lesser degree. Oil and natural gas get trapped in the pores of the rock.

Igneous rocks form when magma solidifies. Examples include granite, basalt, obsidian. Igneous rocks tend to be crystalline and non-porous. While igneous rocks are now known to sometimes contain hydrocarbon resources, the occurrence of a viable oil or gas source is rarer in igneous rocks than in sedimentary rocks.

In July of 1967, Kerr-McGee completed a 33-mile pipeline to transport oil from its producing wells in the DBK field to Shiprock, where it connected to the Four Corners pipeline. Whereas oil had previously been trucked to Shiprock, the construction of the pipeline expanded Kerr-McGee's ability to bring DBK oil to market.^{vi} The Navajo Times reported in August 1967 that Kerr-McGee was sending the oil it produced to several refineries in Los Angeles, California.^{vii}

The surprising discovery of oil near Red Valley caused some to refer to the DBK field as a "geological freak".^{viii} The Navajo Times, for example, described the field's syenite sill as follows:

"This freak, which experts say "should not exist", offers the promise that Arizona will soon be numbered among the major oil-producing states, and it offers new hope for economic security to the Navajo Nation".^{ix}

Navajo Tribal officials expressed enthusiasm for Kerr-McGee's discovery and ongoing development. Chairman Nakai was quoted in the Navajo Times in September 1967:

"This new field will cause reevaluation of all the existing data regarding oil. I am glad to report that this new discovery revives the interest in our Navajo reservation which has become very dormant. I am told this is the first meaningful discovery of oil in Arizona"^x

Not only did leasing and drilling in the DBK field generate significant revenue for the Navajo Tribe: the excitement around the DBK oil discovery also made the oil and gas leasing market more competitive throughout the Four Corners region. In June 1967, for example, months after Kerr-McGee's spudding of Navajo #1, oil and gas companies offered bonus bids of \$1.2 million for leases on the Navajo Nation in the Four Corners region.^{xi}

B) DBK IN CONTEXT

The DBK field became the largest producing oil field in Arizona and produced nearly 20 million barrels of oil, a significant quantity for a field its size.^{xii} But despite early fanfare, the DBK field did not launch Arizona into the ranks of top oil-producing states.

By late 1981, 18 million barrels of oil had been extracted in Arizona, 89% of which came from the DBK field. More than 88% of all oil extracted in Arizona by 2001 (22.5 million barrels) came from the DBK field. In fact, all oil extracted in Arizona comes from Diné lands.^{xiii}

Oil production in Arizona peaked around 1970, after which it began a sharp decline from which it has not recovered.^{xiv} The DBK field was largely depleted by 2000, but still produces oil and gas in small quantities from twenty wells. Today, the primary extractive interest in the DBK field is helium.

Kerr-McGee's Secondary Recovery Program

In the late 1970s, Kerr-McGee sought – and seems to have obtained – permission from the AZOGCC for a “secondary recovery program” in the DBK field. The secondary recovery program was a proposal to inject salt water into the underground Hermosa formation to facilitate oil extraction.¹ This hydraulic fracturing technique was used on wells Navajo #21, #23, and #24.¹

C) CULTURAL RESOURCES SURVEYS AT DBK

EARLY PRODUCTION

In the old well files maintained by the Arizona Oil and Gas Conservation Commission, the only record of a cultural resources survey in the DBK area is of a survey conducted for Kerr-McGee in 1980. The survey was requested by Victor Eaton of Atchison Construction. Eaton worked as a heavy equipment operator for several construction companies in the Four Corners.^{xv} From the records, it can be deduced that Atchison Construction was hired by Kerr-McGee to build or improve access roads and to construct new well pads.

The survey was completed by the Division of Conservation Archaeology (DCA) at the San Juan County Museum Association (New Mexico) for six well sites and associated access roads, including wells Navajo 25, Navajo 26, Navajo 27, Navajo 88-3, Navajo 88-6, and Navajo 138-3. DCA archeologist Margaret Powers conducted the survey and was accompanied by Kames O’Leary of Kerr-McGee, Victor Eaton of Atchison Construction, and Dave Bahe and Ron Milford of the Bureau of Indian Affairs forestry office in Fort Defiance, Arizona.

The survey was conducted in December 1980, with a follow-up in January 1981 due to extensive snow cover during the initial survey.

Methods: The archaeologist surveyed the well pads as well as a 50-foot “buffer zone” around each pad. Note that today, the standard buffer zone around a well pad is 100 feet, which is often still insufficient for understanding the impact of a well pad on cultural resources.^{xvi} The archeologist surveyed the proposed access roads and a buffer zone of 35 feet on each side of the proposed roads and conducted a record search at the San Juan County Archeological Research Center to determine if cultural sites had been previously noted. The archeologist recorded “cultural remains” observed during the survey.

Findings: The archeologist noted that the proposed activities would take place in the northeastern flanks of the Chuska Mountains in the headwaters of Standing Red Rock Creek. The setting is a mixed forest consisting of Ponderosa Pine, Aspen, and Douglas Fir, with an understory dominated by snowberry. Logging activities were evident throughout the area. The archeologist noted signs of deer, squirrel, rabbit, and porcupine during the survey.

In terms of “cultural remains”, the archeologist found mostly then-contemporary items like soda pop cans or coffee lids. On the proposed site for Navajo #26, the archeologist found “a modern Navajo construction” described as a “small sweathouse-like structure”, estimated to be 5-20 years old in 1981. This structure was marked and recommended for avoidance. If the site could not be avoided, the DCA recommended that an “ethnographer and informant visit the site to obtain better functional assessment” prior to construction of the well pad and presumed demolition of the structure.

All pads, wells, and access roads were recommended for archeological clearance.

21ST CENTURY HELIUM PRODUCTION

Because most files for 21st century operations in the DBK field are not available (see Sections 6 and 7) it is unclear whether further cultural resources surveys were conducted by the Navajo Historic Preservation Department, the Bureau of Indian Affairs, the operator, or other entities when the DBK field was reworked for helium extraction.

The DBK field sits in the Chuska Mountains, an area of great importance to local communities and to Diné people. In 2018, the Red Valley Chapter passed a resolution expressing concerns regarding operations in the DBK field. The resolution described the importance of the area as follows:

“The Chuska, Fort Defiance and Carrizo mountains are known to the Dine' as the holy male deity Ch'ooshgai, and as such deserves respect, protection, diligent care, and restoration, in accordance with section B of Dine' Bi Beenahaz'aannii (1 N.N.C. § 201-201§ 5. Nahasdz'áanii – Dine' Natural Law 1. N.N. C. § 205): “The six sacred mountains, Sisnajiini, Tsoodzil, Dook'o'oosliid, Dibe' Nitsaa, Dzil Na'oodilii, Dxil Ch'ool'I'I', and all the attendant mountains must be respected, honored and protected for they, as leaders, are the foundations of the Navajo Nation”.^{xvii}

3. OIL, GAS, AND HELIUM OPERATORS IN THE DBK FIELD

A) THE KERR-MCGEE YEARS: 1967 - 1994

Between 1967-1973, the top operators in the DBK field were Kerr-McGee and Humble. Kerr-McGee operated most of the field until 1994, when Mountain States Petroleum took over operations, followed by Nacogdoches and then Capitol Operating Group.

Kerr-McGee Oil Industries, Inc. acquired its leases in the DBK area in 1964 and 1965. While the DBK field itself is relatively small, by 1967 Kerr-McGee had acquired 47,000 acres in leases in the Four Corners area.^{xviii} The company drilled a total of 31 wells in the DBK field. Kerr-McGee Oil Industries changed its name to Kerr-McGee Corporation in 1965, after acquiring its DBK leases.^{xix} The company has a reputation on the Navajo Nation that extends far beyond the DBK field for its role in the destructive practice of uranium mining.

Humble Oil & Refining Company, Inc. acquired its leases in the DBK area in 1964 and 1965. Shortly thereafter, Humble would merge with Standard Oil and become Exxon Corporation in 1973. Humble drilled a total of 8 wells in the DBK field and along with Kerr-McGee, was one of the major investors and operators in the field. Prior to its assumption into Exxon Corporation, Humble sold its leases and assets in the DBK field, including title and operating rights, to Kerr-McGee in 1972. This transfer was approved and formalized in 1973.

Mesa Petroleum completed one well, "Navajo 1B", in 1970. It was "very dry". The company plugged and abandoned it shortly thereafter.

Anadarko Petroleum completed one well, "Navajo-135", in 1967. It did not strike oil, however the company noted high concentrations of helium in the gas (+6%). Anadarko plugged and abandoned the well shortly thereafter.

Pan American completed one well, "Navajo AE", in 1968. It came up dry and was plugged and abandoned shortly after.

Continental, RMC, Z&D, and Beta Exploration

A handful of other companies drilled wells in the early years of DBK exploration in search of oil. For example, four different companies attempted and failed to extract petroleum from the now abandoned well "Navajo 2XE". The first attempt was made by Continental Energy Corporation in 1969. The well came up dry and was plugged and abandoned shortly thereafter. Two years later, in 1971, Republic Mineral Corporation obtained permission to reenter Navajo 2XE. The well again came up dry, and RMC abandoned it. In 1973, Zoller & Danneberg obtained permission to reenter the well, but they too were unsuccessful, and soon plugged and abandoned it. Finally, in 1975, Beta Exploration reentered the well and was unable to strike oil. The well was plugged and abandoned.

B) POST KERR-MCGEE: 1994-2021

Mountain States Petroleum Corporation acquired title and operating rights to all of Kerr-McGee's leases in 1994. Mountain States was a New Mexico corporation with its primary places of business in Farmington and Roswell.^{xx} No records can be obtained as to its status in 2021. It seems that Mountain States was acquired by Apollo Resources International in late 2008.^{xxi} Apollo Resources

International was a Utah corporation based in Dallas, Texas that was attempting to go private in 2007 around the time of the financial crash. In 2011, the U.S. Securities and Exchange Commission (SEC) revoked Apollo's registration with the SEC for failure to comply with the Exchange Act. Specifically, Apollo had failed to file required periodic reports with the SEC since 2006. It appears that Apollo is now defunct.^{xxii}

Neptune Leasing Inc. is a Texas-based company that owned and operated a helium processing plant from an unknown period until 2006, at which point it sold it to Mountain States (lease records for Neptune are not available). As part of the sale, Neptune negotiated a payment plan with Mountain States. However, one year after the purchase of the plant, Mountain States sold the plant to Nacogdoches Oil and Gas Inc. Neptune sued Mountain States and Nacogdoches in Shiprock District Court, which said it did not have jurisdiction in the case. Neptune appealed to the Navajo Nation Supreme Court. In an important decision, Chief Justice Herb Yazzie ruled that the Court did indeed have jurisdiction in the case and remanded the matter to the Shiprock District Court. Despite multiple requests, Diné CARE was not able to obtain records of the case once it was remanded to the District Court. See *Neptune Leasing, Inc. v. Mountain States* (No. SC-CV-24-10) and section 6d of this report.

Nacogdoches Oil and Gas Inc. acquired title and operating rights to all of Mountain States' assets in the DBK field in 2008, just before Apollo acquired Mountain States. Nacogdoches is a small Texas-based company. In 2014, the company operated 103 oil and gas wells in the Southwest, 51 of which were located on the Navajo Reservation. The company reported that while only half of its infrastructure was located on the Reservation, 91% of its total production and revenue came from its Navajo operations.^{xxiii}

NASCO is a company in the business of locating, acquiring, and operating helium fields in the United States. As of 2021, its estimated net worth is \$121.5 million.^{xxiv} NASCO began investing in the DBK field in 2015, and its share in the field has grown from approximately 20-80% between 2015-2021.^{xxv} NASCO is based in Hamburg, Germany, and is especially active in the United States. By some estimates, NASCO is the largest helium producer in the United States. Notably, NASCO is a joint partner in other helium ventures on and near Diné lands in the Hogback area (San Juan County, New Mexico) and Boundary Butte area (San Juan County, Utah).^{xxvi} February 2020, NASCO completed an \$83 million securitization transaction to refinance its debt associated with the DBK Helium Project, effectively raising \$83 million in investor-grade financing against its assets.^{xxvii} The Deputy Chairman of NASCO, the person responsible for the company's operations in the United States, is David Burns.

Capitol Operating Group, LLC assumed control over operations in the DBK field in 2016, as per the terms of a Joint Operating Agreement between Capitol, Nacogdoches, and Nordic 2. Capitol is owned by NASCO and its president is David Burns. Capitol has contracted its affiliated, DB(K) Helium LLC to operate an ACMS helium processing plant that was brought online in 2019. Capitol also operates the Boundary Butte Project in San Juan County, Utah, which it took over from Nacogdoches. Capitol is based in Lafayette, Louisiana.

DB(K) Helium, LLC is retained by Capitol Operating Group to operate the AMCS helium processing plant in the DBK field, as per the terms of a 2019 Master Services Agreement. DB(K) and Capitol are affiliate entities with identical ownership structures – effectively the same company with a different name.^{xxviii}

Nordic Oil USA 4 LLC (Nordic 4) and **Nordic Oil USA 2 LLP (Nordic 2)** together own the leasing and operating rights in the DBK field. They began acquiring these interests in 2016. Nordic 4 and Nordic 2 are both owned by NASCO.

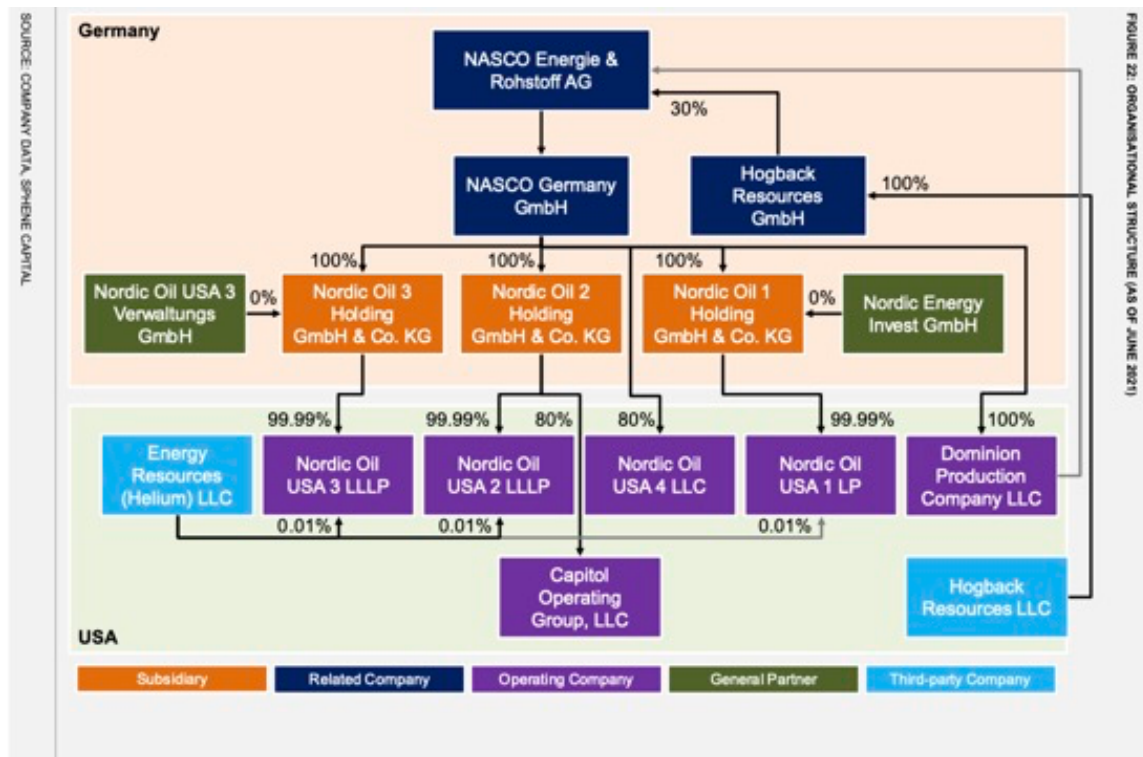


Figure 1 – NASCO's organizational structure as of 2021. Image from Hasler, Spheene Capital, 2021.

4. HELIUM IN THE DBK FIELD

A) HELIUM POTENTIAL AND HISTORY

Geologists and oil companies recognized the helium potential of the DBK field early in the field's development. Helium is generally considered to be worth extracting if it is present in natural gas in quantities of 0.3% or greater. Most oil and gas fields only contain minuscule traces of helium, at approximately 0.05%.^{xxxix} By contrast, initial tests of the gas produced from several wells in the DBK field revealed exceptionally high concentrations of helium, averaging 4.2% in the igneous sill (a layer of rock that forms between two preexisting rock layers) that produces oil, to 4.8%-5.6% in a sandstone formation 500 feet beneath the sill.^{xxx} In 2019, the estimated average helium concentration in producing wells in the DBK field was 4.9%, a very high concentration.^{xxxi}

There was not a viable commercial market for helium in the late 1960s when Kerr-McGee, Humble, and other companies took note of the high concentrations of the gas in the DBK field. Kerr-McGee completed two wells in the helium-bearing sandstone in 1967 (Navajo C2 and B2), but temporarily shut them in.^{xxxii} Today, Capitol Operating Group extracts helium from these wells.

Helium production from the DBK field did not begin until 2003, under Mountain States Petroleum, a company that acquired title and operating rights to all of Kerr-McGee's leases in 1994. When it entered the helium market, Mountain States shipped natural gas through a pipeline to Newpoint Gas Services' helium processing plant near Shiprock.^{xxxiii}

Nacogdoches Oil and Gas Inc and then Capitol Operating Group took over Mountain States' helium operations in the DBK field between 2008-2016 (see Section 4b-c and Appendix I). Today, Capitol operates a total of eight helium wells in the DBK field. These eight wells were deepened in 2017 to extract a total of 400,000 MCF (one thousand cubic feet) of helium per day. Capitol Operating Group contracted a local company, Drake Drilling Services, to help rework the wells.^{xxxivxxxv}

B) NASCO HELIUM PROCESSING FACILITIES DBK HELIUM PROJECT

Oil, gas, and helium extraction in the DBK field today fall under one name: "NASCO Helium Processing Facilities DBK Helium Project" - or the "DBK Helium Project" for short. The DBK Helium Project has a complex corporate structure, with many small and larger corporate actors operating in tandem through a Joint Operating Agreement, a Master Services Agreement, and several leasing agreements. The land comprising the DBK Helium Project is calculated at 8,690 acres.

Controlling Shareholder: NASCO is the controlling shareholder in the DBK Helium Project. Specifically, NASCO controls 80% of Capitol Operating Group, LLC, the company operating the DBK field, and holds 60% of the leases.^{xxxvi}

Working Interest: Nordic 4 and Nordic 2 own 25% and 75% of the *working interest* in the DBK Helium Project, respectively. Working interest is a form of investment that includes all the costs of production.

Operating rights: Capitol Operating Group, LLC, has operating rights in the DBK field. Capitol is owned by NASCO and controlled by NASCO and Nordic 2.

C) JOINT OPERATING AGREEMENT

On September 30, 2016, Nordic 2 executed a Joint Operating Agreement (JOA) with Capitol Operating Group LLC and Nacogdoches Oil and Gas Inc. The JOA authorized Capitol Operating Group to have total operating control over the DBK field, including operation of the wells and future drilling and exploration. In 2019, Nordic 4 purchased Nacogdoches' 25% stake in the DBK field. Nordic 2 and Nordic 4 now owned all title and operating rights.

David Burns

Burns is the CEO of the entire DBK Helium David Project and a central figure in all the companies involved in the project. Burns' companies are based in Arizona, Louisiana, Utah, and Germany.¹ He is the Deputy Chairman of NASCO, the controlling shareholder of the entire DBK Helium Project. Burns is also the Manager of Nordic 4 and the CEO of Nordic 2, the two companies that own full working interest in the DBK Helium Project. He is the Manager and Director of Capitol Operating Group, the company who operates the field, and CEO of DB(K) Helium, member of Capitol and operator of the field's AMCS Plant. Burns is also the founder of Dominion Production Company, LLC.¹

In 2019, Nordic 2 and Nordic 4 brought a new AMCS helium processing plant online. AMCS Corporation specializes in providing equipment to the oil and gas. An AMCS plant is a facility made from AMCS equipment and processes. Capitol contracted DB(K) Helium LLC to operate the plant. DB(K) Helium LLC leases some of the equipment from Shiprock Helium LP, who also installed the plant. Under direction of NASCO, Nordic 2 and Nordic 4 began planning the plant in 2016.^{xxxvii}

Nordic 2 leases 18 helium trailers from Specialty Trailer Leasing, Inc and P-Leasing, Inc. Power for the AMCS Plant is provided by the Navajo Tribal Utility Authority.

D) HELIUM PROCESSING

There are two helium processing plants in the DBK field, where helium is removed from the natural gas stream, purified, compressed, and prepared for shipment and sale:

AMCS Helium Extraction Plant: Operated by DB(K) Helium, LLC, a subsidiary of Capitol Operating Group. In January 2019, Nordic 2 and Nordic 4 brought this plant online. As of May 2019, DB(K) is responsible for operating the plant as per the terms of a Master Services Agreement between Capitol and DB(K), whereby DB(K) is retained by Capitol to operate the plant, remove helium from the natural gas stream, and purify the helium to 98.85% purity.^{xxxviii} The plant uses cryogenic technology designed by AMCS corporation and allows the DBK Helium Project to more than double its production from the field. DB(K) leases the AMCS Plant equipment from Shiprock Helium, LP, an affiliate of Nacogdoches Oil and Gas Inc. based in Texas.^{xxxix} There were several malfunctions with the plant when DB(K) brought it online in 2019, which required DB(K) to invest an additional \$1 million in repairs.^{xl}

Before the natural gas extracted from helium wells in the DBK field is fed into the AMCS plant, it passes through particulate matter removal equipment to get rid of large impurities. Then, it enters the Plant where the first step is to pass through a Pressure Swing Absorption system that removes carbon dioxide from the gas. Then, the gas is cooled using nitrogen. Next, the nitrogen

is removed. Finally, the remaining gas passes through a Temperature Swing Absorption system to remove hydrocarbons. What is left is purified helium, which is compressed into helium trailers. These helium trailers are delivered to Praxair, who purchases the helium.

IACX Energy Plant: Owned and operated separately from the entities that run the DBK Helium Project under the JOA. It is not used when the AMCS Plant is in operation, but additional capacity from the plant can be procured as backup by DB(K) when needed. Like AMCS, IACX is a corporation that provides oil, gas, and helium processing equipment to the private sector. According to IACX's website, it has installed two Helium Recovery Units at the DBK field.^{xii} Very little information is publicly available about this plant. It is adjacent to the newer AMCS Plant.

E) PURCHASE AGREEMENTS

Nordic 2 entered into an agreement with Praxair Inc. in 2016. Praxair merged with and became a subsidiary of British multinational chemical company Linde in 2020. Nordic's agreement with Praxair/Linde will remain in effect until 2031, after which it can be renewed for one-year terms.

The agreement lays out minimum and maximum monthly purchase agreements of helium from the DBK field. Full details of the purchase agreement are not publicly available. There are inconsistencies in mentions of the purchase agreement between a 2019 technical due diligence report filled with the SEC by Nordic 2 and a 2021 valuation report prepared for NASCO.^{xlii} According to the 2021 valuation report, NASCO has an obligation to supply a minimum monthly production volume of 5 million cubic feet of helium to Linde.

The Navajo Nation collects a royalty of 16.67% on the value of minerals produced from the DBK field (see Appendix VII, Lease Assignments).

F) JURISDICTION

DBK Helium Project operations occur on Navajo Nation Tribal Trust land. Both the surface and subsurface land (mineral estate) are in trust. As detailed in Appendix I, VI, and VII, the five leases that comprise the DBK Helium Project were granted by the Chairman of the Navajo Nation Council in the mid 1960s and are currently administered by the Navajo Nation Minerals Department (Minerals).

As per numerous conversations with tribal, state, and federal officials Diné CARE has determined that the following agencies have jurisdiction over operations in the DBK field:

Navajo Nation Division of Natural Resources

Departments within NNDNR (Water, Resource Enforcement, Land, Parks, Historic Preservation, Forestry, Fish & Wildlife, Abandoned Mine Lands, Agriculture, and Minerals) are responsible for reviewing permits.

- Minerals is responsible for making sure that tribal and federal laws are followed when it comes to mineral development on the Navajo Nation. Minerals has an Oil and Gas Inspection Program through which staff inspect every well operating on the Navajo Nation at least once annually.
- Minerals has the authority to issue a "Notice of Incident of Non-Compliance" but has yet to do so for any facility in the DBK field.^{xliii} In a conversation with Minerals Manager Rowena Cheromiah on August 9th, 2021, Cheromiah informed the author that Minerals does not have enforcement authority in the event of a violation.

- If an operator fails to come into compliance after a notice is issued, Minerals will seek federal support for enforcement from an agency within the Department of the Interior – in this case from the Bureau of Land Management Farmington Field Office.
- Minerals administers the leases, updates to lease terms, and royalty payments.

Navajo Nation Environmental Protection Agency

NNEPA is charged with protecting human health, welfare, and the environment of the Navajo Nation. NNEPA's Air Toxics Department hosts the Air Quality Control Program (AQCP), which operates with funding from U.S. EPA Region 9.

- NNEPA AQCP has a responsibility to conduct environmental education and outreach in English and Navajo. Staff from the program have previously held an information session at Red Valley Chapter regarding activities in the DBK field and could do so again.
- NNEPA AQCP oversees the Navajo Nation's implementation of the Clean Air Act.
- NNEPA is in the process of finalizing new regulations for "minor sources" of air pollution. A source is considered a "minor source" if it emits above a certain threshold of pollutants (see Figure 2) but below the threshold for what the Clean Air Act defines as a major source. Once this rule is approved by the U.S. EPA Administrator, it will give NNEPA the authority to require that existing minor sources obtain a registration permit. New sources will be required to apply for a preconstruction and operating permit.^{xliv}
- Until NNEPA's minor source rule is in place, the AQCP likely does not have jurisdiction to require permits or registrations from operators in the DBK field, but it is well within the scope of the agency's mission to assist communities by providing education and to respond to concerns regarding poor air quality.

Minor Tribal New Source Review Rule Thresholds (came into effect in 2011 as part of U.S. EPA's Federal Implementation Plan for Indian Country, 40 CFR 49)^{xlv}

Regulated NSR Pollutant	For Nonattainment Areas (tpy)	For Attainment Areas (tpy)
Carbon monoxide (CO)	5	10
Oxides of nitrogen (NO _x)	5	10
Sulfur dioxide (SO ₂)	5	10
Volatile organic compounds (VOC)	2	5
PM	5	10
PM-10	1	5
PM-2.5	0.6	3
Lead	0.1	0.1
Fluorides	NA	1
Sulfuric acid mist	NA	2
Hydrogen sulfide (H ₂ S)	NA	2
Total reduced sulfur (including H ₂ S)	NA	2
Reduced sulfur compounds (including H ₂ S)	NA	2
Municipal waste combustor emissions	NA	2
Municipal solid waste landfills emissions	NA	10

Figure 2 - Minor Tribal New Source Review Rule Thresholds, U.S. EPA.^{xlvi}

U.S. EPA Region 9

- Until NNEPA finalizes its minor source rule, U.S. EPA Region 9 will continue to administer the Clean Air Act's Tribal New Source Review rule. However, as per emissions estimates that U.S. EPA received from DBK operators, facilities in the DBK field emit well under the TNSR threshold.^{xlvii} Because they do not currently count as "minor sources", they are not required to register with U.S. EPA. These sources of pollution effectively fall through the cracks.
- U.S. EPA Region 9 may have jurisdiction to require DBK operators to submit a "Spill Prevention, Countermeasure, and Control Plan" for its facilities, should it be determined that these facilities can reasonably be expected to discharge oil into navigable waters of the United States. Following multiple discharge incidents observed by Diné CARE (see Section 4b), U.S. EPA Region 9 is currently assessing whether it has jurisdiction in this matter.

Arizona Oil and Gas Conservation Commission (AZOGCC)

- AZOGCC does not have permitting authority over wells in the DBK field.
- AZOGCC does however maintain a map of current and historic wells in Arizona, including wells in the DBK field, which can be accessed on the [AZOGCC website](#). The map links to historic well files that were previously maintained and digitized by the Arizona Geological Survey. The Arizona Geological Survey was housed under AZOGCC prior to 2016. Well files for DBK facilities available through this tool have not been updated since 2016. Updated files should be housed with the Navajo Nation Minerals Department.
- Production data for wells operating in Arizona can be requested from AZOGCC.

This summary may not be comprehensive of all entities that have regulatory or enforcement authority regarding oil, gas, and helium operations in the DBK field, and may not comprehensively list the existing or potential powers of each agency. Because jurisdiction over extraction in the DBK field is split across multiple tribal and federal agencies, and because the documentary record regarding extraction also appears to be scattered across these agencies and/or missing in some cases, it has been extremely challenging for Diné CARE and local community members to ascertain exactly who is responsible for ensuring that extraction in this area meets all health, safety, and environmental standards. See Sections 6 and 7 for further discussion.

5. COMMUNITY CONCERNS

The Red Valley community has had concerns about operations in the DBK field for decades. Community mobilization has flashed up in two moments – 1978 and 2017-present – when technological innovations brought increased traffic and impacts to the area.

A) SECONDARY RECOVERY PROGRAM: 1978

While early development in the DBK field brought significant revenue to the Navajo Nation, residents saw little benefit. In 1978, residents of Red Valley Chapter began to speak out about the negative impacts of oil and gas operations. This coincided with Kerr-McGee's secondary recovery program, which brought increased truck traffic and drilling operations into the Red Valley community.^{xlviii}

Six Red Valley families whose water, livestock, and grazing areas were directly affected by the drilling began meeting in one another's homes to discuss their concerns. Soon, these families brought their concerns to the Red Valley Chapter. An estimated 25 families were directly affected by the drilling activities, while others were affected simply by virtue of living within the Red Valley community.

On May 9th, 1978, Red Valley Chapter approved a list of demands to be presented to Kerr-McGee, who was at the time the most active operator in the DBK field. The demands included:

- Kerr-McGee must notify Chapter residents of a "dry hole" from which oil cannot be produced, but which could produce domestic water for local use. Kerr-McGee should work with residents to complete this well with pumping equipment.
- Kerr-McGee must work with residents and relevant agencies to provide running water, electricity, and natural gas to residents who live within a reasonable distance from the DBK field.
- Kerr-McGee must quickly settle any valid claims presented to the leases, which will be screened by a committee of three local residents.
- Kerr-McGee must exercise every precaution to avoid causing environmental contamination.
- Kerr-McGee must assist in improving existing roads to oil wells and residences in the oil field area and must fence in all producing wells.
- Kerr-McGee must restore a spring that was damaged by a bulldozer (located near Frank Bluehouse's residence).
- Prior to beginning any new drilling operations, Kerr-McGee must obtain the consent of families who have grazing rights in the lease area.
- Kerr-McGee must agree to allow damage claims from oil and gas development to be screened by a 3-person committee appointed by Red Valley Chapter.
- In consultation with the families who have grazing rights in the area, Kerr-McGee must install cattle guards and culverts wherever needed. Kerr-McGee will incur the costs of installation.
- Kerr-McGee shall give employment preference to qualified applicants from families who have grazing permits within the lease area, without consideration of sex.

In August 1978, the *Navajo Times* covered the controversial development in the DBK field. At that time, Kerr-McGee had yet to respond to the demands of the Red Valley Chapter.^{xlix} It is unclear

from the record whether the company ever did. Residents interviewed by the *Navajo Times* shared the following comments regarding extraction in the DBK field:

"There used to be good livestock grazing up there, but that has changed. Mary Nakai had a good healthy herd of sheep before, but now the sheep don't look very good. I think it's due to the oil drilling and all the pollution."

– James Taylor, community grazing board representative

"The smell of oil gives us all headaches and always makes me feel sick in the stomach. Our animals get sick from the water pollution and the chemicals the companies leave around. And we never get any money in compensation for the damage they cause. I just wish they wouldn't drill anymore"

– Alice Lee, resident with grazing rights in lease area

"I don't know how the people up there can stand it. The smell is so bad, especially in the summer, that it makes you sick."

– Ella Taylor, Red Valley Chapter Secretary

B) HELIUM: 2017

Red Valley residents became concerned about increased activity in the DBK field around 2017, shortly after a Joint Operating Agreement was signed between Nordic 2, Nacogdoches, and Capitol Operating Group, giving Capitol Operating Group full control of operations in the DBK field as part of the DBK Helium Project. The field would have begun to see increased activity not long after the signing of the Joint Operating Agreement.

In March 2018, Red Valley Chapter passed a resolution (24 in favor, 0 against, 2 abstained), in which it requested that several federal and Navajo Nation agencies "formally investigate oil and gas operations at the Dineh Bi Keyah Oil Field in Red Valley, AZ and to remediate health and safety concerns and complaints brought forth by residents and community members of the Red Valley Chapter". The resolution, along with a supportive resolution from Tsaiile/Wheatfields, is attached in Appendix IV. In summary, Red Valley Chapter expressed the following concerns:

- Residents are observing an "apparent rapid apparent increase in helium production and are hearing reports that Navajo Nation is entering into new contracts for helium extraction in the area, about which residents and chapter officials have been given no information".
- Residents of the Red Valley Chapter "that have homesite and grazing permits near the DBK Oil Field and within the Navajo Nation Forestlands, and Chuska Mountain Range, have complaints about the strong, foul smelling fumes and emissions from the DBK oil field, including loud noises, and bright lights on during the night".
- "Residents and community members have complaints about the heavy traffic that oil and gas operators of the DBK field have brought to community roads in the mountains and in the valley. Mountain dirt roads are showing signs of erosion, and oil/gas truck traffic restricts community use and access". The resolution goes on to note that some roads have been blocked off by construction materials, restricting community access to homesites and traditional herbs and medicines. Lastly, the resolution indicates that oil and gas contractors have begun using the BIA-

maintained school bus road instead of their own access roads, which puts the community at risk.

- "In 2005, there was a large oil spill that came from an oil well in the DBK field. Residents do not feel the cleanup and remediation was properly addressed."
- Powerlines have been "knocked down and electrocuted livestock and wildlife".
- Not enough has been done by the Navajo Nation, its departments, and BIA to monitor the safety of operations in the DBK field. Residents note concerns about air quality.
- "Residents that have homesites and grazing permits near the oil field, have noticed the increase of headaches at their summer sheep composites in the mountains."

As is evident from these concerns articulated by the Red Valley Community in 1978 and again in 2018, there are longstanding issues with DBK operations that have gone unaddressed by operators and regulators.

6. DINÉ CARE FINDINGS

Diné CARE hosted a table at the 2017 Navajo Nation Fair in Window Rock. It was then that staff were first approached by community members from Red Valley who were concerned about the potential impacts from increased oil and gas extraction happening in the Chuska Mountains. Residents noticed increased truck traffic, strong foul odors, and traces of oil residue in surface water. Diné CARE began conducting research and field visits in the area in the Fall of 2017 to gather information for the community.

In January 2018, we were accompanied for the first time by certified thermographers from Earthworks. Earthworks is a national non-profit organization dedicated to protecting communities and the environment from the adverse impacts of mineral and energy development while promoting sustainable solutions. Since 2018, Diné CARE has collaborated with Earthworks to take Optical Gas Imaging (OGI) videos on five separate occasions. On two occasions, our team took air samples that were analyzed by an independent laboratory (ALS Environmental). Diné CARE staff have visited the DBK field on numerous other occasions since 2017.

Diné CARE also researched the history of the DBK field and has tried to obtain information from relevant Navajo Nation, state, and federal agencies. In 2021, we hired a research consultant to help compile information about the history and management of the DBK field. As detailed below, our organization has encountered significant barriers in obtaining information about the regulation of the DBK field.

A) AIR QUALITY CONCERNS

AIR SAMPLING: METHODS

Diné CARE and Earthworks conducted air sampling in October 2019 and May 2021 at oil and gas well sites in the DBK field. We chose the air sampling locations based on strong odors we smelled and on OGI work that revealed heavy emissions (pollution) coming from specific well sites. We then deployed Summa canisters to capture air samples near the emission source. The 2019 samples were "grab" samples that lasted several seconds at each of three selected well sites (Navajo 14, 19, and 25). In 2021, we repeated the grab sampling at the same three sites, plus three other ones. A longer-term air sample (lasting several hours) was also taken near a summer residence and sheep camp.

A certified laboratory (ALS Environmental) provided the canisters and analyzed the results using the TO-3 test for methane and TO-15 test for volatile organic compounds (VOCs) developed by U.S. EPA, as well as ASTM International standard test D 5504-12 for sulfur compounds in oil and gas.

The pollution sources at all the well sites where grab samples were taken appeared to be ground-level surface casing vents, which are designed to release gas as it flows from underground to the surface. At the time of our visits, Diné CARE and Earthworks staff detected strong odors and reported health effects such as headaches and eye irritation. We detailed those symptoms in complaints submitted to NNEPA.

RESULTS: POTENTIAL HEALTH EMERGENCY

The air sampling results were dramatic and sobering, with clear risks to health for anyone exposed to pollution at or near the sites. The concentrations of all the VOCs and sulfur compounds detected far exceeded the Effects Screening Levels (ESL), or levels likely to trigger health symptoms.^{li}

The actual health impacts on nearby residents, workers, and anyone who visits these sites would depend on factors such as proximity and wind direction. However, the ESLs were exceeded by tens, hundreds, thousands, and even tens of thousands of times, making this an extreme situation by any measure.

All the chemicals detected have scientifically established health effects, many of which are related to inhalation, i.e., exposure through air. There was remarkable consistency in the compounds detected across nearly all the sites where sampling occurred, as well as in the concentration levels, indicating that similar products were being used and produced at all sites that resulted in the same mix of pollutants.

The data table in Appendix II details sampling results for the three sites where repeat air sampling occurred in 2019 and 2021. Most notably:

- Hydrogen sulfide (H₂S) levels were in line with what the U.S. Occupational Safety and Health Administration (OSHA) considers dangerous for acute (short-term) exposure, such as what workers, inspectors, or anyone visiting the site could experience.^{lii} At the Navajo 19 site, the concentration of H₂S (170 parts per million [ppm] in 2019 and 180 ppm in 2021) was high enough to cause a loss of sense of smell and was close to the level (200 ppm) that would cause eye and respiratory irritation; with prolonged exposure, this concentration of H₂S could cause fluid buildup in the lungs.
- At the Navajo 14 and 25 sites in 2019, the H₂S concentrations (440 and 410 ppm respectively) were just under the level (500 ppm) for acute exposure that OSHA has determined can cause "staggering, collapse in 5 minutes. Serious damage to the eyes in 30 minutes. Death after 30-60 minutes." Even though the H₂S concentrations were somewhat lower for these and other sites at the time of sampling in 2021, they remained many times higher than the levels that OSHA considers hazardous to health.
- Some of the other sulfur compounds detected, including thiophene and mercaptans, are scientifically established to be associated with nausea, vomiting, headache, and eye, nose, throat, and skin irritation.^{liii}
- The sampling at all three sites detected benzene, a known carcinogen, and ethylbenzene, a possible carcinogen. Several other VOCs were detected that are scientifically established to be associated with eye, nose, and throat irritation, dizziness, irregular heartbeat, and changes to the kidney and liver.
- Some of the pollution releases documented by Diné CARE and Earthworks were many times higher than what the U.S. EPA considers to be a "leak" that requires repair (any release of 500ppm by volume – ppmV – or more). For example, the leak at the Navajo 25 site had a methane concentration more than 100 times that level in 2019 (51,000 ppmV), while the leaks at the Navajo 19 and 14 sites were more than 300 times as high (161,000 ppmV) in 2019 and 200-300 times as high (150,000 and 120,000 ppm respectively) in 2021. These leaks could have significant impact on air quality and the climate.^{liv}

It is important to note that of the three wells that Diné CARE and Earthworks have sampled, only one has been in production. According to production reports available from the AZOGCC, Navajo 19 was shut in during the calendar year 2015-2016, and Navajo 25 was shut in during the

calendar year 2014-2015. For its part, Navajo 14, while active, produces very small and declining quantities of oil. According to production data provided by the AZOGCC, in 2017, Navajo 14 produced 648 barrels; in 2018 it produced 410 barrels; in 2019 it produced 503 barrels; and in 2020 it only produced 96 barrels.

The emissions coming from wells 14, 19, and 25 pose a grave threat to public health. It is particularly troubling that these emissions are coming from sites that have been shut in or, in the case of Navajo 14, produce very little. More can and should be done to ensure that these wells do not pose a threat to public health and the environment. If Capitol does not intend to produce from 19 and 25, these wells should be plugged and abandoned, with the land properly remediated and reclaimed.

B) APPARENT DISRESPECT FOR THE LAND: SPILLS, GARBAGE, AND ROAD EROSION

During Diné CARE's many visits to the DBK field, we were disappointed to observe that many of the well sites appear to be poorly maintained. Some roads to well sites are in such bad shape that they are inaccessible in a standard 4X4 vehicle. We observed well sites that did not have appropriate signage, and sites where garbage and industrial debris were strewn about (see figure 7).

More worrisome, we observed sites where an oil spill had taken place and had not been remediated.

For example, at a pipe adjacent to the well "Navajo 24", Diné CARE observed large amounts of spilled oil coming from a crudely maintained pipe. We first observed this spillage in 2018 and reported it to NNEPA (see figures 5 and 6). We observed more spillage and further deterioration of the piping in 2021 (see figures 3 and 4).



Figures 3 and 4 – Spilled oil and poorly maintained piping observed in May 2021 at Navajo 24.

Red Valley residents also made Diné CARE aware of a large oil spill that occurred in 2005, which residents feel was not properly remediated.^{iv}

The conditions on the ground in the DBK field indicate to Diné CARE that there is irregular maintenance of sites. We infer from these conditions that even if there is an annual inspection of sites by staff with Minerals' Oil and Gas Inspection Program, the issuance of violations and collaboration with federal agencies on enforcement may be lacking.



Figures 5 and 6 - Spilled oil and poorly maintained piping observed in 2018 at Navajo 24.



Figure 7 – Well site where road is completely eroded. Garbage and debris on site covering spilled oil.

C) LACK OF RESPONSE AND TRANSPARENCY FROM RESPONSIBLE AGENCIES

Since 2018, Diné CARE and Earthworks have filed 29 complaints with NNEPA based on troubling OGI and air sampling results from the DBK field. Diné CARE filed complaints in March and June of 2018, in November 2019, and in August 2021.

In 2018, Red Valley Chapter and Tsaile/Wheatfields Chapter requested that agencies within the Navajo Nation and the Department of the Interior formally investigate residents' complaints about operations in the DBK field and develop plans to address health and safety concerns, including air quality and noxious odors, liquid waste discharges, heavy traffic and hazards, loud noises, and bright lights. To our knowledge, no such investigations have occurred, and no plans have been put into place to address the concerns of the community.

Diné CARE has made numerous attempts to obtain information about extraction in the DBK field from NNEPA and Minerals on behalf of the community, to little avail. It has become clear to Diné CARE that greater transparency, accountability, and enforcement capacity is needed to ensure that operations in the DBK field are being conducted safely and with clear communication to impacted communities.

NNEPA RESPONSE

In May 2018, NNEPA issued a report in response to community complaints of strong noxious odors, received by Minerals, and air quality complaints filed with NNEPA in March of 2018 by Diné CARE and Earthworks. The report did not lead to any corrective action because NNEPA found that it did not have jurisdiction over sources of pollution in the DBK field, while Minerals seemed to dismiss the complaints entirely.

NNEPA's report stated that staff from Minerals had visited the helium processing facility at the DBK field with a hand-held H₂S monitor in February 2018 but claimed not to detect any H₂S. While Minerals visited the helium processing facility, there is no mention that staff visited any of the well sites for which complaints were made.

NNEPA stated in its report that it did not have the monitoring capacity to detect H₂S. In conversations with NNEPA in subsequent years, Diné CARE staff have learned that NNEPA's Air Quality Control Program (AQCP) has since acquired a stationary H₂S monitor but does not, as of 2021, have the capacity to deploy it in Red Valley.

Minerals requested that NNEPA's AQCP conduct H₂S monitoring in the DBK field in February 2018, in response to community complaints as well as a January 2018 *Navajo Times* story that featured findings from Diné CARE and Earthworks' fieldwork. Because NNEPA did not have a monitor, it requested data from the BLM Farmington Field Office. Minerals had informed NNEPA that a former operator in the DBK field reported emissions to BLM. BLM Geologist Joe Hewitt provided the most recent data available to NNEPA, which was from 1996. This data was deemed outdated, and more recent data was not available. In August 2021, the author contacted BLM Farmington Field Office and learned that Joe Hewitt had retired. The author spoke with a colleague of Hewitt's, Chris Wenman, who did not know of any available data. Wenman also asked Hewitt about the matter and Hewitt did not have any updated information to provide.

NNEPA requested information from U.S. EPA Region 9 about emissions estimates for facilities in the DBK field. U.S. EPA provided the registration forms that Nacogdoches, a previous operator, had submitted for its 31 wells and the processing plant. Later, Capitol Operating Group provided its emissions estimates to U.S. EPA Region 9, and NNEPA reviewed these. According to Capitol's emissions estimates, the wells and the helium processing plant emitted quantities of pollutants that were below the threshold of a "minor source" under the Clean Air Act. This meant that the sources did not need to be registered with U.S. EPA, unless they are modified in the future such that they will emit at or above the threshold of a minor source. When NNEPA implements its anticipated minor source rule, there may be mechanisms for it to require a registration of some facilities at the DBK field if they are found to emit within the minor source threshold.

Notably, no on-the-ground monitoring was conducted by NNEPA, Minerals, or BLM to determine whether Capitol's emissions estimates were accurate.

In November 2019, Diné CARE filed a third set of complaints with NNEPA based on fieldwork conducted in October 2019. Diné CARE received no response from NNEPA regarding these complaints.

In August 2021, Diné CARE again filed complaints with NNEPA and this time copied Minerals and U.S. EPA Region 9. In this set of complaints, Diné CARE included the results of air sampling that showed alarming levels of H₂S. At the time of writing (September 2021), Diné CARE has yet to receive a response from NNEPA.

Requests Pursuant to the Navajo Nation Privacy and Access to Information Act

In 2019, Diné CARE sought legal assistance in soliciting documentation about the DBK field from NNEPA. Attorney Julia Guarino of Western Environmental Law Center sent letters in May 2019 on behalf of Diné CARE to NNEPA requesting records pursuant to the Navajo Nation Privacy and Access to Information Act (see Appendix IX). From NNEPA, Guarino requested:

- "Water Permits for operation in the DBK field;
- Inspection Reports of the DBK wells and the helium processing site in Red Valley;
- Emissions reports from wells in the DBK field and helium processing site in Red Valley;
- Copies of BLM and Capitol Operating Groups reports on quarterly air monitoring data and H₂S monitoring data, which Navajo EPA's Air Quality Follow-up Report recommended that Navajo Minerals Department request and provide copies to Navajo EPA."

On August 15, 2019, Guarino and Diné CARE received a response from NNEPA. Regarding water permits, NNEPA stated that it did not have these in its possession and suggested that Diné CARE contact the Department of Water Resources. As explained below, Diné CARE did contact Water Resources, and the agency responded saying it did not have water permits in its possession. Regarding documents pertaining to air quality and emissions, NNEPA stated that it did not have these in its possession and recommended that Diné CARE contact Minerals.

The response from NNEPA also stated:

"In your letter, you also asked two questions: (1) Are the wells in the DBK field considered minor source air emissions? and (2) Is the helium processing site considered minor source, as well? The answer to both of these questions is yes".

This response directly contradicts NNEPA's 2018 report, in which it states that facilities in the DBK field do not meet the emissions threshold to count as minor sources. It is unclear why this

determination changed. Was new, more accurate emissions data made available to NNEPA? Where is this data? NNEPA insists that it does not have it, and, as explained below, Minerals has yet to respond to requests for information.

NAVAJO NATION MINERALS DEPARTMENT RESPONSE:

Diné CARE and the Red Valley community have had difficulty obtaining documentation about DBK operations from Minerals.

Minerals' Memo to Delegate Crotty

In September 2017, the Honorable Council Delegate Amber Crotty requested information from Minerals regarding increased oil and gas activity in the DBK field. Delegate Crotty issued this request in response to concerns from Red Valley Chapter.

On March 6, 2018, Steven L. Prince, Principal Petroleum Engineer at Minerals, provided a memo in response to Delegate Crotty's request (see Appendix VIII). The overall tone and content of the memo, while cordial, did not seem to take seriously the concerns of the community, nor did it indicate a willingness on the part of Minerals to assist the community in seeking answers to its outstanding questions.

Regarding the community's concern that there may be increased oil and gas activity in the DBK field, the memo notes that oil and gas production is in fact declining in the area. While he mentions in passing that helium extraction has recently increased, he fails to note that helium is extracted from natural gas. The impacts that community members were noticing – like a rise in truck traffic and noxious odors – may well have been due to operators reworking oil wells to extract helium-bearing gas.

Residents were concerned about the non-consent of grazing permittees. The memo indicated that the leases in the DBK field were issued in the 1960s, and so new activity did not require the consent of grazing permittees. While this may be the case, it is also true that the Red Valley community raised concerns in 1978 regarding lack of consultation with grazing permittees, among several other complaints.^{lvi} It is unclear whether there was ever meaningful consultation with the Red Valley community regarding the DBK leases. Prince offered to provide Delegate Crotty with a copy of the leases.

The memo dismissed residents' concerns of increased traffic by placing the blame on residents themselves. The memo stated that an access road to oil sites had been built in the 1960s by a former DBK operator, presumably Kerr-McGee, and that over time many residents had chosen to relocate along the road and to use it as if it were intended for local traffic.

Residents' concerns about smells and impacts to land and water were also dismissed, rather than investigated. The memo stated that residents were not smelling H₂S or other sulfur or volatile organic compounds, but rather a "scavenger gas" intended to absorb H₂S and transform it into a "benign product". Without citing emissions estimates or measurements, the memo stated that "there is no danger from the H₂S in this area". Regarding impacts to land and water, the memo indicated that any incidents are always addressed by Minerals before they become a problem, and that Prince was not aware of "any impacts to the land/water which have not been addressed and rectified".

The last set of community concerns addressed in the memo had to do with lack of communications with the operator(s) at the DBK field and lack of clarity regarding the ownership of the operations. Regarding communications, Prince wrote that he had recently heard from Red Valley Chapter Vice-President that the operator had donated uniforms to the school sports

teams, so there must be communications between Red Valley officials and the operator. Regarding ownership, Prince enclosed the name of the leaseholder (Nordic) and operator (Capitol) and shared the email and business address for Nordic's president, David Burns. This information is helpful, but as detailed in Section 3 and Section 4B, does not provide a full sense of the ownership structure of the field, nor does it address the sense of confusion among residents.

Memo to Diné CARE

In December of 2018, Robyn Jackson, Climate & Energy Outreach Coordinator with Diné CARE, wrote a letter to Steven Prince at Minerals requesting documentation regarding extraction in the DBK field. Specifically, Jackson sought tribal permits held by operators and lessees, water permits, inspection reports for well sites and the helium processing facility, emissions reports, and quarterly air monitoring data (including H₂S data). Prince responded in March 2019 (see Appendix V).

Except for Water Permits, for which Price recommended that Jackson contact Jason John, Acting Director of the Navajo Nation Department of Water Resources, Prince responded to each request by stating that Minerals did not have any such permits in its possession, nor did it know "of any Navajo Nation entity that maintains such documentation".

In her letter, Jackson had also asked whether the wells in the DBK field are considered minor sources, and whether the helium processing facility is also considered a minor source. To these questions, Prince responded: "It is Minerals' understanding that both the wells in the DBK field and the helium processing site are considered minor sources, but we strongly recommend you seek an official answer to these questions from the U.S. Environmental Protection Agency".

Requests Pursuant to the Navajo Nation Privacy and Access to Information Act

In 2019, Diné CARE sought legal assistance in soliciting documentation about the DBK field from Minerals. Attorney Julia Guarino of Western Environmental Law Center sent letters in May 2019 on behalf of Diné CARE to Minerals requesting records pursuant to the Navajo Nation Privacy and Access to Information Act (see Appendix IX). From Minerals, Guarino requested:

- "Water Permits for operation in the DBK field;
- Inspection Reports of the DBK wells and the helium processing site in Red Valley;
- Emissions reports from wells in the DBK field and helium processing site in Red Valley;
- Copies of BLM and Capitol Operating Groups reports on quarterly air monitoring data and H₂S monitoring data, which Navajo EPA's Air Quality Follow-up Report recommended that Navajo Minerals Department request and provide copies to Navajo EPA."
- All original lease or permitting documents as well as any lease modifications, related approvals of infrastructure or right of ways, or other related permits or approvals in the DBK field."

From Jason Johns (Acting Director of the Navajo Nation Department of Water Resources), Guarino additionally requested Water Permits. On August 15, 2019, Water Resources responded to this requested stating: "The Navajo Department of Water Resources does not have any water use permits issued to operators of the Dineh-Bi-Keyah Field".

As of August 2021, neither Diné CARE nor Western Environmental Law Center have received responses from Minerals to these requests.

D) IMPLICATIONS FOR SELF-DETERMINATION

The lack of transparency and documentation regarding operations in the DBK field has potential implications for the self-determination of the Red Valley community and the Navajo Nation more broadly. The confusion around the regulation of the DBK Helium Project, which appears to be present among regulators themselves, makes it difficult for community members to find clear answers to their concerns and to hold operators responsible when pollution or environmental degradation occurs. Furthermore, the lacking documentary record puts the Navajo Nation and local communities in a potentially compromised position if any serious incidents were to occur in the DBK field.

A Navajo Nation Supreme Court Case, in which the Honorable Chief Justice Herb Yazzie presided, provides a cautionary tale. *Neptune Leasing, Inc. v. Mountain States* (No. SC-CV-24-10) is a case involving two former operators of a helium processing plant in the DBK field. Details of the case are provided in Appendix VI. In his opinion, Chief Justice Yazzie made several statements that are pertinent beyond the specificities of the case, and that are instructive for understanding the implications of the current situation in the DBK field.

Chief Justice Yazzie found that the absence of a documentary record regarding land dealings would “surely threaten or have some direct effect on the political integrity, the economic security, or the health or welfare of the tribe [...]. Navajo land belongs to the people, and management of Navajo land carries a solemn responsibility”.

Chief Justice Yazzie goes on to say: “As we say in Diné, *t’óó hot dah hazké eḡgoóh há k’íhodoodoqoḡ* (one cannot resolve disputes when in a confused state)”. While Chief Justice Yazzie is referring here to the transfer of Navajo trust lands without lease records, this lesson could also apply to the confusion that results from among regulators and community members alike about jurisdiction in the DBK field. As in the *Neptune Leasing, Inc. v. Mountain States*, the absence of documentation regarding DBK operations obfuscates jurisdictional matters and poses an obstacle to local and national Navajo self-determination.

7. RECOMMENDATIONS

Based on Diné CARE's years of fieldwork, research, and conversations with the Red Valley community, we respectfully make the following recommendations to the Navajo Nation Council, responsible agencies within the Navajo Nation, and to federal agencies. Diné CARE believes these recommendations will support a clearer understanding of the roles, responsibilities, and powers of agencies within the Navajo Nation and the U.S. Government to regulate operations in the DBK field. A clearer understanding of jurisdiction and more open communication with impacted communities will, we hope, lead to a safer and healthier environment in Red Valley.

COMMUNITY ENGAGEMENT

1. **Community Information Sessions:** The Red Valley community has expressed that it would like further information about what is going on in the DBK field. Diné CARE recommends that NNEPA and Minerals work with Red Valley Chapter officials to set dates for an information session and/or presentation during a Chapter meeting. As per the needs of the community, multiple information sessions may be required. David Burns plays a central leadership role in all the companies involved in the DBK Helium Project. Inviting him to a local information session could be beneficial.
2. **Provide Clear Directions for Community Concerns:** As part of the information that Navajo Nation agencies provide to the Red Valley community, Diné CARE recommends that agencies collaborate and, if appropriate, consult the Navajo Nation Natural Resources Unit for the Department of Justice for any needed clarifications, to provide community members with a clear fact sheet that includes the following information: which agencies or departments residents should contact for specific concerns regarding DBK operations; which laws and regulations apply in what instances; how residents should initiate contact; and contact information for relevant personnel. This information could also be beneficial to Diné communities in other parts of the Navajo Nation who are impacted by resource extraction.
3. **Community Reinvestment Fund:** For too long, the Red Valley community has borne the impacts of oil and gas extraction in the DBK field without seeing tangible benefits. Diné CARE recommends that the appropriate Committees and Departments within the Navajo Nation collaborate with the Red Valley Chapter to discuss an equitable reinvestment plan. For example, in 2020, the Resources and Development Committee, the Naa'bik'iyati' Committee, and the Navajo Nation Council passed legislation approving the Rattlesnake and Tocito Dome North Oil and Gas Exploration and Development Operating Agreements between the Navajo Nation and Tacitus, LLC, for certain trust lands on the Navajo Nation (San Juan County, New Mexico) (0038-20). The primary commodity sought in this project is helium. Under the terms of the operating agreement, the Navajo Nation will set aside three-quarters of one percent (0.75%) of its royalty payments, generated from the gross proceeds of Tacitus' helium sales, into a "Community Reinvestment Fund" that will be established by the Office of the Controller. A fund management plan is to be governed by the Navajo Nation Resources Development Committee and approved by the Budget and Finances Committee.

4. **Local Consultation:** Diné CARE understands that helium extraction is being considered or is already underway in many parts of the Navajo Nation. We urge that a meaningful process of local consultation, wherein the local community receives all pertinent information regarding helium extraction and its potential impacts, occur prior to any exploration or development. Exploration and development should only occur with explicit support of the community.

ENVIRONMENTAL REVIEW AND MONITORING

1. **Real-time Air Monitoring:** The air sampling done by Diné CARE and Earthworks shows that there could be an urgent threat to public health due to H₂S and other emissions from facilities in the DBK field. Diné CARE recommends that the Navajo Nation Council ensures that NNEPA and Minerals have sufficient staffing capacity, equipment, and expertise to conduct on-the-ground air monitoring in the DBK field on a regular basis. As part of this effort, the Navajo Nation should ensure that NNEPA has the capacity to apply for federal U.S. EPA grants. The results of this monitoring should be readily available to the public. The record shows that in the past, BLM Farmington Field Office has had some role in reviewing and/or archiving air monitoring data from the DBK field. While BLM does not typically do air monitoring, Diné CARE recommends that NNEPA also collaborate with BLM to determine whether BLM can lend capacity to monitoring, inspection, enforcement, and/or analytic efforts.
2. **Clarify Whether DBK Sites Count as Minor Sources:** According to a 2018 NNEPA report, both Nacogdoches and Capitol have provided emissions estimates to U.S. EPA, and NNEPA's ACQP have reviewed these estimates. As per these estimates in 2018, the sources did not meet the threshold for a "minor source" and therefore did not require registration. Yet, in a March 2019 letter to Diné CARE from Minerals, petroleum engineer Steven Prince indicated that it was Minerals' understanding that wells and the helium processing facilities in the DBK field were minor sources. Moreover, in an August 2019 letter to Diné CARE's attorney Julia Guarino, NNEPA reversed its 2018 opinion and indicated that these facilities were indeed minor sources. Considering NNEPA's upcoming minor source regulation, Diné CARE recommends that NNEPA collaborate with U.S. EPA Region 9 to determine whether, in fact, facilities in the DBK field meet the threshold requirements for minor sources, and whether they need to be registered as such. Given the dangerous emissions levels that Diné CARE and Earthworks found in our air sampling, Diné CARE further recommends that U.S. EPA Region 9 and NNEPA verify operators' self-reporting with a thorough monitoring campaign to assess actual emissions levels of criteria and hazardous air pollutants.
3. **Methane Regulations:** Diné CARE recommends that NNEPA consider implementing strong methane regulations for the oil and gas sector.
4. **Consider the Full Lifecycle of Helium Operations:** When assessing other proposals for helium extraction on Navajo Nation lands, Diné CARE recommends that the Navajo Nation consider the full lifecycle of helium extraction: including natural gas exploration and extraction, transportation to a helium processing plant, the plant operations themselves, transportation of the helium to market, and eventual remediation and reclamation of abandoned wells. The cumulative social, environmental, and cultural impacts of each phase should be fully analyzed and disclosed to potentially impacted communities.^{lvii}

5. **Make a Jurisdictional Determination Regarding Water Resources in the DBK Field:** Diné CARE recommends that U.S. EPA Region 9 collaborate with relevant Navajo Nation agencies and to determine whether facilities in the DBK field can be reasonably expected to discharge oil into navigable waters of the United States and as such may require Spill, Countermeasure, and Control plans. This effort may require collaboration with the Red Valley community to identify and locate water resources. Additionally, Diné CARE recommends that these agencies collaborate to provide clarity to the Red Valley community regarding which laws (federal and/or tribal) are in place to protect surface water and groundwater in the DBK field, and which agency oversees saltwater injection.
6. **Well Abandonment:** Except for the eight wells producing gas-bearing helium, most wells in the DBK field have been shut-in for years and either produce no oil or do not produce in paying quantities (see Appendix I). With the crisis of orphaned and abandoned wells growing across the country, it has become clear that operators cannot afford to properly plug their infrastructure let alone reclaim the land.^{lviii} This poses a major public and environmental burden to the Navajo Nation and the Red Valley community. The Navajo Nation is at risk of losing the ability to hold operators accountable for reclamation costs should further changes in ownership of the DBK field occur. In April 2021, New Mexico State Land Commissioner had to take Dominion Production Company, LLC, another company owned by David Burns, to State Court to compel Dominion to plug and abandon wells on expired leases.^{lix} Diné CARE recommends that Minerals review Navajo Nation and federal regulation to determine whether any of these wells are at the point where they should be plugged and abandoned (see for instance 43 CFR § 3162.3-4 and Arizona Administrative Code R12-7-125). If some wells do need to be plugged and abandoned, NNDNR should work with the operator to ensure proper reclamation and remediation of the land.

IMPROVE ACCESS TO INFORMATION:

1. **Improve and Update Agency Websites:** In trying to understand DBK operations, Diné CARE found it difficult to access information on the websites of public Navajo Nation agencies like NNEPA and Minerals. In many instances, information and agency contacts were outdated or simply unavailable. For example, it is difficult or impossible to access web versions of current rules and regulations, contact information for current personnel, information about facilities operating on the Navajo Nation, or relevant data about these facilities. Diné CARE recommends that divisions like DNR and NNEPA ensure that they can provide public and timely access to this information.
2. **Make Monitoring Data Available:** Emissions data, whether self-reported or collected by NNEPA or another entity, should be made available to the public.
3. **Improve Response Time:** Diné CARE has received no response to several complaints and requests for information. In other instances, it has taken several months to receive a response. Diné CARE recommends that the Navajo Nation work to increase capacity within its agencies to ensure a faster response time to community concerns and requests for information.
4. **Locate Documents Pertaining to DBK Field:** In a 2019 letter in response to an informal request for information from Diné CARE, Minerals noted that it did not have in its possession any tribal permits held by operators and lessees, water permits, inspection

reports for well sites and the helium processing facility, emissions reports, and quarterly air monitoring data for the DBK field, nor did it know of any agency within the Navajo Nation that had possession of such documents. Shortly thereafter, Minerals failed to respond to a formal request for documentation sent in 2019 pursuant to the Navajo Nation Privacy and Access to Information Act. NNEPA and Water Resources both responded by stating that they had no documents. The absence of a documentary record makes it impossible for communities to understand how extraction in the DBK field is regulated, or to hold operators and regulators accountable for their responsibilities under Navajo Nation and federal law. Diné CARE thus recommends that Minerals and other relevant departments within NNDNR collaborate with NNEPA and with federal agencies if necessary to locate – and make readily available to the public – all permits and inspection data regarding operations in the DBK field. It may be necessary to consult with the Navajo Nation Department of Justice to obtain further clarity on this matter.

CAPACITY

1. **Funding and Capacity:** Diné CARE recommends that the Navajo Nation Council ensure that NNEPA programs and departments within NNDNR (such as Minerals) have adequate funding and staffing capacity to carry out duties in an efficient and timely manner; that staff have access to the equipment they need (such as vehicles and monitoring equipment), training, and professional development opportunities to ensure the health and safety of Diné communities.
2. **Consider Joining WRAP:** Diné CARE recommends that the Navajo Nation consider joining the Western Regional Air Partnership (WRAP), “a voluntary partnership of states, tribes, federal land managers, local air agencies and the U.S. EPA whose purpose is to understand current and evolving regional air concerns in the West”.^{ix} Several Tribes in the Southwest are already part of this partnership. Joining may help build capacity at NNEPA AQCP for addressing local and regional air quality issues.

APPENDICES

APPENDIX I – OVERVIEW OF DBK LEASES

A) OVERVIEW OF LEASE STRUCTURE:

There are 5 active leases in the DBK field. Broadly, they have undergone similar changes in ownership since the 1970s. Figure 8 provides an overview.

This information is gleaned from: a review of DBK leases, a review of the purchase agreement between Nordic 2 and Nacogdoches, a review of well files maintained by AZOGCC, and a review of production reports for the DBK field from 2017-2020.

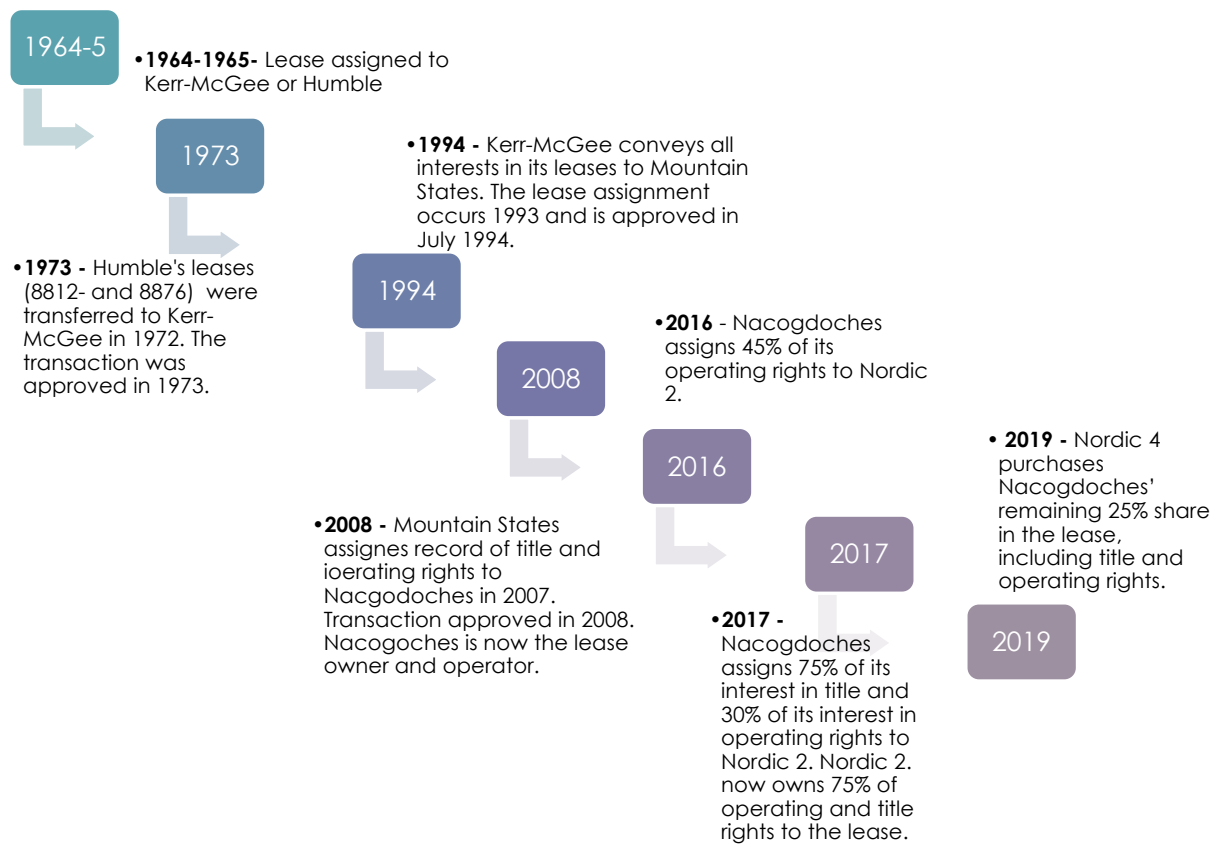


Figure 8 - Overview of DBK lease history

Nordic Oil USA 2 LLLP (Nordic 2) and Nordic Oil USA 4 LLC (Nordic 4) currently hold 75% and 25%, respectively, of operating and title rights to these leases.

Leases are administered by the Navajo Nation Minerals Department within the Division of Natural Resources.

Leases were initially issued to Kerr-McGee Oil Industries or Humble Oil & Refining Company in the mid-1960s, with a royalty rate of 16.67%. This rate has remained unchanged.

Kerr-McGee acquired Humble's leases in 1973.

In 1994, Mountain States Petroleum acquired all the leases from Kerr-McGee.

In 2008, Nacogdoches Oil and Gas Inc acquired all the leases from Mountain States Petroleum. In 2012, Nacogdoches began the process of assigning 45% of its *operating* rights on the leases to Nordic 2. This transfer was approved and finalized in 2016. The next year, in 2017, Nordic 2 acquired an additional 30% of Nacogdoches' interest in operating rights, and 75% of Nacogdoches' interest in title in the lease. This means that by 2017, Nordic 2 owned 75% in title and operating rights to the leases.

In 2019, Nacogdoches sold its remaining 25% share in the lease, including title and operating rights, to Nordic USA 4 LLP (see Appendix VI).

By this point, Nordic 2 and Nordic 4, both owned by NASCO, controlled the DBK Helium Project.

B) DBK WELLS BY LEASE

LEASE 14-20-0603-8823

Lease 8823 was initially granted to Kerr-McGee Oil Industries Inc. in 1964. The lease terms included title and operating rights, with a royalty rate of 16.67%. Kerr-McGee began developing oil and gas wells on this lease in 1967, eventually developing a total of 28 wells, 19 of which are still active to extract oil or helium, and one which is used as a saltwater injection well.

The land in question includes Township 36 North, Range 30 East. All of Sections 27, 28, 33 and 34, in Apache County, Arizona, Navajo Nation.

Active and shut-in wells under 8823

Well	API	Type	Status
Navajo 1	02-001-20001	Oil	P
Navajo 3X	02-001-20011	Oil	S
Navajo 4	02-001-20009	Helium	S
Navajo 6	02-001-20014	Oil	S
Navajo 7	02-001-20013	Saltwater Injection	I
Navajo 9	02-001-20020	Oil	P
Navajo 11	02-001-20106	Oil	P
Navajo 14	02-001-20040	Oil	P
Navajo 15	02-001-20041	Helium	S**

Navajo 16	02-001-20043	Oil	S
Navajo 17	02-001-20190	Oil	P
Navajo 19	02-001-20240	Oil	S
Navajo 20	02-001-20245	Oil	S
Navajo 21	02-001-20242	Oil	S
Navajo 22	02-001-20241	Oil	S
Navajo 24	02-001-20244	Helium	S**
Navajo 25	02-001-20249	Oil	S
Navajo 26	02-001-20250	Oil	S
Navajo 27	02-001-20251	Oil	P
Misc. equipment			

*Status Code

F = Flowing

P = Pumping

G = Gas Lift

S = Shut In

T = Temporarily Abandoned

I = Injection

**Production reports indicate that these wells are shut-in but also indicate that they produce significant quantities of gas. This gas is presumably transported to the AMCS plant for treatment and separation into helium. It is possible that the shut-in status indicates that the well is shut-in for oil production.

Plugged and abandoned wells under lease 8823 (damage on the ground still present):

- Navajo 5 - API: 02-001-20016
- Navajo 13 - API: 02-001-20044
- Navajo 10 - API: 02-001-20042
- Navajo 3 - API: 02-001-20005
- Navajo 18 - API: 02-001-20239
- Navajo 8 - API: 02-001-20015
- Navajo 23 - API: 02-001-20243
- Navajo 2 API: 02-001-20004

LEASE 14-20-0603-8822

Lease 8822 was originally granted by the Navajo Nation to Kerr-McGee in 1964, including title and operating rights, at a royalty rate of 16.67%. Kerr-McGee developed 2 wells on this lease.

The land comprises Township 36, Range 30 East, Sections 27, 28, 33 & 34, encompassing 2,560 acres in Apache County, Arizona, Navajo Nation.

Active and shut-in wells under 8822

Well	API	Type	Status
Navajo C-1	02-001-20092	Oil	P
Navajo C-2	02-001-20046	Helium	S**

*Status Code

F = Flowing

P = Pumping

G = Gas Lift

S = Shut In

T = Temporarily Abandoned

I = Injection

**Production reports indicate that this well is shut-in, but it is also a well that was recently converted to extract helium. It is unclear from the record whether it will be brought into production soon.

LEASE 14-20-0603-8889

Lease 8889 was originally granted to Kerr-McGee in 1965, including title and operating rights, at a royalty rate of 16.67%. Kerr-McGee developed 3 wells on this lease, one of which is abandoned.

The land in question is Township 35 North, Range 30 East. All of Section 5, comprising 640 Acres in Apache County, Arizona, Navajo Nation.

Active and shut-in wells under 8889

Well	API	Type	Status
Navajo B1-X	02-001-20068	Oil	S
Navajo B2	02-001-20010	Helium	S**

*Status Code
F = Flowing
P = Pumping
G = Gas Lift
S = Shut In
T = Temporarily Abandoned
I = Injection

**Production reports indicate that this well is shut-in but also indicate that it produces significant quantities of gas. This gas is presumably transported to the AMCS plant for treatment and separation into helium. It is possible that the shut-in status indicates that the well is shut-in for oil production.

Plugged and abandoned wells under lease 8889:

- Navajo 1-B – API: 02-001-00006

LEASE 14-20-0603-8812

Lease 8812 was originally granted to Humble Oil & Refining Company in October 1964. The royalty rate was and is 16.67%. Humble developed 5 wells on this lease, one of which is currently abandoned.

The land in question includes Township 36 North, Range 29 East, Apache County, Arizona, Navajo Nation, covering all of sections 25, 26, 35, and 36, totaling 2,560 acres.

Active and shut-in wells under 8812

Well	API	Type	Status
Navajo 88-1	02-001-20045	Oil	S
Navajo 88-2	02-001-20055	Helium	S**
Navajo 88-3	02-001-20066	Helium	S**
Navajo 88-6	02-001-200252	Oil	S

*Status Code
F = Flowing
P = Pumping
G = Gas Lift
S = Shut In
T = Temporarily Abandoned I = Injection

**Production reports indicate that these wells are shut-in but also indicates that these wells produce significant quantities of gas. This gas is presumably transported to the AMCS plant for treatment and separation into helium. It is possible that the shut-in status indicates that the well is shut-in for oil production.

Plugged and abandoned well under lease 8812:

- Navajo 88-4 – API: 02-001-20069

LEASE 14-20-0603-8876

Lease 8876 was issued by the Navajo Tribal Council to Humble Oil & Refining Company in 1965, including all title and operating interests, at a royalty rate of 16.67%. Humble developed 3 wells on this lease, one of which is currently abandoned.

Land in question encompasses Township 35 North, Range 30 East. All of Section 6, totaling 615.01 acres. Apache County, Arizona, Navajo Nation.

Active and shut-in wells under 8876

	Well	API	Type	Status
1	Navajo 138-1	02-001-20012	Helium	S**
2	Navajo 138-3	02-001-200253	Oil	S

Status Code

F = Flowing

P = Pumping

G = Gas Lift

S = Shut In

T = Temporarily Abandoned

I = Injection

**Production reports indicate that these wells are shut-in but also indicates that these wells produce significant quantities of gas. This gas is presumably transported to the AMCS plant for treatment and separation into helium. It is possible that the shut-in status indicates that the well is shut-in for oil production.

Plugged and abandoned wells under lease 8876:

- Navajo 138-2 – API: 02-001-20024

Plugged and abandoned wells under inactive leases in DBK field:

Well	Operator	API	Lease
Navajo 1B	Mesa Petroleum	02-001-20124	8888
Navajo 1-151	Humble	02-001-20076	8882
Navajo 1-135	Anadarko Production	02-001-20019	8897
Navajo 1-AE	Pan American	02-001-20079	1563
Navajo 1-F	Kerr-McGee	02-001-200-51	8824
Navajo 1-146	Humble	02-001-20074	8880
Navajo 2XE	Continental Energy Corporation	02-001-20016-0000	2981
2XE Reentry 1	Republic Mineral Corporation	02-001-20016-0001	2981
2XE Reentry 2	Zoller & Danneberg	02-001-20016-0002	2981
2XE Reentry 3	Beta Exploration	02-001-20016-0003	2981

APPENDIX II – AIR SAMPLING DATA

This table provides an overview of air sampling results from fieldwork that Diné CARE conducted in collaboration with Earthworks in late October of 2019 (analysis returned in November) and May of 2021. Three wells in the DBK field were sampled each time – “Navajo 19” (API 02-001-20240), “Navajo 25” (API 02-001-20249), and “Navajo 14” (02-001-20242). These three wells are all under the same lease - 14-20-0603-8823.

According to records provided by AZOGCC, only Navajo 14 is in operation, Navajo 19 has been shut in since 2015-2016, while Navajo 25 has been shut in since 2014-2015. Navajo 14 produces very small quantities of oil, and its production is in decline. Meanwhile, the toxic emissions coming from these sites are significant and threatening.

Compound (selected)	Health effects *	Long-term ESL (annual averaging; TCEQ 2020) **	#19 - Nov. 2019	#19 - May 2021	#25 - Nov. 2019	#25 - May 2021	#14 - Nov. 2019	#14 - May 2021
sulfur compounds detected (of 20 analyzed)			16	16	15	10	15	14
Hydrogen sulfide	Lack of oxygen/asphyxiation; respiratory arrest; skin/eye/nose/respiratory irritation	n/a	170,000 ppbV	180,000 ppbV	410,000 ppbV	17,000 ppbV	440,000 ppbV	330,000 ppbV
Methyl mercaptan	Eye/skin/respiratory irritation; headache, nausea, dizziness	0.5 ppbV	190 ppbV	150 ppbV	130 ppbV	15 ppbV	240 ppbV	130 ppbV
Ethyl mercaptan	Respiratory arrest, dizziness, nausea; similar effects as H ₂ S	0.5 ppbV	36,000 ppbV	27,000 ppbV	15,000 ppbV	600 ppbV	53,000 ppbV	32,000 ppbV
Isopropyl mercaptan	Hazardous on contact.	1.8 ug/m3	37,000 ug/m3	26,000 ug/m3	19,000 ug/m3	780 ug/m3	72,000 ug/m3	10,000 ppbV
tert-Butyl Mercaptan	Eye/skin/respiratory irritation; headache, nausea, dizziness.	0.49 ppbV	630 ppbV	450 ppbV	120 ppbV	ND	510 ppbV	420 ppbV
n-Propyl mercaptan	Eye/skin/nose irritant.	0.5 ppbV	34,000 ppbV	23,000 ppbV	5,100 ppbV	110 ppbV	18,000 ppbV	14,000 ppbV
Ethyl Methyl Sulfide	Eye & skin damage (inhalation)	14 ug/m3	3,000 ug/m3	ND	800 ug/m3	41 ug/m3	2,700 ug/m3	ND
Thiophene	Nausea, vomiting, headache,	57 ug/m3	38,000 ug/m3	23,000 ug/m3	6,700 ug/m3	170 ug/m3	26,000 ug/m3	16,000 ug/m3

	eye/nose/throat/skin irritation							
Isobutyl mercaptan	Eye/skin/respiratory irritant; headache, nausea, dizziness	1.8 ug/m3	7,000 ug/m3	5,300 ug/m3	2,400 ug/m3	150 ug/m3	7,400 ug/m3	1,400 ug/m3
Diethyl sulfide	Skin/eye/nose/throat/ irritation	14 ug/m3	270,000 ug/m3	220,000 ug/m3	52,000 ug/m3	2,400 ug/m3	220,000 ug/m3	170,000 ug/m3
n-Butyl mercaptan	Eye/skin/respiratory irritant; headache, nausea, dizziness	0.49 ppbV	8,200 ppbV	2,900 ppbv	720 ppbV	ND	2,700 ppbV	1,300 ppbv
3-methylthiophene	Skin/eye/oral irritant	57 ug/m3	2,800 ug/m3	1,600 ug/m3	800 ug/m3	ND	3,900 ug/m3	1,900 ug/m3
Tetrahydrothiophene	Headache, nausea, dizziness, palpitations	50 ppbV	500 ppbV	240 ppbv	ND	ND	ND	ND
2,5-Dimethylthiophene	Eye irritation	10 ug/m3	9,400 ug/m3	2,500 ug/m3	1,300 ug/m3	ND	5,200 ug/m3	1,500 ug/m3
2-Ethylthiophene	Contact & inhalation toxicity	57 ug/m3	4,600 ug/m3	2,300 ug/m3	550 ug/m3	ND	3,700 ug/m3	1,400 ug/m3
Diethyl Disulfide	Nose/throat/skin/eye/respiratory irritant	14 ug/m3	1,700 ug/m3	1,500 ug/m3	580 ug/m3	41 ug/m3	1,700 ug/m3	500 ug/m3
VOCs detected (of 50 analyzed)			9	9	11	10	10	9
1,3 Butadiene	Skin, eye/nose/throat irritation; respiratory distress	4.5 ppbV	ND	ND	3,300 ppbV	ND	ND	ND
n-Hexane	Dizziness, headaches, neuropathy	57 ppbV	1,600,000 ppbV	2,700,000 ppbv	380,000 ppbV	57,000 ppbv	2,600,000 ppbV	1,700,000 ppbv
Benzene	Dizziness, headaches, rapid heartbeat; carcinogen	1.4 ppbV	270,000 ppbV	360,000 ppbv	44,000 ppbV	6,400 ppbv	330,000 ppbV	190,000 ppbv
Cyclohexane	Eye/nose/throat irritation, dizziness, headache	100 ppbV	900,000 ppbV	1,300,000 ppbv	150,000 ppbV	20,000 ppbv	1,100,000 ppbV	680,000 ppbv
n-Heptane	Eye/nose/throat irritation, dizziness, headache, nausea	660 ppbV	770,000 ppbV	1,100,000 ppbv	100,000 ppbV	15,000 ppbv	980,000 ppbV	640,000 ppbv
Toluene	Eye/nose irritation, dizziness,	320 ppbV	300,000 ppbV	390,000 ppbv	37,000 ppbV	7,300 ppbv	490,000 ppbV	280,000 ppbv

	kidney/liver damage							
n-Octane	Eye/nose/throat irritation, lightheadedness, headache	110 ppbV	230,000 ppbV	240,000 ppbv	24,000 ppbV	3,900 ppbv	370,000 ppbV	180,000 ppbv
Ethylbenzene	Eye/nose irritation, dizziness, kidney/liver damage; possible carcinogen	130 ppbV	33,000 ppbV	43,000 ppbv	3,800 ppbV	860 ppbv	64,000 ppbV	29,000 ppbv
m,p-Xylenes	Eye/nose/respiratory irritation, dizziness, irregular heartbeat, kidney/liver changes	41 ppbV	71,000 ppbV	100,000 ppbv	8,400 ppbV	1,900 ppbv	150,000 ppbV	66,000 ppbv
o-Xylene	Eye/nose/respiratory irritation, dizziness, irregular heartbeat, kidney/liver changes	41 ppbV	20,000 ppbV	50,000 ppbv	2,600 ppbV	610 ppbv	46,000 ppbV	25,000 ppbv
n-Nonane	Nose/throat irritant, coughing, headache, dizziness	86 ppbV	ND	ND	6,400 ppbV	1,100 ppbv	170,000 ppbV	ND

Data compiled by Earthworks. Air samples analyzed by ASL Environmental.

*** Sources:** Agency for Toxic Substances and Disease Registry, Toxic Substances Portal: <https://www.atsdr.cdc.gov/substances/index.asp>; the National Institutes of Health Library of Medicine, <https://www.nlm.nih.gov/>; hazardous substances fact sheets from the NJ Department of Health, <https://nj.gov/health/workplacehealthandsafety/right-to-know/hazardous-substances/index.shtml>; and other governmental and industry information resources.

**** Data results** for air sampling are reported in both parts per billion by volume (ppbV) and micrograms per cubic meter (ug/m3). The Effects Screening Levels (ESL) from the TX Commission on Environmental Quality's 2020 list (<https://www.tceq.texas.gov/toxicology/esl>) includes both measurements depending on the chemical.

APPENDIX III - NEPTUNE LEASING, INC. V. MOUNTAIN STATES PETROLEUM CORPORATION AND NACOGDOCHES OIL AND GAS INC.

Neptune Leasing, Inc. v. Mountain States is a Navajo Nation Supreme Court Case (No. SC-CV-24-10) decided in May 2013. The Supreme Court made important jurisdictional decisions regarding the case but remanded the specific matter at hand back to the Shiprock District Court. During the COVID-19 pandemic, Diné CARE was unable to obtain information from the court system to ascertain how or if the case was ultimately resolved. The decision at the Navajo Nation Supreme Court level was significant because it clarified important questions around Tribal jurisdiction with regards to non-Navajo companies operating on trust lands.

The Parties:

Neptune Leasing Inc

Texas-based company. Operator of a helium plant on Navajo trust land in the DBK field from an unknown period until 2006.

Mountain States Petroleum

New Mexico-based company. Acquired DBK assets from Kerr-McGee in 1994 and bought helium plant from Neptune in 2006. Sold assets, including helium plant, to Nacogdoches in 2007-2008.

Nacogdoches Oil and Gas Inc

Texas-based company. Acquired DBK assets, including helium plant, from Mountain States in 2007-2008. Began selling assets to Nordic Oil USA 2 and Nordic Oil USA 4 in 2016.

Case background: In November 2006, Neptune sold a helium processing plant in the DBK field to Mountain States. As part of the sale, Mountain States worked out a multi-year payment plan or security agreement with Neptune. But then, in August 2007, Mountain States sold the plant, along with its other assets, to Nacogdoches. Neptune claimed that Mountain States' sale of the plant constituted a breach of its security agreement, as well as a breach of Diné Fundamental Law.

Neptune first brought its case against Mountain States and the plant's new owner, Nacogdoches, to the Shiprock District Court in 2010.

Mountain States and Nacogdoches argued that the Navajo Nation did not have jurisdiction over them or over the subject matter. Nacogdoches later withdrew this claim, but Mountain States argued that the case should be heard in Texas based on a clause in its agreement with Neptune.

The Shiprock District Court ultimately found that it had jurisdiction over the subject property (the helium plant) but that its jurisdiction to adjudicate the breach of contract was ambiguous. It thus decided to yield jurisdiction on the contractual matter to an unnamed Texas court. With regards to personal jurisdiction, the Shiprock District Court found that it had jurisdiction over Neptune, which consented to as much, and over Nacogdoches, who had clear business dealings on the Navajo Nation, but found that it did not have jurisdiction over Mountain States because the company no longer had business dealings on the Navajo Nation.

The Helium Plant: The helium plant in question is on Navajo trust land, in the DBK field. The last known business lease written for the site, at the time of the Supreme Court decision, was in 1974 for a party unrelated (and unnamed) to the case. There is no lease record for Neptune, Mountain States, or Nacogdoches' use of the site. Neptune could not produce a record of its

ownership of the helium plant. The sale of the plant to Mountain States was done without knowledge of the Navajo Nation, while Nacogdoches stated that the Navajo Nation was aware of its purchase of the plant from Mountain States and that the Nation was aware of its operations of the plant as well as other oil, gas, and helium recovery activities on and near the Navajo Nation. Because the Shiprock District Court found that it did not have personal jurisdiction over Mountain States, it dismissed the case.

Neptune appealed the case to the Navajo Nation Supreme Court.

THE NAVAJO NATION SUPREME COURT DECISION:

The Supreme Court considered the following issues and analyzed them both as they pertained to Navajo Nation Common Law and U.S. Common Law:

1. "Whether the district court properly dismissed the action below for lack of personal jurisdiction over Mountain States".
2. "Whether the district court properly "yielded" subject matter jurisdiction to an unnamed Texas court conducting unspecified proceedings involving some or all of the parties".

QUESTION 1

Navajo Common Law:

The authority of the Navajo Nation to regulate non-members is recognized in the Treaty of 1868 and codified in the Navajo Nation Long-Arm Statute at 7 N.N.C. § 253(a). One of the grounds for jurisdiction established in the long-arm statute is when a non-member consents to jurisdiction through "commercial dealings" with the Nation, as was the case with Neptune, Mountain States, and Nacogdoches, insofar as they operate(d) on the Navajo Nation. However, the Shiprock District Court had determined that what was relevant for establishing jurisdiction was that Mountain States no longer operated on the Navajo Nation at the time that the suit was brought. The Supreme Court found that the District Court had erred in this decision. According to the Supreme Court, it is not relevant whether the non-member entity (Mountain States) is currently conducting business on the Navajo Nation so long as they once did. The Supreme Court thus reversed this decision.

Federal Common Law:

To determine whether the Navajo Nation has personal jurisdiction over Mountain States under federal common law, the Navajo Nation Supreme Court applied a two-pronged jurisdictional test (the *Montana test*) established in a U.S. Supreme Court Case, *Montana v. United States*, 450 U.S. 544 (1981) for personal jurisdiction over non-members.

The Montana Test: In *Montana*, the U.S. Supreme Court held that while Tribes generally do not have jurisdiction over non-members on non-member fee land, Tribes do retain civil jurisdiction over non-members on the reservation in two instances:

1. When non-members enter into "consensual relationships with the tribe or its members, through commercial dealing, contracts, leases, or other arrangements" OR
2. When non-member "conduct threatens or has some direct effect on the political integrity, the economic security, or the health or welfare of the tribe." *Montana, supra* at 566.

The Navajo Nation Supreme Court noted that the District Court failed to perform the *Montana* test in analyzing the *Neptune v. Mountain States* case. The Supreme Court found that if the District Court had done such an analysis, it would have found that the Navajo Nation had personal jurisdiction over Mountain States because Mountain States did indeed enter into consensual relationships with the Tribe by virtue of its commercial dealings. The Supreme Court rejected the notion espoused by the District Court that the Nation's jurisdiction over Mountain States had ended when Mountain States' commercial relationship with the Nation ended.

In the security agreement (purchase plan) between Neptune and Mountain States, both companies had agreed that conflicts between the two would be addressed in a Texas Court. Mountain States argued that due to this clause in the agreement, the Navajo Nation did not have jurisdiction over its dispute with Neptune. The Navajo Nation Supreme Court rejected this argument:

"If we apply *Montana*, the private party transfers of Navajo land in this case [between Neptune and Mountain States], without written leases, surely threaten or have some direct effect on the political integrity, the economic security, or the health or welfare of the tribe under *Montana*'s second prong. Navajo land belongs to the people, and management of Navajo land carries a solemn responsibility" (p. 8).

Citing the poorly documented practices around the helium plant at the DBK field, the Supreme Court wrote:

"The practice of swift re-sale without involving the Nation clearly interferes with the Nation's ability to manage our land. While being able to point to a lease's terms would be crucial to a jurisdictional challenger under *Montana* in seeking to limit the Nation's reversionary interest in this case, the lack of a lease, and lack of involvement of the Nation across generations of valuable transfers, does not remove private entities from regulation or adjudication under Navajo law" (p. 12).

The Supreme Court thus found that under the two-prong *Montana* test, which is applicable under federal common law, the Navajo Nation did indeed have personal jurisdiction over Mountain States.

QUESTION 2:

The Navajo Nation Supreme Court found that the Shiprock District Court erred in "yielding" subject matter jurisdiction to a Texas court because it did not determine what proceedings, if any, were ongoing in Texas on the matter. In other words, the Shiprock District Court did not confirm whether there was an ongoing case in Texas, in which Court, and involving what parties. In passing off the case, the Court did not do its due diligence to make sure justice would be served in Texas.

Outcome: The Navajo Nation Supreme Court remanded the case to the Shiprock District Court. Records of the case are not available.

APPENDIX IV – RESOLUTIONS FROM RED VALLEY AND TSAILE/WHEATFIELDS CHAPTERS



Red Valley Chapter Government • The Navajo Nation

P.O. Box 304 • Red Valley, Arizona 86544

Hwy 491 Route N13 Buffalo Drive, Bldg. #R006-001

RVC-33-18

Resolution of the Red Valley Chapter

REQUESTING THE DEPARTMENT OF INTERIOR, BUREAU OF INDIAN AFFAIRS NAVAJO REGION, BUREAU OF LAND MANAGEMENT, NAVAJO NATURAL RESOURCE DIVISION, MINERALS DEPARTMENT, OIL AND GAS PERMIT OFFICE, NAVAJO NATION OFFICE OF THE PRESIDENT AND VICE PRESIDENT, NAVAJO NATION RESOURCE & DEVELOPMENT COMMITTEE, NAVAJO HEALTH, EDUCATION & HUMAN SERVICES COMMITTEE TO FORMALLY INVESTIGATE OIL AND GAS OPERATIONS AT THE DINE'BIKEYAH OIL FIELD IN RED VALLEY, AZ AND TO REMEDIATE HEALTH AND SAFETY CONCERNS AND COMPLAINTS BROUGHT FORTH BY RESIDENTS AND COMMUNITY MEMBERS OF THE RED VALLEY CHAPTER.

WHEREAS:

1. The RED VALLEY CHAPTER, pursuant to the Navajo Nation Council Resolution #CAP-34-98 dated October 01, 1998, is a recognized certified local unit of government with the responsibility to review matters pertaining to its government, administration, membership and to decide whether issue(s) is/are in their best interest or not and act accordingly, AND
2. The RED VALLEY CHAPTER, is a certified entity of the Navajo Nation Council Government, vested with the authority to review all issues affecting the respective community; AND
3. The Indian Self-Determination Act (P.L. 93-638) of the U.S. Congress and Local Governance Initiatives entitles and support us, Navajo Indians, in initiating plans making decisions, recommendation, request, etc., according to our actual needs and desires; AND
4. Residents of the RED VALLEY CHAPTER maintain their right as Dine', the aboriginal People of Dine' Bikeyah, to be duly informed and consulted with, and included in any contracts concerning leasing of their lands for minerals, oil, gas, and/or helium, or natural resource management plans involving the IBA, BLM, Navajo Nation, and Minerals Department. Residents are observing an apparent rapid increase in helium production, and are hearing reports that the Navajo Nation is entering into new contracts for helium extraction in the area, about which residents and chapter officials have been given no information; AND
5. The United Nations Declaration on the Rights of Indigenous Peoples recognizes "free, prior, and informed consent (FPIC), AS A SPECIFIC RIGHT THAT PERTAINS TO Indigenous People. FPIC, recognizes that Indigenous People may withhold consent to a project that may affect them or their territories. Once they have given their consents, they can withdraw it at any stage. Furthermore, AFPIC enables them to negotiate the conditions under which the project will be designed, implemented, monitored and evaluated. This is also embedded within the universal right to self-determination; AND
6. The RED VALKEY CHAPTER maintains section G of Diyin Bitsaadee Beenahaz'aanii—Dine' Traditional Law (1 N.N.C. § 203): "Our elders and our medicine people, the teachers of traditional laws, values and principles must always be respected and honored if the people and the government are to persevere and thrive; the teachings of the elders and medicine people, their participation in government and their contributions of the traditional values and principles of Dine' life way will ensure growth of the Navajo Nation; AND

7. The Chuska, Fort Defiance and Carrizo mountains are known to the Dine' as the holy male deity Ch'oooshgai, and as such deserves respect, protection, diligent care, and restoration, in accordance with section B of Dine' Bi Beenahaz'aanii (1 N.N.C. § 201-201§ 5. Nahasdz'aanii—Dine' Natural Law (1 N.N.C. § 205): "The six sacred mountains, Sisnajini, Tsoodzil, Dook'o'osliid, Dibe' Nitsaa, Dzil Na'oodilii, Dxil Ch'ool'i'I, and all the attendant mountains must be respected, honored and protected for they, as leaders, are the foundations of the Navajo Nation"; AND
8. Residents of the RED VALLEY CHAPTER that have homesite and grazing permits near the DBK Oil Field and within the Navajo Nation Forestlands, and Chuska Mountain Range have complaints about the strong, foul smelling fumes and emissions from the DBK oil field, including loud noises, and bright lights on during the night; AND
9. Residents and community members have complaints about the heavy traffic that oil and gas operators of the DBK field have brought to community roads in the mountains and in the valley. Mountain dirt roads are showing signs of erosion, and oil/gas truck traffic restricts community use and access. Residents and homesite lease holders have also noticed new roads built by oil/gas workers and community roads are blocked off by beams, restricting community access to homesites and traditional herbs and medicine. Additionally, there is a BIA-maintained road used by school buses that oil/gas truck drivers are using regularly, driving far above the speed limit, and causing some community members and a school bus at one time to be pushed off the road. Community members have stated that DBK oil and gas field drivers are not using their designated road, are not maintaining their road, and are heavily using the BIA school bus road, and as such are putting the community at risk with increased traffic and dangerous driving; AND
10. In 2005, there was a large oil spill that came from an oil well in the DBK field. Residents do not feel the cleanup and remediation was properly addressed. Residents have also noticed a number of power lines in the oil field are knocked down and have electrocuted livestock and wildlife; AND
11. Residents and community members do not feel that enough has been done by Navajo Nation and its departments, BIA, or the oil and gas operators of the DBK field to monitor and ensure proper safety standards are carried out in their operations. A January 11th article in Navajo Times exposed toxic and dangerous ground gas leakage and emissions coming from gas well API: 02-001-20020, State Permit # AZOGCC:0396 and Nacogdoches Oil and Gas Helium Fractionators Plant. Outside technicians brought in to survey the DBK site stated that practices at the DBK field are not up to proper safety standards. Bad practices at the DBK field pose a very dangerous risk to the community. Residents request that all responsible agencies act to ensure the safety of the Red Valley Community and environment. Additionally, residents ask that OSHA become involved and access the DBK site, to initiate and ensure that proper practices are addressed; AND
12. Residents that have homesites and grazing permits near the oil field, have noticed the increase of headaches at their summer sheep composites in the mountains. Numerous studies and articles have stated the dangers of oil, gas and fracking operations to human and environmental health. Organizations that have long worked on oil and gas issues, have noted that communities that live near oil and gas fields often report symptoms of respiratory problems, such as asthma, coughing, eye, nose, and throat irritation, headaches, nausea, dizziness, trouble sleeping, and fatigue (Eathworks, 2017, Oil and Gas Health Effects; AND
13. Residents' concerns about the harmful health effect of fumes coming from poorly operated oil and gas wells are supported by research such as a 2014 study published in Environmental Health 13:82, entitled "Air Concentrations of Volatile Compounds Near Oil and Gas Production: A Community-based Exploratory Study," which found that "Levels of eight volatile chemicals exceeded federal guidelines under several operations circumstances. Benzene, formaldehyde, and hydrogen sulfide were the most common compounds to exceed acute and other health-based risk levels"; AND

14. Oil and Gas and fracking operations require millions of gallons of water, sand, and dangerous chemicals. Deep shale wells can use anywhere from 2 to 10 million gallons of water to fracture a single well. A four million fracturing operations uses from 80-330 tons of various chemicals. Red Valley residents are concerned about negative effects to their community and environment resulting from the large amount of chemicals and water use at the DBK Oil Field. Many fracturing fluid chemicals are known to be toxic to humans and wildlife, and several are known to cause cancer. Some chemicals, like benzene even in small quantities can contaminate millions of gallons of water. (Earthworks 2017, Hydraulic Fracturing-What it is); AND
15. Residents have expressed concern that companies operating in the DBK oil field may be illegally and unsafely disposing of potentially hazardous, toxic, and even radioactive liquid wastes onto oil field sites, along roadways, and into the watershed; AND
16. PART 167.3 of Navajo Grazing Regulations states that the Navajo Nation is committed to "The preservation of the forage, the land, and the water resources on the Navajo Reservation, and the building up of those resources where they have deteriorated." Red Valley grazing permit holders and local livestock owners are therefore notifying the Navajo Nation of their concern about potential damage from fumes and waste fluid pollution on livestock, as well as on wildlife in the vicinity of the DBK oil field; AND
17. The Navajo Nation Natural Resource Division is currently developing an Integrated Resource Management Plan (IRMP) for the Navajo Forestlands, which includes Red Valley and other chapters in the Chuska Mountains and Defiance Plateau regions, and which proposes to increase oil and gas exploration, logging, and gravel mining in the area, without comprehensive community consultations; AND
18. This chapter supports our residents and other Navajo community members who have signed a petition seeking redress and reparation for the damages that are being and have been caused by DBK oil field company operations, which is a right guaranteed by Section 4 of the Navajo Nation Bill of Rights, as well as the Indian Civil Rights Act, under freedom of religion, speech, press, and the right of assembly and petition.

NOW THEREFORE BE IT RESOLVED THAT:

1. The RED VALLEY CHAPTER hereby approves a resolution requesting the requesting the Department Of Interior, Bureau of Indian Affairs Navajo Region, Bureau of Land Management, Navajo Natural Resource Division, Minerals Department, Oil and Gas Permit Office, Navajo Nation Office of the President and Vice President, Navajo Nation Resource & Development Committee, Navajo Health, Education & Human Services Committee to formally investigate oil and gas operations at the Dine'Bikeyah oil field in Red Valley, AZ and to remediate health and safety concerns and complaints brought forth by residents and community members of the RED VALLEY CHAPTER; AND
2. The RED VALLEY CHAPTER and community must be duly informed, and consulted with immediately on all contracts, leasing, current and future oil and gas operations, as well as natural resource management plans, involving the Red Valley community and Chuska mountain region; AN
3. Complaints brought forth by the RED VALLEY CHAPTER and residents must be addressed immediately, including complaints concerning strong odors and fumes, loud noise, bright lights, road and traffic hazards; AND
4. A formal investigation and detailed survey of the DBK oil and gas field must be carried out by each of the agencies listed in the title of this resolution; AND
5. A plan must be developed by all responsible agencies to repair and remediate all environment damages and toxic dumps, including those from historical wells that are no longer in operation; AND

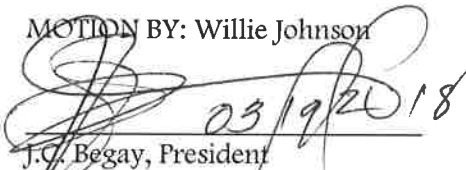
6. Navajo Nation should commence negotiations regarding compensation to RED VALLEY CHAPTER and community for damages inflicted on their livelihoods, homesite, grazing permit rights and Dine' cultural practices; AND
7. It would be in the best interest of RED VALLEY CHAPTER, residents and local Chuska forest communities, as well as the Navajo Nation, to ensure that complaints brought forth by Red Valley resident are properly investigated, and that remediation is carried out in a responsible and timely manner to safeguard the health, safety, and well being of its communities.

CERTIFICATION

WE, hereby certify the foregoing resolution was duly considered at called meeting at RED VALLEY CHAPTER, Navajo Nation, ARIZONA, at which quorum was present and that same was passed by a vote of 24 in favor, 0 opposed, and 2 abstained on this 11th day of March, 2018.

MOTION BY: Willie Johnson

SECONDED BY: Sally Benally

 03/19/2018

J.C. Begay, President

Gary Chavez, Vice-President



Stella Tsosie, Secretary/Treasurer

Amber Crotty, Council Delegate



Tsaile/Wheatfields Chapter
Post Office Box C18
Tsaile, Arizona 86556
Phone: (928) 724-2220 Fax: (928) 724-2223

Tsééhilí

TóDzis'á

Tsézhine

Zane P. James, President
Charles R. Chee, Grazing Committee

Devon Begay, Vice President

Kuhyorne E. Nata'ani, Secretary/Treasurer
Nelson Begaye, Council Delegate

TWFFY18- 094

**RESOLUTION OF THE
TSAILE/WHEATFIELDS CHAPTER #038**

Supporting the Red Valley Chapter request to: 1.) The Department of Interior, Bureau of Indian Affairs Navajo Region; 2.) Bureau of Land Management; 3.) Navajo Nation Natural Resource Division: Minerals Department, Oil and Gas Permit Office; 4.) Navajo Nation Environmental Protection Agency; and 5.) Navajo Nation Office of President and Vice President, 6) Navajo Nation Resource & Development Committee, and 7) Navajo Nation Health, Education & Human Services Committee to formally investigate oil and gas operations at the Diné Bikeyah Oil Field in Red Valley, AZ, and to remediate health and safety concerns and complaints brought forth by residents and community members of the Red Valley Chapter.

WHEREAS:

1. Pursuant to Navajo Nation Council Resolution No. CJ-20-55, dated December 2, 1955, the Tsaile/Wheatfields Chapter is vested with authority and charged with the responsibility to promote, protect and preserve the interest and general welfare, including the health and safety of its community people; and
2. The Indian Self-Determination Act (P.L. 93-638) of U.S. Congress entitles and support us, Navajo Indians, in initiating plans and making decisions, recommendations, request, etc., according to our needs and desires; and
3. Residents of the Tsaile/Wheatfields Chapter maintain their right as Diné, the aboriginal People of Diné Bikeyah, to be duly informed and consulted with, and included in any contracts concerning leasing of their lands for minerals, oil, gas, and/or helium, or natural resource management plans involving the BIA, BLM, Navajo Nation, and Minerals Department. Residents are observing an apparent rapid increase in helium production, and are hearing reports that the Navajo Nation is entering into new contracts for helium extraction in the area, about which residents and chapter officials have been given no information; and
4. The United Nations Declaration on the Rights of Indigenous Peoples recognizes "free, prior, and informed consent (FPIC), as a specific right that pertains to Indigenous People. FPIC recognizes that Indigenous People may withhold consent to a project that may affect them or their territories. Once they have given their consent, they can withdraw it at any stage. Furthermore, FPIC enables them to negotiate the conditions under which the project will be designed, implemented, monitored and evaluated. This is also embedded within the universal right to self-determination; and
5. The Tsaile/Wheatfields Chapter maintains section G of Diyin Bitsaądęę Beenahaz'aanii--Diné Traditional Law (1 N.N.C. § 203): "Our elders and our medicine people, the teachers of traditional laws, values and principles must always be respected and honored if the people and the government are to persevere and thrive; the teachings of the elders and medicine people, their participation in government and their contributions of the traditional values and principles of Diné life way will ensure growth of the Navajo Nation ..."; and
6. The Chuska, Fort Defiance and Carrizo mountains are known to the Diné as the holy male deity Ch'ooshgai, and as such deserves respect, protection, diligent care, and restoration, in

accordance with section B of Diné Bi Beenahaz'áanii (1 N.N.C. §§ 201-206)§ 5. Nahasdzáán dóó Yádiłhít Bitsaądeę Beenahaz'áanii--Diné Natural Law (1 N.N.C. § 205): "The six sacred mountains, Sisnajíni, Tsoodzil, Dook'o'osliíd, Dibé Nitsaa, Dził Na'oodiili, Dził Ch'ool'i'i, and all the attendant mountains must be respected, honored and protected for they, as leaders, are the foundation of the Navajo Nation"; and

7. Residents of the Red Valley Chapter that have homesites and grazing permits near the DBK Oil Field and within the Navajo Nation Forestlands, and Chuska Mountain Range have complaints about the strong, foul smelling fumes and emissions from the DBK oil field, including loud noises, and bright lights on during the night; and
8. Residents and community members have complaints about the heavy traffic that oil and gas operators of the DBK field have brought to community roads in the mountains and in the valley. Mountain dirt roads are showing signs of erosion, and oil/gas truck traffic restricts community use and access. Residents and homesite lease holders have noticed new roads built by oil/gas workers and community roads are blocked off by berms, restricting community access to homesites and prevents the gathering of traditional herbs and medicine. Additionally, there is a BIA-maintained road used by school buses that oil/ gas truck drivers are using regularly, driving far above the speed limit, and causing some community members, and a school bus at one time to be pushed off the road. Community members have stated that DBK oil and gas field drivers are not using their designated road, are not maintaining their road, and are heavily using the BIA school bus road, and as such are putting the community at risk with increased traffic and dangerous driving; and
9. In 2005, there was a large oil spill that came from an oil well in the DBK field. Residents do not feel the cleanup and remediation was properly addressed. Residents have also noticed a number of power lines in the oil field are knocked down and have electrocuted livestock and wildlife; and
10. Residents and community members do not feel that enough has been done by Navajo Nation and its departments, BIA, or the oil and gas operators of the DBK field to monitor and ensure proper safety standards are carried out in their operations. A January 11th article in the Navajo Times exposed toxic and dangerous ground gas leakage and emissions coming from gas well API: 02-001-20020, State Permit # AZ0GCC:0396 and the Nacogdoches Oil and Gas Helium Fractionator Plant. Outside technicians brought in to survey the DBK site stated that practices at the DBK field are not up to proper safety standards. Bad practices at the DBK field pose a very dangerous risk to the community. Residents request that all responsible agencies act to ensure the safety of the Red Valley community and environment. Additionally, residents ask that OSHA become involved and access the DBK site, to initiate and ensure that proper practices are addressed; and
11. Residents that have homesites and grazing permits near the oil field, have noticed the increase of headaches at their summer homesites in the mountains. Numerous studies and articles have stated the dangers of oil, gas, and fracking operations to human and environmental health. Organizations that have long worked on oil and gas issues, have noted that communities that live near oil and gas fields often report symptoms of respiratory problems, such as asthma, coughing, eye, nose, and throat irritation, headaches, nausea, dizziness, trouble sleeping, and fatigue (Earthworks, 2017, Oil and Gas Health Effects); and
12. Residents' concern about the harmful health effects of fumes coming from poorly operated oil and gas wells are supported by research such as a 2014 study published in *Environmental Health* 13:82, entitled "Air Concentrations of Volatile Compounds Near Oil and Gas Production: A Community-based Exploratory Study," which found that "Levels of eight volatile chemicals exceeded federal guidelines under several operational circumstances. Benzene, formaldehyde, and hydrogen sulfide were the most common compounds to exceed acute and other health-based risk levels"; and
13. Oil and gas and fracking operations require millions of gallons of water, sand, and dangerous chemicals. Deep shale wells can use anywhere from 2 to 10 million gallons of water to fracture a single well. A four million gallon fracturing operation uses from 80-330 tons of various

chemicals. Red Valley residents are concerned about negative effects to their community and environment resulting from the large amount of chemicals and water used at the DBK oil field. Many fracturing fluid chemicals are known to be toxic to humans and wildlife, and several are known to cause cancer. Some chemicals, like benzene even in small quantities can contaminate millions of gallons of water. (Earthworks 2017, Hydraulic Fracturing- What it is); and

14. Residents have expressed concern that companies operating in the DBK oil field may be illegally and unsafely disposing of potentially hazardous, toxic, and even radioactive liquid wastes onto oil field sites, along roadways, and into the watershed; and
15. Part 167.3 of Navajo Grazing Regulations states that the Navajo Nation is committed to "The preservation of the forage, the land, and the water resources on the Navajo Reservation, and the building up of those resources where they have deteriorated." Red Valley grazing permit holders and local livestock owners are therefore notifying the Navajo Nation of their concern about potential damage from fumes and waste fluid pollution on livestock, as well as on wildlife in the vicinity of the DBK oil field; and
16. The Navajo Nation Natural Resource Division is currently developing an Integrated Resource Management Plan (IRMP) for the Navajo Forestlands, which includes Red Valley and other chapters in the Chuska Mountains and Defiance Plateau regions, and which proposes to increase oil and gas exploration, logging, and gravel mining in the area, without comprehensive community consultation; and
17. This chapter supports residents of the Chuska Mountains and Defiance Plateau, and other Navajo community members who have signed a petition seeking redress and reparation for the damages that are being and have been caused by DBK oil field company operations, which is a right guaranteed by Section 4 of the Navajo Nation Bill of Rights, as well as the Indian Civil Rights Act, under freedom of religion, speech, press, and the right of assembly and petition.

NOW THEREFORE IT BE RESOLVED THAT:

1. The Tsaile/Wheatfields Chapter hereby approves and supports the Red Valley Chapter to: 1.) the Department of Interior, Bureau of Indian Affairs Navajo Region; 2.) Bureau of Land Management; 3.) Navajo Nation Natural Resource Division: Minerals Department, Oil and Gas Permit Office; 4.) Navajo Nation Environmental Protection Agency; and 5.) Navajo Nation Office of President and Vice President, to formally investigate oil and gas operations at the Diné Bikeyah Oil Field in Red Valley, AZ, and to remediate health and safety concerns and complaints brought forth by residents and community members of the Red Valley Chapter.
2. The Red Valley Chapter and communities in the Chuska and Defiance mountain range must be duly informed, and consulted with immediately on all contracts, leasing, current and future oil and gas operations, as well as natural resource management plans, involving the Red Valley community and Chuska mountain region; and
3. Complaints brought forth by the Red Valley Chapter and residents must be addressed immediately, including complaints concerning strong odors and fumes, loud noise, bright lights, road and traffic hazards; and
4. A formal investigation and detailed survey of the DBK oil and gas field must be carried out by each of the agencies listed in the title of this resolution; and
5. A plan must be developed by all responsible agencies to repair and remediate all environmental damage and toxic dumps, including those from historical wells that are no longer in operation; and

6. Navajo Nation should commence negotiations regarding compensation to Red Valley Chapter and community for damages inflicted on their livelihoods, homesites, grazing permit rights, and Diné cultural practices; and
7. No new leases or contracts should be entered into, until concerns and complaints brought forth by the Red Valley Chapter and community are remedied; and
8. It would be in the best interest of Tsaile/Wheatfields Chapter, residents, and local Chuska forest communities, as well as the Navajo Nation, to ensure that complaints brought forth by Red Valley residents are properly investigated, and that remediation is carried out in a responsible and timely manner to safeguard the health, safety, and well-being of its communities.

CERTIFICATION

I, hereby certify the foregoing resolution was duly considered by the Tsaile/Wheatfields Chapter at a duly called meeting at Wheatfields, Arizona at which a quorum was present and the same was passed by a vote of 26 in favor, 0 opposed, and 5 abstained on this 19th day of March, 2018.

Motion by: Adella Begay

Second by: Willis Becenti



Zane James
Tsaile/Wheatfields Chapter President

APPENDIX V – MARCH 2019 LETTER FROM NAVAJO NATION MINERALS
DEPARTMENT TO DINÉ CARE

THE NAVAJO NATION

JONATHAN NEZ | PRESIDENT MYRON LIZER | VICE PRESIDENT



March 6, 2019

Robyn Jackson, Climate & Energy Outreach Coordinator
Diné C.A.R.E.
HC 63 Box 272
Dilkon, Arizona 86047

RE: Request for Documents

Dear Ms. Jackson:

This letter is in response to your request for documents submitted to me on December 7, 2108. The following is the Navajo Nation Minerals Department (or "Minerals")' response to each of your requests contained in your December 7th letter:

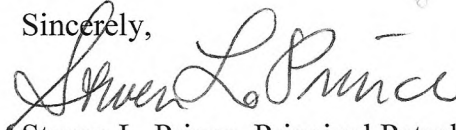
- Tribal Permits held by operators and leasees [sic] in the DBK field
 - **Minerals Response:** Minerals does not have any tribal permits in its possession related to the DBK field. Your December 7th letter states that you have already spoken with the Navajo Nation Environmental Protection Agency (Navajo EPA) who referred you to Minerals. Therefore, Minerals does not know of any Navajo Nation entity that maintains such documentation.
- Water Permits for operation in the DBK field
 - **Minerals Response:** Minerals does not have any water permits in its possession related to the DBK field. The Navajo Nation Department of Water Resources may maintain water permits associated with the DBK field. Our office recommends that you contact Mr. Jason John, Acting Director, Navajo Nation Department of Water Resources, PO Box 678, Fort Defiance, AZ 86504.
- Inspection Reports of the DBK wells and the helium processing site in Red Valley
 - **Minerals Response:** Minerals does not have any of these environmental inspection reports in its possession, nor does Minerals know of any Navajo Nation entity that maintains such documentation.
- Emissions reports from wells in the DBK field and helium processing site in Red Valley
 - **Minerals Response:** Minerals does not have any emissions reports in our possession. As your December 7th letter indicates, you have already spoken with Navajo EPA who referred you to Minerals. Therefore, Minerals does not know of

any Navajo Nation entity which maintains such documentation.

- Copies of BLM and Capitol Operating Groups reports on quarterly air monitoring data and H2S monitoring data.
 - **Minerals Response:** Minerals does not have copies of these documents in its possession. Minerals does not know of any Navajo Nation entity that maintains these documents.

In your letter, you also asked two additional questions: 1.) Are the wells in the DBK field considered minor source air emissions? and 2.) Is the helium processing site considered minor source, as well? It is Minerals' understanding that both the wells in the DBK field and the helium processing site are considered minor sources, but we strongly recommend you seek an official answer to these questions from the U.S. Environmental Protection Agency.

Sincerely,

A handwritten signature in black ink that reads "Steven L. Prince". The signature is written in a cursive style with a large, stylized "S" and "P".

Steven L. Prince, Principal Petroleum Engineer
Minerals Department

xc: April Quinn, Attorney, DOJ
Akhtar Zaman, Director, Minerals Department

APPENDIX VI – COPY OF PURCHASE AND SALE AGREEMENT BETWEEN
NACOGDOCHES OIL AND GAS, INC. AND NORDIC USA 4 LLC

Nacogdoches Oil & Gas, Inc.

March 29, 2019

Red Valley Chapter
PO BOX 304
Red Valley, AZ 86544

*via certified mail return
receipt requested*

Re: Nacogdoches Oil and Gas, Inc.'s Application for Approval of Assignment
of Five Tribal Oil and Gas Mining Leases to Nordic Oil USA 4 LLC

Apache County, Arizona Lease Nos.: 14-20-0603-8812; 14-20-0603-8822;
14-20-0603-8823; 14-20-0603-8876; 14-20-0603-8889

Ladies and Gentlemen:

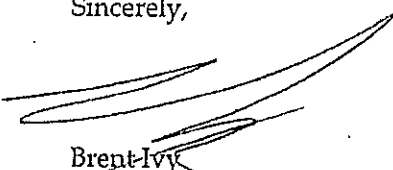
Pursuant to N.N.C. T. 18 § 605, Nacogdoches Oil and Gas, Inc. ("NOG") has submitted the enclosed applications to the Navajo Nation for approval of assignment of all of NOG's right, title and interest in and to the above-referenced Oil and Gas Mining Leases to Nordic Oil USA 4 LLC ("Nordic").

Such applications were executed pursuant to the enclosed Purchase and Sale Agreement, executed by NOG as Seller and Nordic as Buyer, dated March 29, 2019, with exhibits and schedules, which constitute the full and complete economic terms between the parties for this transaction.

Capitol Operating Group, LLC is currently the operator of these five leases. Following the transfer of assignments to Nordic, Capitol Operating Group, LLC shall remain operator.

Should you have any questions, please do not hesitate to contact me at (936) 560-4747 or brent.ivy@nogtx.com.

Sincerely,



Brent Ivy
Vice President

Enclosures.

PURCHASE AND SALE AGREEMENT

BY AND BETWEEN

NACOGDOCHES OIL AND GAS, INC.

AS SELLER,

AND

NORDIC OIL USA 4 LLC

AS BUYER,

DATED AS OF MARCH 29, 2019

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EXHIBITS AND SCHEDULES

EXHIBITS

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SCHEDULES

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Schedule 5.8	Governmental Bonds

PURCHASE AND SALE AGREEMENT

This PURCHASE AND SALE AGREEMENT (this "*Agreement*") is entered into this 29th day of March, 2019 (the "*Execution Date*"), by and between NACOGDOCHES OIL AND GAS, INC., a Texas corporation ("*Seller*"), and NORDIC OIL USA 4 LLC, a Delaware limited liability company ("*Buyer*"). Buyer and Seller are each referred to herein, individually, as a "*Party*" and, collectively, as the "*Parties*".

RECITALS

WHEREAS, Seller desires to sell, and Buyer desires to purchase, all of the Properties (as hereinafter defined); and

WHEREAS, the purchase and sale of the Properties will be consummated on the terms and conditions set forth in this Agreement;

NOW, THEREFORE, for and in consideration of the mutual promises, representations, warranties, covenants, conditions and agreements contained herein, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Parties hereby agree as follows:

1. **Definitions and References.** Capitalized terms used in this Agreement and not defined elsewhere in this Agreement shall have the meanings set forth in this Section 1.1.

1.1. **Definitions.** The following terms have the meanings given in this Section 1.1 or in the Section referred to below:

"*Accounting Referee*" means a nationally recognized accounting firm mutually agreed upon by Seller and Buyer, *provided* that such Accounting Referee has not performed any material work for any of the Parties or any of their respective Affiliates within the preceding five (5) year period.

"*Affiliate*" means, with respect to any Person, any other Person that directly or indirectly (through one or more intermediaries or otherwise) Controls, is Controlled by, or is under common Control with the first Person.

"*Agreement*" has the meaning specified in the introductory paragraph.

"*Allocated Value*" means, with respect to a Property, the portion of the Purchase Price allocated to such Property as shown on Exhibit A.

"*Assignment*" means the Assignment, Bill of Sale and Conveyance in substantially the same form attached hereto as Exhibit B, from Seller to Buyer assigning the Properties effective as of the Effective Time.

"*Assumed Obligations*" means the following: (a) Liabilities solely to the extent attributable to the ownership, use or operation of the Properties during the period from and after the Effective Time, including the payment of real estate, use,

occupation, ad valorem, severance, production and personal property Taxes attributable to the Properties for calendar year 2019 and thereafter (subject to apportionment of such Taxes as provided for in this Agreement); and (b) Liabilities, whether accruing or attributable to periods before or after the Effective Time, arising out of or relating to: (i) Gas Imbalances, and (ii) Suspended Funds, but only to the extent such Suspended Funds were paid by Seller to Buyer as provided in this Agreement; *provided, however*, Buyer does not assume and Assumed Obligations does not include any of the foregoing (or any other Liabilities) to the extent constituting Retained Liabilities or to the extent resulting from any matters that are the subject of any other indemnity obligation of Seller hereunder.

“Basket” has the meaning specified in Section 10.6.1.

“Business Day” means any day other than Saturday or Sunday or a day on which banking institutions in Houston, Texas are authorized by Law to close.

“Buyer” has the meaning specified in the introductory paragraph.

“Buyer Indemnified Parties” has the meaning specified in Section 10.2.

“Capitol Operating” means Capitol Operating Group, LLC, a Texas limited liability company.

“Casualty” means volcanic eruptions, acts of God, terrorist acts, fire, explosion, gathering line failure, earthquake, wind storm, flood, drought, or other casualty, or any condemnation, exercise of eminent domain, confiscation or seizure.

“Claim Notice” has the meaning specified in Section 10.5.2.

“Closing” means the closing and consummation of the transactions contemplated by this Agreement.

“Closing Date” means the Execution Date.

“Closing Payment” means the Purchase Price as adjusted at Closing, as determined in accordance with Section 2.7 and set forth in the Closing Statement.

“Closing Statement” has the meaning specified in Section 2.7.

“Code” means the Internal Revenue Code of 1986, as amended.

“Contracts” has the meaning specified in the definition of Properties.

“Control” means the possession, directly or indirectly, of the power, directly or indirectly, to direct or cause the direction of the management or policies of the controlled Person, whether through the ownership of equity interests in or voting rights attributable to the equity interests in such Person, by contract or agency, by

the general partner of a Person that is a partnership, or otherwise; and “*Controls*” and “*Controlled*” have meanings correlative thereto.

“*Customary Post-Closing Consents*” has the meaning specified in the definition of Permitted Encumbrances.

“*Debt Financing Party*” means any lender, arranger, commitment party or agent acting in such capacity with respect to any Financing, and their respective Affiliates, equityholders, members, partners, officers, directors, employees, agents, advisors and representatives involved in the Financing and the successors and assigns of any of the foregoing.

“*Debt Instrument*” means any contract or instrument evidencing any indebtedness for borrowed money, deferred payment of purchase price, or carry obligation, or any guaranty, endorsement, assumption or other contingent obligation in respect of indebtedness of others, including any note, indenture, mortgage, security interest, loan, credit agreement, financing lease or similar instrument.

“*Defensible Title*” means title to each Real Property Interest and each Well that as of both the Effective Time and immediately prior to the Closing:

(a) with respect to a Real Property Interest or Well, (i) entitles Seller (and immediately following the Closing, will entitle Buyer) to receive throughout the productive life of such Real Property Interest and Well not less than the NRI for such Real Property Interest and Well shown on Exhibit A, except for decreases required to allow other working interest owners to make up past underproduction or pipelines to make up past under deliveries, or (ii) obligates Seller (and immediately following the Closing, will obligate Buyer) to bear throughout the productive life of such Real Property Interest or Well not greater than the Working Interest for such Real Property Interest or Well shown on Exhibit A, except for (A) any increases that result in at least a proportionate increase in Seller’s NRI for such Real Property Interest or Well, and (B) increases resulting from contribution requirements with respect to defaulting co-owners under applicable operating agreements;

(b) with respect to a Real Property Interest, such Real Property Interest is in full force and effect and entitles Seller (and immediately following the Closing, will entitle Buyer) to not less than the number of Net Acres shown on Exhibit A for such Real Property Interest; and

(c) subject to Permitted Encumbrances, is free and clear of all Liens.

“*Disallowed Expenses*” means Operating Expenses and other expenses that are incurred, or otherwise contracted or consented to, by or on behalf of Seller at any time during the period from the Effective Time until Closing (or that are otherwise attributable to the ownership or operation of the Properties from and after the Effective Time) and that (a) were not incurred in the Ordinary Course of

Business, (b) were not incurred in compliance with the terms of this Agreement or any applicable Contracts, or (c) constitute capital expenditures related to any Wells listed on Exhibit A (unless set forth on Schedule 3.10).

“Dollar” means the United States of America dollar.

“Easements” has the meaning specified in the definition of Properties.

“Effective Time” means 12:00:01 a.m. Central Time, March 1, 2019.

“Environmental Law” means any Law relating to the environment, health and safety, Hazardous Materials, industrial hygiene, Hydrocarbon well construction, the environmental conditions on, under, or about any of the Properties, including soil, groundwater, and indoor and ambient air conditions or the reporting or remediation of environmental contamination and includes, without limitation, the Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended, including the Superfund Amendments and Reauthorization Act of 1986, 42 U.S.C. § 9601 *et seq.*; the Resource Conservation and Recovery Act, including the Hazardous and Solid Waste Amendments Act of 1984, 42 U.S.C. § 6901 *et seq.*; the Federal Water Pollution Control Act, 33 U.S.C. § 1251 *et seq.*; the Clean Air Act, 42 U.S.C. § 7401 *et seq.*; the Hazardous Materials Transportation Act, 49 U.S.C. § 1471 *et seq.*; the Toxic Substances Control Act, 15 U.S.C. §§ 2601 *et seq.*; the Oil Pollution Act of 1990, 33 U.S.C. § 2701 *et seq.*; the Emergency Planning and Community Right to Know Act of 1986, 42 U.S.C. § 11001 *et seq.*; the Safe Drinking Water Act, 42 U.S.C. §§ 300f *et seq.*; the Rivers and Harbors Act of 1899, 33 U.S.C. § 401 *et seq.*; Fungicide and Rodenticide Act 7 U.S.C. Section 136, *et seq.*; and the Occupational Safety and Health Act, 29 U.S.C. § 651 *et seq.*; as any of the foregoing may be amended and any other Law the purpose of which is to conserve or protect human health, the environment, wildlife or natural resources.

“Equipment” has the meaning specified in the definition of Properties.

“Excluded Assets” means the following:

(a) Seller’s minute books, financial and income or franchise tax records, Tax Returns to the extent relating to Seller’s income or franchise taxes, and legal records (other than title records);

(b) any existing or future refund of costs, Taxes or expenses borne by any of Seller, its Affiliates or its or their respective predecessors in title, to the extent attributable to the period prior to the Effective Time;

(c) all claims and causes of action of Seller or its Affiliates arising under or with respect to any of the Contracts that are attributable to periods of time prior to the Effective Time (including claims for adjustments or refunds);

(d) all rights and interests of Seller or its Affiliates (i) under any policy or agreement of insurance or indemnity to the extent and only to the extent such rights and interests relate to the ownership of the Properties prior to the Effective Time and not to any Assumed Obligations, and (ii) under any bond;

(e) Seller's rights with respect to Hydrocarbons produced from the Properties with respect to all periods prior to the Effective Time and all proceeds from the disposition thereof, other than inventory for which an adjustment is made under Section 2.5(a); and any and all proceeds from production and from the settlements of contract disputes with purchasers of Hydrocarbons or byproducts from the Lands, including settlement of take-or-pay disputes, insofar as said proceeds are attributable to periods of time prior to the Effective Time;

(f) all accounts receivable and audit rights arising under any of the Contracts or otherwise with respect to the Properties solely with respect to any period prior to the Effective Time or to any of the Excluded Assets, and except for any Gas Imbalances;

(g) all claims of Seller or any of its Affiliates for refunds of or loss carry forwards with respect to (1) production, ad valorem or any other Taxes attributable to any period prior to the Effective Time, (2) income or franchise Taxes, or (3) any Taxes attributable to the Excluded Assets;

(h) all documents and instruments of Seller or any of its Affiliates that may be protected by an attorney-client privilege, except to the extent relating to any Assumed Obligations;

(i) all information that cannot be disclosed to Buyer as a result of confidentiality arrangements under agreements with Third Parties (other than title opinions and other title records relating to the Properties) for which Seller is unable to secure permission (after using its commercially reasonable efforts, at no material out-of-pocket cost to Seller) to provide or convey to Buyer;

(j) all Hedge Contracts and all rights and Liabilities thereunder, and all Debt Instruments of Seller and its Affiliates and all Liabilities thereunder;

(k) all of Seller's proprietary computer software, patents, trade secrets, copyrights, names, trademarks, logos and other intellectual property;

(l) documents prepared or received by Seller or its Affiliates with respect to (i) lists of prospective purchasers for the Properties, (ii) correspondence between or among Seller, its representatives and any prospective purchaser other than Buyer, and (iii) correspondence between Seller or any of its representatives with respect to any of the prospective purchasers or the transactions contemplated by this Agreement;

(m) all employee files of Seller; and

(n) all e-mails and other electronic files on Seller's servers and networks to the extent not primarily related to the ownership, operation or development of the Properties.

"Execution Date" has the meaning specified in the introductory paragraph.

"Final Statement" has the meaning specified in Section 2.8.

"Financing" means any debt financing now or hereinafter obtained by the Buyer in connection with the transactions contemplated by this Agreement as such debt financing may be amended, restated, modified, supplemented, refinanced or replaced.

"Fundamental Representation" means with respect to a Party the representations and warranties of such Party that are contained in Sections 3.1, 3.2, 3.3, 3.5, 3.19, 3.20, 4.1, 4.2, 4.3, 4.6, and 4.7, as applicable.

"GAAP" means generally accepted accounting principles, consistently applied, as recognized by the U.S. Financial Accounting Standards Board (or any generally recognized successor). The requisite that such principles be consistently applied means that the accounting principles in a current period are comparable in all material respects to those applied in preceding periods.

"Gas Imbalances" means any over-production of Hydrocarbons or under-production of Hydrocarbons, or over-deliveries or under-deliveries with respect to Hydrocarbons produced from or allocated to the Properties.

"Geological and Geophysical Information" means all proprietary and (to the extent transferable without payment of a fee or other penalty to any Third Party, unless Buyer has separately agreed in writing to pay such fee or other penalty) non-proprietary geophysical, seismic and related technical data, including data, core and fluid samples and other engineering, geological and/or geophysical studies (including seismic data, studies, analyses, interpretations and information), and other similar information and records, in each case relating to the Properties.

"Governmental Authority" means any foreign, national, state, local, municipal, tribal or other government or division thereof; any governmental, regulatory or administrative agency, commission, body or other authority exercising or entitled to exercise any administrative, executive, judicial, legislative, police, regulatory or taxing authority or power; and any court or governmental tribunal or arbitrator.

"Hazardous Materials" means, without limitation, any waste, substance, product, or other material (whether solid, liquid, gas or mixed), which is identified, listed, published, or defined as a hazardous substance, hazardous waste, hazardous material, toxic substance, radioactive material or solid waste, including Hydrocarbons, oil, or petroleum waste, or any other waste, pollutant or contaminant that is regulated, restricted or subject to reporting and recordkeeping under any Environmental Law.

“Hedge Contract” means any contract or agreement to which Seller or any of its Affiliates is a party with respect to any swap, forward, future or derivative transaction or option or similar agreement, whether exchange traded, “over-the-counter” or otherwise, involving, or settled by reference to, one or more rates, currencies, commodities, equity or debt instruments or securities, or economic, financial or pricing indices or measures of economic, financial or pricing risk or value or any similar transaction or any combination of these transactions.

“Hydrocarbons” means crude oil, natural gas, casinghead gas, condensate, natural gas liquids, and other liquid or gaseous hydrocarbons and any combination or constituents thereof or extracted therefrom, including, without limitation, helium.

“Indemnified Party” has the meaning specified in Section 10.5.1

“Indemnifying Party” has the meaning specified in Section 10.5.1.

“Individual Claim” has the meaning specified in Section 10.6.1.

“Knowledge” of a fact or matter means the actual knowledge with respect to such fact or matter of any of the following listed individuals: (a) with respect to Buyer, the individuals listed in Schedule 1.1(a), and (b) with respect to Seller, the individuals listed in Schedule 1.1(b).

“Lands” means the lands covered by the Real Property Interests and all lands pooled or unitized therewith.

“Laws” means any and all applicable laws, statutes, ordinances, permits, decrees, writs, injunctions, orders, codes, judgments, principles of common law, rules or regulations (including Environmental Laws) which are promulgated, issued or enacted by a Governmental Authority having jurisdiction.

“Liabilities” means any and all claims, demands causes of action, payments, charges, judgments, assessments, liabilities, losses, damages, diminution in value, debts, duties, obligations, violations, penalties, fines, costs, and/or expenses, including attorney fees, legal or other expenses incurred in connection therewith.

“Lien” means any lien, mortgage, security interest, pledge, charge, encumbrance or other arrangements substantially equivalent thereto or other defect in title.

“Net Acres” means, as calculated separately with respect to each Real Property Interest, (a) the number of gross acres of land covered by such Real Property Interest, multiplied by (b) the lessor’s undivided interest in the Hydrocarbons in the lands covered by such Real Property Interest, multiplied by (c) Seller’s undivided interest in such Real Property Interest; *provided, however*, if items (b) and (c) vary as to different areas of such lands covered by such Real Property Interest, a separate calculation shall be performed with respect to each such area.

“Net Revenue Interest” or ***“NRI”*** means, with respect to a Real Property Interest or Well, the decimal interest in and to all Hydrocarbons produced and saved or sold from or allocated to such Property after giving effect to all royalties, overriding royalties, production payments, carried interests, net profits interests, reversionary interests and other burdens upon, measured by or payable out of production therefrom.

“Operating Expenses” means all operating expenses (excluding all costs and expenses of bonds, letters of credit or other surety instruments, but including costs of insurance and ad valorem, property, severance, production and similar Taxes based upon or measured by or attributable to the ownership or operation of the Properties or the production of Hydrocarbons therefrom, but excluding any other Taxes) and capital expenditures incurred in the ownership, operation, use or maintenance of the Properties, and overhead costs, if any, charged by Third Party operators to the Properties under operating agreements, but excluding Liabilities attributable to (a) personal injury, death, property damage, torts, breach of contract or violation of any Law, (b) obligations relating to abandoning or plugging of wells, dismantling or decommissioning facilities, closing pits and restoring the surface around such wells, facilities and pits, (c) Liabilities associated with violations of applicable Environmental Laws, existing as of the Effective Time or occurring at any time prior to Closing, in, on or under or emanating from or related to any Property that requires, if known, or will require, once discovered, reporting to a Governmental Authority, investigation, monitoring, reporting, removal, cleanup, remediation, restoration or correction under Environmental Laws, (d) Gas Imbalances, (e) obligations to pay royalty owners, working interest owners or other interest holders revenues or proceeds attributable to sales of Hydrocarbons, including those held in suspense, (f) title and environmental curative costs, or (g) claims for indemnification or reimbursement from any Third Party with respect to costs of the types described in the preceding clauses (a) through (f), whether such claims are made pursuant to contract or otherwise.

“Ordinary Course of Business” means the ordinary course of Seller’s business in material compliance with applicable Laws and the terms and conditions of the Real Property Interests, Contracts, Permits, and Easements, consistent with past custom and practice (including with respect to quantity and frequency).

“Parties” has the meaning specified in the introductory paragraph.

“Party” has the meaning specified in the introductory paragraph.

“Permits” has the meaning specified in Section 3.6.

“Permitted Encumbrances” means the following to the extent and only to the extent that the same do not, individually or in the aggregate, reduce Seller’s NRI or Net Acres, or increase its Working Interest (without at least a proportionate corresponding increase in its NRI), in any Property from that shown on Exhibit A:

- (a) the terms and conditions of the Leases and Contracts,
- (b) royalties, overriding royalties, and similar burdens on production;
- (c) Liens for Taxes for which payment is not yet due or delinquent;
- (d) Liens of mechanics, materialmen, warehousemen, landlords, vendors, and carriers and any similar Liens arising by operation of Law which arise in the Ordinary Course of Business for sums not yet due or delinquent;
- (e) the terms and conditions of all operating agreements, unit agreements, unitization and pooling designations and declarations, gathering and transportation agreements, processing agreements, Hydrocarbon purchase contracts and other Contracts constituting Properties, in each case, to the extent they do not materially impair the ownership, development, operation, production or use of the Properties for the purposes of Hydrocarbon development as currently being developed;
- (f) easements, surface leases, surface use agreements, and other surface rights and plat restrictions, in each case, to the extent they do not materially impair the ownership, development, operation, production or use of the Properties for the purposes of Hydrocarbon development as currently being developed; and all zoning laws, restrictive covenants and conditions, regulatory authority of Governmental Authorities, and building and other land use laws and similar encumbrances;
- (g) all rights to consent by, required notices to, filings with or other actions by Governmental Authorities in connection with the sale, disposition, transfer or conveyance of federal, state, tribal, or other governmental oil and gas leases or interests therein or related thereto, or the transfer of operations of any of the Wells, where the same are customarily obtained subsequent to the assignment, disposition or transfer of such oil and gas leases or interests therein, or such operations ("*Customary Post-Closing Consents*");
- (h) to the extent such rights have not been triggered on or prior to the Closing Date, conventional rights of reassignment obligating the lessee to reassign or offer to reassign its interests in any lease prior to a release or abandonment of such lease;
- (i) preferential rights to purchase and required consents to assignment and similar agreements;
- (j) any Lien affecting any of the Properties that is discharged by Seller or its Affiliates at or prior to Closing; and
- (k) rights vested in or reserved to any Governmental Authority to regulate the Properties in any manner, to terminate any right, power, franchise,

license or permit afforded by such Governmental Authority, or to purchase, condemn or expropriate any of the Properties.

"Permits" means all licenses, approvals, authorizations, certifications, clearances, consents, franchises, permits, registrations, waivers, variances or other authorization required under applicable Law to be obtained from or issued, granted, given, or otherwise made available by or under the authority of any Governmental Authority necessary and sufficient to permit operation of the Properties.

"Person" means an individual, corporation, partnership, limited liability company, joint venture, association, joint stock company, trust, unincorporated organization or other entity or Governmental Authority.

"PPR" has the meaning specified in Section 2.2.

"Proceedings" means any and all proceedings, suits, claims and causes of action by or before any Governmental Authority or arbitrator.

"Properties" means all of Seller's right, title and interest in and to the following (but excluding the Excluded Assets):

(a) the oil, gas and mineral leases described on Exhibit A, whether producing or non-producing, together with all leasehold interests in and to the leasehold estates created thereby, and all royalties, working interests, net revenue interests, overriding royalties, production payments, carried interests, net profits interests, reversionary interests, and other Hydrocarbon interests of any kind or character created thereby, derived therefrom or attributable thereto, as well as any and all operating rights thereunder (collectively, the **"Real Property Interests"**);

(b) all oil, condensate, gas, helium, water, carbon dioxide, disposal, injection, observation and other wells located on the Lands, including the oil and gas wells shown on Exhibit A (collectively, the **"Wells"**), and all tangible personal property, supplies, inventory, equipment, fixtures and improvements, including all injection wells, salt water disposal and handling facilities, frac ponds, frac pits, pads, well heads, casing, tubing, pumps, motors, gauges, valves, heaters, treaters, water lines, vessels, tanks, boilers, separators, treating equipment, compressors, pipelines, gathering systems, other equipment, automation systems including meters and related telemetry on wells, power lines, telephone and communication lines and other appurtenances owned or held primarily for use in connection with operation, production, treating, storing, transportation or marketing of Hydrocarbons from the Wells (collectively, the **"Equipment"**);

(c) all presently existing unitization, pooling and/or communitization agreements, declarations or designations, and statutorily, judicially or administratively created drilling, spacing and/or production units, whether recorded or unrecorded, insofar as the same are attributable or allocated to the Lands; and the properties covered or units created thereby;

(d) all Hydrocarbons in, on, under or produced from or attributable to the Lands from and after the Effective Time and the proceeds thereof, and all inventory purchased pursuant to Section 2.5(a) and the proceeds thereof; and

(e) all surface fee interests, easements, surface leases, surface use agreements, surface rights, servitudes, water rights, licenses and rights of way appurtenant to or otherwise used or held for use in connection with the Properties or the operation, production, treating, storing, transportation or marketing of Hydrocarbons therefrom or allocated thereto ("*Easements*"); and, to the extent the same are transferrable, all Permits used primarily in connection with the ownership or operation of the Properties;

(f) all presently existing and valid Hydrocarbon sales agreements, operating agreements, gathering agreements, transportation agreements, farmout and farmin agreements, purchase agreements, exploration agreements, area of mutual interest agreements, processing agreements, and other contracts, agreements and instruments, in each case, to the extent Seller is a party or is otherwise bound and the above agreements cover, are attributable to or relate to the Properties and are set forth on Schedule 3.8 (collectively, the "*Contracts*");

(g) all rights, benefits and obligations arising from or in connection with any Gas Imbalances as of the Effective Time;

(h) all audit rights, rights to receive refunds or payments of any nature, and all amounts of money, relating thereto, in each case, to the extent arising from, or relating to, the ownership, operation, or sale or other disposition of the Properties from and after the Effective Time and any claim of indemnity, contribution or reimbursement relating to the Assumed Obligations;

(i) all claims, rights, demands, causes of action, suits, actions, judgments, damages, awards, recoveries, settlements, indemnities, rights to insurance proceeds, duties, obligations and liabilities in favor of or owed to Seller and relating to any Assumed Obligations or arising from acts, omissions or events, or damage to or destruction of Properties occurring from and after the Effective Time; and

(j) all of Seller's files, records and data (including electronic data) that (1) primarily relate to the ownership, operation or development of the Properties described above, and (2) are in Seller's or its Affiliates' possession, including but not limited to lease files, land files, division order files, abstracts, title files, maps, well files, well logs, well tests, mud logs, directional surveys, core reports, daily drilling records, machinery and equipment files, engineering and/or production files, Geological and Geophysical Information, regulatory files, environmental and health and safety files, Contracts and related files, and production, accounting and Tax records ("*Records*").

"*Purchase Price*" has the meaning specified in Section 2.

“Real Property Interests” has the meaning specified in the definition of Properties.

“Records” has the meaning specified in the definition of Properties.

“Required Consent” means a consent by a Third Party that, if not obtained prior to the assignment of a Property, either (a) voids or nullifies the Assignment with respect to such Property (or would give the holder thereof the right to void or nullify such assignment), (b) terminates Seller’s interest in the Property subject to such consent (or would give the holder thereof the right to terminate such interest), or (c) would give rise to a payment obligation pursuant to the terms of the underlying Real Property Interest or Contract; *provided, however*, “Required Consent” does not include any Customary Post-Closing Consent.

“Retained Liabilities” has the meaning specified in Section 10.1.

“Seller” has the meaning specified in the introductory paragraph.

“Seller Indemnified Parties” has the meaning specified in Section 10.3.

“Special Damages” has the meaning specified in Section 13.17.

“Suspended Funds” means funds which Seller is holding as of the Closing Date which are owing to Third Party owners of royalty, overriding royalty, working or other interests in respect of past production of oil, gas or other Hydrocarbons attributable to the Properties.

“Taxes” means taxes of any kind, levies, or other like assessments, customs, duties, imposts, charges or fees of any Governmental Authority, including gross receipts, ad valorem, value added, excise, real or personal property, asset, sales, use, royalty, license, payroll, transaction, capital, net worth and franchise taxes, withholding, employment, social security, workers compensation, utility, severance, production, unemployment compensation, occupation, premium, windfall profits, transfer and gains taxes or other governmental taxes imposed or payable to the United States or any other Governmental Authority, and in each instance such term shall include any interest, penalties or additions to tax attributable to any such Tax, including penalties for the failure to file any tax return or report.

“Tax Return” has the meaning specified in Section 3.5.

“Third Party” means any Person other than a Party or an Affiliate of a Party.

“Third Party Claim” has the meaning specified in Section 10.5.2.

“Transaction Documents” means this Agreement and each other document and instruments executed or delivered pursuant hereto or in connection herewith.

"Wells" has the meaning specified in the definition of Properties.

"Working Interest" or **"WI"** means the decimal interest in the full and entire leasehold estate in any Property and all rights and obligations of every kind and character pertinent thereto or arising therefrom, without regard to any lessor royalties, overriding royalties and/or other burdens against production, insofar as said interest in said leasehold estate is burdened with the obligation to bear and pay the cost of exploration, development and operation.

"WTNB" means West Texas National Bank, a national banking association, whose principal business address is 6 Desta Drive, Suite 2400, Midland, Texas 79705.

- 1.2. **References; Construction.** All references in this Agreement to Exhibits, Schedules, Sections, paragraphs, subsections and other subdivisions refer to the corresponding Exhibits, Schedules, Sections, paragraphs, subsections and other subdivisions of or to this Agreement unless expressly provided otherwise. Titles appearing at the beginning of any Sections, subsections or other subdivisions of this Agreement are for convenience only, do not constitute any part of this Agreement, and shall be disregarded in construing the language hereof. The words "this Agreement," "herein," "hereby," "hereunder" and "hereof" and words of similar import, refer to this Agreement as a whole and not to any particular subdivision unless expressly so limited. The words "this Section" and "this subsection," and words of similar import, refer only to the Section or subsection hereof in which such words occur. A defined term has its defined meaning throughout this Agreement regardless of whether it appears before or after the place where it is defined. The word "including" (in its various forms) means including without limitation. Examples are not to be construed to limit, expressly or by implication, the matter they illustrate. Each accounting term not defined herein, and each accounting term partly defined herein to the extent not defined, will have the meaning given to it under GAAP. All references to prices, values or monetary amounts refer to Dollars. Pronouns in masculine, feminine or neuter genders shall be construed to state and include any other gender, and words, terms and titles (including terms defined herein) in the singular form shall be construed to include the plural and vice versa, unless the context otherwise requires. Exhibits and Schedules referred to herein are attached to and by this reference incorporated herein for all purposes.

2. **Purchase and Sale; Purchase Price.** At the Closing, and upon the terms and subject to the conditions of this Agreement, Seller agrees to sell and convey to Buyer all of the Properties, and Buyer agrees to purchase, accept and pay for the Properties. In consideration for the sale of all of the Properties, Buyer will pay to Seller the purchase price of FIFTEEN MILLION TWO HUNDRED THOUSAND AND 00/100 DOLLARS (\$15,200,000.00) (the **"Purchase Price"**). The Purchase Price will be adjusted (without duplication) as set forth below in this Section 2.

- 2.1. Title. At Closing, Seller shall deliver the Assignment which shall contain a special warranty of title with respect to the Properties (including Defensible Title to the Real Property Interests and Wells), subject to Permitted Encumbrances.
- 2.2. Preferential Purchase Rights. At Closing, Seller shall provide any required notifications of a preferential purchase right, right of first refusal or other agreement which gives a Third Party a right to purchase the Properties ("**PPR**"), requesting waivers thereof, in connection with the transactions contemplated hereby. Seller will thereafter use commercially reasonable efforts to ensure that all such waivers are promptly granted. Buyer shall purchase the Properties subject to the unexpired PPR, and if such PPR is subsequently exercised, Buyer shall deliver the affected Properties to the holder of such PPR pursuant to an assignment in substantially the same form as the Assignment and under the terms of this Agreement, and shall be entitled to retain the proceeds paid for such Properties to Buyer by the party exercising the PPR.
- 2.3. Gas Imbalances. The Purchase Price will be adjusted upward or downward, as applicable, by (a) the net mcf amount of Seller's aggregate wellhead Gas Imbalances as of the Effective Time multiplied by Buyer's contract price per mcf (upward for underage and downward for overage); and (b) the mmbtu amount of any pipeline Gas Imbalances or unsatisfied throughput obligations attributable to Seller or the Properties as of the Effective Time multiplied by the actual settlement price per mmbtu (upward for over deliveries and downward for under deliveries).
- 2.4. Reserved.
- 2.5. Certain Upward Adjustments. The Purchase Price shall be increased by the following (without duplication): (a) the value of all liquid Hydrocarbons in pipelines or in tanks (but excluding tank bottoms and basic sediment and water impurities in crude oil) above pipeline connections at the Effective Time that is credited to the Properties in accordance with gauging and other customary industry procedures, in each case such value to be based upon the contract price in effect as of the Effective Time (or if no such contract is in effect, the current market price in the area at the Effective Time), less severance taxes and gravity adjustments deducted by the purchaser of such oil or other liquid Hydrocarbons; (b) the amount of all Operating Expenses attributable to the ownership, operation or maintenance of the Properties during the period from and after the Effective Time and that were actually paid by Seller, but excluding any Disallowed Expenses; and (c) any other amount agreed upon by the Parties, or otherwise required to be reflected pursuant to the other provisions of this Agreement.
- 2.6. Certain Downward Adjustments. The Purchase Price shall be decreased by the following (without duplication): (a) the amount of any proceeds received by Seller from the sale of Hydrocarbons produced from and after the Effective Time from the Properties (net of marketing fees, royalties and other burdens, and production, severance, sales, use and similar Taxes measured by or payable out of

production if not deducted pursuant to Section 2.5 above); (b) the amount equal to all unpaid ad valorem, property, production, severance and similar Taxes (excluding income, capital gains, franchise or similar Taxes) based upon or measured by the ownership of the Properties or the production of Hydrocarbons therefrom or the receipt of proceeds attributable thereto, which accrue to or are chargeable against the Properties in accordance with GAAP prior to the Effective Time, which amount shall, to the extent not actually assessed or known, be computed based upon such Taxes for the immediately preceding calendar year, or, if such Taxes are assessed on other than a calendar year basis, for the Tax period last ended; (c) the amount of all Operating Expenses attributable to the ownership, operation or maintenance of the Properties during the period prior to the Effective Time and that are paid or payable by Buyer, and the amount of any Disallowed Expenses that are paid or payable by Buyer; (d) amount of all Suspended Funds; and (e) any other amount agreed upon by the Parties, or otherwise required to be reflected pursuant to the other provisions of this Agreement.

- 2.7. Closing Date Estimates. The statement (the “*Closing Statement*”) setting forth the mutually agreed estimate of each adjustment to the Purchase Price required under this Agreement and showing the calculation of such adjustments, shall be delivered by the Parties pursuant to Section 8.1 and 8.2. Any final adjustments, if necessary, will be made pursuant to Section 2.8 of this Agreement.
- 2.8. Final Accounting. On or before the later of one hundred twenty (120) days after the Closing Date, Buyer will prepare, in accordance with the provisions of this Agreement, and deliver to Seller, a post-closing statement setting forth a detailed calculation of all final adjustments to the Purchase Price which takes into account all such adjustments provided in this Agreement (the “*Final Statement*”). If Seller disputes any items in or the accuracy and completeness of the Final Statement, then as soon as reasonably practicable, but in no event later than fifteen (15) Business Days after its receipt of the Final Statement, Seller will deliver to Buyer a written exception report containing any changes Seller proposes to be made to the Final Statement and the reasons therefor (“*Dispute Notice*”). If Seller fails to deliver the Dispute Notice to Buyer within that period, then the Final Statement as delivered by Buyer will be deemed to be true and correct, binding upon and not subject to dispute by any Party. If Seller delivers a timely Dispute Notice, then as soon as reasonably practicable, but in no event later than thirty (30) days after Buyer receives Seller’s Dispute Notice, the Parties will meet and undertake to agree on the final post-Closing adjustments to the Purchase Price. If Seller and Buyer fail to agree on the final post-Closing adjustments within sixty (60) days after Buyer’s receipt of the Dispute Notice, then the Parties will submit the dispute for resolution exclusively through the binding resolution process set forth in this Section 2.8 by submission to the Accounting Referee. The cost of the Accounting Referee shall be paid fifty percent (50%) by each Party. Each Party shall each present to the Accounting Referee, with a simultaneous copy to the other Party, a single written statement of its position on the dispute in question, together with a copy of this Agreement, the Closing Statement, the proposed Final Statement, and the Dispute Notice and any

supporting material that such Party desires to furnish, not later than ten (10) Business Days after appointment of the Accounting Referee. In making its determination, the Accounting Referee shall be bound by the terms of this Agreement and, without any additional or supplemental submittals by either Party (except as may be specifically requested by the Accounting Referee), may consider such other accounting and financial standards matters as in its opinion are necessary or appropriate to make a proper determination. The Parties shall direct the Accounting Referee to resolve the disputes within thirty (30) days after receipt of the written statements submitted for review and to render a decision in writing based upon such written statements. **The Accounting Referee shall act as an expert for the limited purpose of determining the specific Final Statement dispute presented to it, shall be limited to the procedures set forth in this Section 2.8, shall not have the powers of an arbitrator, shall not consider any other disputes or matters, and may not award damages, interest, costs, attorney's fees, expenses or penalties to any Party.** Upon agreement of the Parties to the adjustments to the Final Statement, or upon resolution of such adjustments by the Accounting Referee, as the case may be, the amounts in the Final Statement (as adjusted pursuant to such agreement or resolution by the Accounting Referee) will be deemed final, conclusive and binding on all of the Parties, without right of appeal, and the aggregate amount due to either Party pursuant to such Final Statement will be paid within five (5) Business Days after the final determination is made that such payments are due and payable, by wire transfer of immediately available funds pursuant to wire transfer instructions designated in advance by the receiving Party to the paying Party in writing) for the account of the receiving Party.

3. **Seller's Representations and Warranties.** Seller hereby represents and warrants to Buyer as follows:

- 3.1. **Organization and Good Standing.** Seller is duly formed, validly existing and in good standing under the Laws of the State of its formation, and Seller is duly qualified and/or licensed, as may be required, and in good standing in all jurisdictions in which it carries on business or owns assets and such qualification is required by Law. Seller has all requisite power and authority to own and operate the Properties as now being operated by Seller and to carry on its business as now conducted.
- 3.2. **Authority.** Seller has adequate power, authority and legal right to enter into and perform this Agreement and each Transaction Document and to consummate the transactions contemplated herein and therein, and Seller has taken all necessary action to authorize the execution, delivery and performance of this Agreement and each other Transaction Document. This Agreement is (and each other Transaction Document will be) legal, valid and binding with respect to Seller and enforceable against Seller in accordance with its terms, except as the enforceability thereof may be limited by bankruptcy, insolvency, reorganization, moratorium or similar laws affecting creditors' rights generally or by principles of equity.

- 3.3. No Breach. Except as disclosed in Schedule 3.3, the execution, delivery, performance and consummation of this Agreement do not and will not: (a) violate, conflict with or constitute a default or an event that, with notice or lapse of time or both, would be a default, breach, or violation under any term or provision of any governing document of Seller; (b) violate, breach or constitute a default under, or result (with notice or lapse of time or both) in the breach, violation, acceleration or termination of any agreement, contract, instrument, license, lease, promissory note, indenture, mortgage, deed of trust, or other arrangement to which Seller is a party or by which Seller or any of the Properties is bound; (c) violate, conflict with or constitute a breach of any Law applicable to Seller or the Properties; or (d) except for Permitted Encumbrances, result in the creation, imposition or continuation of Liens on or affecting the Properties.
- 3.4. Litigation. Except as disclosed in Schedule 3.4, (a) there are no Proceedings pending or, to Seller's Knowledge, threatened in writing against Seller involving the Properties, (b) there are no actions, suits, or proceedings pending, or, to Seller's Knowledge, threatened in writing, before any Governmental Authority or arbitrator against Seller or its Affiliates, which are reasonably likely to impair or delay materially Seller's ability to perform its obligations under this Agreement; (c) there is no investigation, proceeding, charge or audit pending, or to Seller's Knowledge threatened, before or by any Governmental Authority with respect to any of the Properties; and (d) there has been no settlement or other similar agreement or order of any Governmental Authority with respect to the ownership or operation of the Properties that is or could reasonably be expected to be material.
- 3.5. Taxes. Except as disclosed in Schedule 3.5, (a) each Tax return, declaration, report, claim for refund or information return or statement relating to Taxes, including any schedule or attachment thereto, and including any amendment thereof (a "*Tax Return*") required to be filed with a Governmental Authority with respect to the Properties has been timely filed; (b) all such Tax Returns are complete and accurate in all material respects and disclose all Taxes required to be paid in respect of the Properties; (c) all Taxes shown due on such Tax Returns with respect to the Properties have been timely paid; (d) there is not currently in effect any extension or waiver of any statute of limitations of any jurisdiction regarding the assessment or collection of any Tax of Seller relating to its acquisition, ownership or operation of the Properties; (e) there are no liens, charges, obligations or other encumbrances (other than Permitted Encumbrances) on any of the Properties that arose in connection with its failure or alleged failure to pay any Tax; (f) neither Seller nor any of its Affiliates is presently contesting a Tax liability with respect to ownership of the Properties before any Governmental Authority; and (g) none of the Properties is subject to any tax partnership agreement or provisions requiring a partnership income tax return to be filed under Subchapter K of Chapter 1 of Subtitle A of the Code or any similar state statute.
- 3.6. Reserved.

- 3.7. Compliance with Laws. During the period that Seller or its Affiliates have operated any of the Properties, those Properties have been operated in compliance, in all material respects, with the provisions and requirements of all applicable Laws (excluding Environmental Laws, which are solely addressed in Section 3.9, and Tax matters, which are solely addressed in Section 3.5), except for prior instances of non-compliance that have been fully and finally resolved to the satisfaction of all Governmental Authorities with jurisdiction over such matters.
- 3.8. Contracts. Except for the Real Property Interests, Seller has listed in Schedule 3.8 all of the following contracts, agreements and instruments to the extent covering, attributable to or relating to the Properties:
- 3.8.1 all farm-in, farm-out, exploration, development, participation, joint venture, non-competition, area of mutual interest, purchase and/or acquisition agreements, operating agreements and similar agreements, in each case, where any of the terms of which remain executory and which cover, are attributable to or relate to the Properties;
 - 3.8.2 all Hydrocarbon purchase and/or sale contracts, gathering contracts, processing contracts, transportation contracts, marketing contracts, drilling contracts, disposal contracts, injection contracts, and all other similar contracts, in each case, cover, are attributable to or relate to the Properties and that are not terminable without penalty upon 90 days or less notice;
 - 3.8.3 all contracts that cover, are attributable to or relate to the Properties and that, individually, can reasonably be expected to result in aggregate payments by or revenues to Seller (or Buyer, after Closing) of more than \$50,000 during the current or any subsequent fiscal year (based solely on the terms thereof without regard to expected increase in volumes or revenues);
 - 3.8.4 all contracts that constitutes a lease under which Seller is the lessor or the lessee of real or personal property that (a) cannot be terminated by Seller (without penalty) upon thirty (30) days or less notice, and (b) involves an annual base rental of more than \$25,000;
 - 3.8.5 all production payments or net profits interests burdening any of the Properties;
 - 3.8.6 all contracts where the primary purpose thereof is to indemnify another Person and which will be binding on Buyer or on any of the Properties after Closing;
 - 3.8.7 any contracts with any Affiliate of Seller that will not be terminated on or prior to Closing and which will be binding on Buyer or on any of the Properties after Closing;

3.8.8 all contracts that are a seismic or other geophysical acquisition or sharing agreement or license and which cover, are attributable to or relate to the Properties; and

3.8.9 all contracts that contain any mandatory drilling requirements with respect to any of the Properties.

Prior to the Closing Date, Seller has made available to Buyer true and correct copies of all of the Contracts. Except as separately described on Schedule 3.8, (a) all of the Contracts are in full force and effect and are legal, valid and binding obligations of Seller, and, to the Knowledge of Seller, are the legal, valid and binding obligation of each of other party thereto, except as the enforceability thereof may be limited by bankruptcy, insolvency or similar laws affecting creditors' rights generally or by principles of equity, (b) neither Seller nor, to Seller's Knowledge, any other Person is in material default under any of the Contracts, and (c) no event has occurred that with notice or lapse of time or both would constitute any material default under any such Contract by Seller or, to Seller's Knowledge, by any other party thereto. No written notice of default or breach has been received or delivered by Seller under any Contract, the resolution of which is currently outstanding. No currently effective written notices have been received by Seller of the exercise of any premature termination, price redetermination, market-out, shut-in or curtailment of or under any of the Contracts.

- 3.9. Environmental and Safety Matters. Notwithstanding any provision to the contrary in this Agreement, the representations and warranties contained in this Section 3.9, are the sole and exclusive representations and warranties of Seller pertaining or related to matters arising under or with respect to applicable Environmental Laws. Except as set forth in Schedule 3.9, (a) except for any noncompliance that has been remediated in accordance with applicable Environmental Law, to Seller's Knowledge, during the period from October 1, 2016 to the Closing Date, such Properties have been operated in compliance, in all material respects, with the regulatory requirements of all applicable Environmental Laws; (b) to Seller's Knowledge, there is no contamination of groundwater, surface water or soil on the Properties resulting from Hydrocarbon activities on the Properties by Seller or any of its Affiliates, or any Third Party, for which Seller would be liable, and to Seller's Knowledge, no Hazardous Substance has been handled, managed, stored, transported, processed, treated, disposed of (onsite or offsite) by Seller or any of its Affiliates or any Third Party in connection with the Properties or the ownership or operation of the Properties by Seller, in each case, which would reasonably be expected to result in a material violation of any material Permit or applicable Environmental Laws; (c) Seller has received no written notice of any alleged or actual material violation or non-compliance with any Environmental Law or of material non-compliance with the terms or conditions of any environmental Permits, arising from, based upon, associated with or related to the Properties or the ownership or operation of any thereof by Seller or any Affiliate; and (d) Seller has provided Buyer true and accurate copies of all written

environmental reports, studies and notices prepared by a Third Party on behalf of, or delivered by a Governmental Authority to, Seller or any of its Affiliates with respect to any of the Properties.

- 3.10. Current Commitments. Except as set forth on Schedule 3.10, as of the Effective Time, Seller is not legally or contractually obligated for any future commitments requiring an expenditure by Seller in excess of Fifty Thousand Dollars (\$50,000) (net to Seller's interest) relating to any of the Properties.
- 3.11. Suspended Funds. Schedule 3.11 sets forth, as of the Effective Time, all Suspended Funds with respect to the Properties.
- 3.12. Gas Imbalances. Schedule 3.12 sets forth, as of the Effective Time, all Gas Imbalances with respect to the Properties.
- 3.13. Advance Payments. Except as set forth on Schedule 3.13, Seller is not obligated by virtue of any take or pay payment, advance payment or other similar payment (other than customary gas balancing arrangements and for the rights of any lessor to take free gas under the terms of the relevant Real Property Interest for its use on the lands covered thereby) to deliver Hydrocarbons, or proceeds from the sale thereof, attributable to the Properties at some future time without receiving payment therefor at or after the time of delivery.
- 3.14. Payout Balances. Schedule 3.14 contains a list, which is complete and accurate, of the status of the Payout Balance, as of the Effective Time, for each of the Wells. "**Payout Balance**" means the status, as of the date of the calculations, of the recovery by Seller or a third party of a cost amount specified in the contract relating to a well out of the revenue from such well where the NRI of Seller therein will be reduced or Seller's WI therein will be increased when such amount has been recovered.
- 3.15. PPRs, Rights and Required Consents. Except as set forth in Schedule 3.15, no Property is subject to (a) any preferential right of purchase, right of first refusal or other agreement which gives a Third Party the right to purchase any interest in a Property or any tag along rights, drag along rights, co-sale rights or similar rights, or (b) any Required Consent.
- 3.16. Leases. Neither Seller nor, to Seller's Knowledge, any other Person is in material default under any of the Real Property Interests and no event has occurred that, with notice or lapse of time or both, would constitute a material default by Seller or, to Seller's Knowledge, by any other Person under any Real Property Interest. No party to any Real Property Interest or any successor to the interest of such party has filed or, to Seller's Knowledge, threatened in writing to file any action to terminate, cancel, rescind or procure judicial reformation of any Real Property Interest. Seller has timely paid, in all material respects, all rentals, delay rentals, shut-in royalties, royalties, overriding royalties, and other burdens due by Seller with respect to the Properties.

- 3.17. Wells and Equipment. Except as set forth on Schedule 3.17, Seller has not received any written notice that the Wells, platforms, pits, or other facilitates or equipment located on the Properties are obligated by any Laws to be plugged, dismantled, closed or abandoned or are currently subject to exceptions to a requirement to plug and/or abandon issued by a Governmental Authority.
- 3.18. Operations. Seller has not declined to participate in any operation or activity proposed with respect to the Properties that could result in its interest in the Properties becoming subject to a penalty or forfeiture as a result of such election not to participate in such operation or activity, except to the extent reflected in the NRI and WI for such Properties set forth in Exhibit A. Seller has paid or caused to be paid when due all operating and capital expenses with respect to the Properties.
- 3.19. Broker's or Finder's Fees. Neither Seller nor any of its Affiliates has incurred any liability, contingent or otherwise, for brokers', finders' or similar fees in respect of the transactions contemplated by this Agreement for which Buyer or its Affiliates will have any responsibility whatsoever.
- 3.20. Bankruptcy. There are no bankruptcy, reorganization or arrangement proceedings pending, being contemplated by or, to Seller's Knowledge, threatened against Seller or any Affiliate of Seller.
- 3.21. Absence of Certain Changes. To the Knowledge of Seller, since the Effective Time, there has not been any Casualty with respect to the Properties.
4. Buyer's Representations and Warranties. Buyer hereby represents and warrants to Seller as follows:
- 4.1. Organization and Good Standing. Buyer is duly formed, validly existing and in good standing under the Laws of the State of its formation and Buyer is duly qualified and/or licensed, as may be required, and in good standing, in all jurisdictions in which it carries on business or owns assets and such qualification is required by Law. Buyer has the power and authority to acquire and own the Properties and to conduct business in the State of Arizona.
- 4.2. Authority. Buyer has adequate power, authority and legal right to enter into and perform this Agreement and each Transaction Document and to consummate the transactions contemplated herein and therein, and Buyer has taken all necessary action to authorize the execution, delivery and performance of this Agreement and each other Transaction Document. This Agreement is (and each other Transaction Document will be) legal, valid and binding with respect to Buyer and enforceable against Buyer in accordance with its terms, except as the enforceability thereof may be limited by bankruptcy, insolvency, reorganization, moratorium or similar laws affecting creditors' rights generally or by principles of equity.

Taxes attributable to the Properties with respect to periods prior to the Effective Time;

(c) reserved;

(d) accounting for, failure to pay or the incorrect payment to any royalty owner, overriding royalty owner, working interest owner or other interest holder under the Properties insofar as the same are attributable to periods and Hydrocarbons produced prior to the Effective Time;

(e) gross negligence or willful misconduct of Seller or its Affiliates as operator of any of the Properties before the Closing;

(f) bodily injury, illness or death arising out of, incident to or in connection with operations on the Properties prior to the Closing;

(g) claims, demands, violations, actions, suits or other Proceedings to the extent existing as of the Closing and related to any of the Properties or the ownership, operation or maintenance thereof, including the matters set forth on Schedule 3.4;

(h) obligations or liabilities of Seller to any of its Affiliates to the extent accruing during the period prior to the Closing Date, other than for goods or services furnished in the Ordinary Course of Business on an arms-length basis;

(i) plugging, abandoning, closing or decommissioning wells, facilities, equipment, personal property, pits and/or fixtures located on or comprising part of the Properties that, as of Closing, were required by applicable Law to be plugged, abandoned, closed or decommissioned;

(j) disposal or transportation prior to the Closing Date of any Hazardous Materials from the Properties; and

(k) the Excluded Assets.

- 10.2. Seller's Indemnification. Upon the Closing, Seller will agree (and, upon the delivery of the Assignment to Buyer, Seller shall be deemed to have agreed) to pay, defend, indemnify, reimburse and hold harmless Buyer and its Affiliates and Buyer's and its Affiliates' partners, members, managers, directors, officers, agents and employees (the "*Buyer Indemnified Parties*") for, from and against any and all Liabilities (including interest, reasonable legal fees, and expenses of litigation and attorneys' fees in enforcing this indemnity) incurred, suffered, paid by or resulting to any of the Buyer Indemnified Parties and which result from, arise out of or in connection with, are based upon, or exist by reason of: (a) the breach of any representation or warranty of Seller set forth in Section 3 of this Agreement (other than a breach of any Fundamental Representation); (b) the breach of any Fundamental Representation of Seller; (c) any failure by Seller to perform any of

its covenants or obligations in this Agreement; or (d) any of the Retained Liabilities.

- 10.3. Buyer's Indemnification. Upon the Closing, Buyer will agree (and, upon the delivery of the Assignment by Seller, Buyer shall be deemed to have agreed) to pay, defend, indemnify, reimburse and hold harmless Seller and its Affiliates and Seller's and its Affiliates' partners, members, managers, directors, officers, agents and employees (the "*Seller Indemnified Parties*") for, from and against any and all Liabilities (including interest, reasonable legal fees, and expenses of litigation and attorneys' fees in enforcing this indemnity) incurred, suffered, paid by or resulting to any of the Seller Indemnified Parties and which result from, arise out of or in connection with, are based upon, or exist by reason of: (a) the breach of any representation or warranty of Buyer set forth in Section 4 of this Agreement (other than a breach of any Fundamental Representation); (b) the breach of any Fundamental Representation of Buyer; (c) any failure by Buyer to perform any of its covenants or obligations in this Agreement; or (d) any of the Assumed Obligations.

10.4. EXCLUSIVE REMEDY; EXPRESS NEGLIGENCE.

NOTWITHSTANDING ANYTHING TO THE CONTRARY CONTAINED IN THIS AGREEMENT, THE INDEMNIFICATION SET FORTH IN SECTION 10.2 AND SECTION 10.3 SHALL CONSTITUTE THE SOLE AND EXCLUSIVE POST-CLOSING REMEDIES OF THE PARTIES AGAINST EACH OTHER WITH RESPECT TO BREACHES OF THE REPRESENTATIONS, WARRANTIES, COVENANTS AND AGREEMENTS OF THE PARTIES CONTAINED IN SECTION 3, SECTION 4, AND SECTION 5 (OTHER THAN SECTIONS 5.3, 5.4, 5.5, AND 5.9) OF THIS AGREEMENT. WITHOUT LIMITING THE FOREGOING, EXCEPT FOR (A) THE REMEDIES CONTAINED IN SECTION 10.2 AND SECTION 10.3, (B) ANY OTHER REMEDIES AVAILABLE AT LAW OR IN EQUITY FOR A PARTY'S BREACH OF THIS AGREEMENT (OTHER THAN WITH RESPECT TO SECTION 3, SECTION 4, AND SECTION 5 (EXCLUDING SECTIONS 5.3, 5.4, 5.5, AND 5.9), AND (C) THE REMEDIES AVAILABLE AT LAW OR IN EQUITY IN CONNECTION WITH ANY TRANSACTION DOCUMENT DELIVERED BY THE PARTIES IN CONNECTION WITH THE CONSUMMATION OF THE TRANSACTIONS CONTEMPLATED HEREBY (INCLUDING THE SPECIAL WARRANTY OF TITLE CONTAINED IN THE ASSIGNMENT AND INCLUDING ANY REMEDIES EXPRESSLY PROVIDED IN SUCH DOCUMENTS DELIVERED PURSUANT TO THIS AGREEMENT), FROM AND AFTER CLOSING, EACH PARTY RELEASES, REMISES AND FOREVER DISCHARGES THE OTHER PARTY AND THE OTHER PARTY'S AFFILIATES AND THE OTHER PARTY'S AND ITS AFFILIATES' PARTNERS, MEMBERS, MANAGERS, DIRECTORS, OFFICERS, AGENTS, EMPLOYEES, ADVISORS AND REPRESENTATIVES FROM ANY AND ALL CLAIMS, CAUSES OF

ACTIONS, PAYMENTS, CHARGES, JUDGMENTS, ASSESSMENTS, LIABILITIES, LOSSES, DAMAGES, PENALTIES, FINES OR COSTS AND EXPENSES (INCLUDING ANY ATTORNEYS' FEES, LEGAL OR OTHER EXPENSES INCURRED IN CONNECTION THEREWITH AND INCLUDING LIABILITIES, COSTS, LOSSES AND DAMAGES FOR PERSONAL INJURY OR DEATH OR PROPERTY DAMAGE), IN LAW OR IN EQUITY, KNOWN OR UNKNOWN, WHICH IT (OR ITS RESPECTIVE INDEMNIFIED PARTIES HEREUNDER) MIGHT NOW OR SUBSEQUENTLY MAY HAVE, BASED ON, RELATING TO OR ARISING OUT OF THIS AGREEMENT, THE OWNERSHIP, USE OR OPERATION OF THE PROPERTIES PRIOR TO THE CLOSING, OR THE CONDITION, QUALITY, STATUS OR NATURE OF THE PROPERTIES PRIOR TO THE CLOSING, INCLUDING RIGHTS TO CONTRIBUTION UNDER ANY ENVIRONMENTAL LAW, BREACHES OF STATUTORY OR IMPLIED WARRANTIES, NUISANCE OR OTHER TORT ACTIONS, RIGHTS TO PUNITIVE DAMAGES, COMMON LAW RIGHTS OF CONTRIBUTION, AND RIGHTS UNDER INSURANCE MAINTAINED BY SELLER OR ANY OF ITS AFFILIATES.

WITHOUT LIMITING OR ENLARGING THE SCOPE OF THE INDEMNIFICATION, DEFENSE AND ASSUMPTION PROVISIONS SET FORTH IN THIS AGREEMENT, TO THE FULLEST EXTENT PERMITTED BY LAW, AN INDEMNIFIED PARTY SHALL BE ENTITLED TO INDEMNIFICATION HEREUNDER IN ACCORDANCE WITH THE TERMS OF SECTIONS 10.2 OR 10.3, REGARDLESS OF WHETHER THE ACT, OCCURRENCE OR CIRCUMSTANCE GIVING RISE TO ANY SUCH INDEMNIFICATION OBLIGATION IS THE RESULT OF THE SOLE, ACTIVE, PASSIVE, CONCURRENT OR COMPARATIVE NEGLIGENCE, STRICT LIABILITY, BREACH OF DUTY (STATUTORY OR OTHERWISE), OR OTHER FAULT OR VIOLATION OF ANY LAW OF OR BY ANY SUCH INDEMNIFIED PARTY, *PROVIDED THAT* NO SUCH INDEMNIFICATION SHALL BE APPLICABLE TO THE EXTENT OF ANY GROSS NEGLIGENCE OR WILLFUL MISCONDUCT, BAD FAITH OR FRAUD OF THE INDEMNIFIED PARTY, EACH OF BUYER AND SELLER ACKNOWLEDGES AND AGREES THAT THIS STATEMENT COMPLIES WITH THE EXPRESS NEGLIGENCE RULE AND IS CONSPICUOUS.

- 10.5. Indemnification Procedure. Claims for indemnification under Section 10.2 and Section 10.3 shall be asserted and resolved as follows:

10.5.1 For purposes of this Section 10.5, the term "*Indemnifying Party*" when used in connection with particular Liabilities shall mean the Party or Parties having an obligation to indemnify the other Party and/or other Persons with respect to such Liabilities pursuant to Section 10.2 or 10.3, and the term "*Indemnified Party*" when used in connection with particular

Liabilities shall mean the Party and/or other Persons having the right to be indemnified with respect to such Liabilities by the Indemnifying Party pursuant to Section 10.2 or 10.3.

- 10.5.2 To make a claim for indemnification under Section 10.2 or 10.3, an Indemnified Party shall notify the Indemnifying Party of its claim under this Section 10.5, including the specific details of and specific basis under this Agreement for its claim (the "*Claim Notice*") and may thereafter exercise any remedies available to such Indemnified Party under this Agreement; *provided, however*, the failure of any Indemnified Party to give a Claim Notice as provided herein will not relieve the indemnifying Party of any obligations hereunder, to the extent the indemnifying Party is not materially prejudiced thereby. In the event that the claim for indemnification is based upon a claim by a Third Party against the Indemnified Party (a "*Third Party Claim*"), the Indemnified Party shall provide its Claim Notice promptly after the Indemnified Party has actual knowledge of the Third Party Claim and shall enclose a copy of all papers (if any) served with respect to the Third Party Claim; *provided, however*, the failure of any Indemnified Party to give notice of a Third Party Claim as provided in this Section 10.5 shall not relieve the Indemnifying Party of its obligations under Section 10.2 or 10.3 (as applicable) except to the extent such failure materially prejudices the Indemnifying Party's ability to defend against the Third Party Claim.
- 10.5.3 In the case of a claim for indemnification based upon a Third Party Claim, the Indemnifying Party shall have thirty (30) days from its receipt of the Claim Notice to notify the Indemnified Party whether it admits or denies its obligation to defend and indemnify the Indemnified Party against such Third Party Claim at the sole cost and expense of the Indemnifying Party. The Indemnified Party is authorized, prior to and during such thirty (30) day period, to file any motion, answer or other pleading that it shall deem necessary or appropriate to protect its interests or those of the Indemnifying Party and that is not prejudicial to the Indemnifying Party.
- 10.5.4 If the Indemnifying Party admits its potential obligation to defend and indemnify the Indemnified Party against a Third Party Claim, then it shall have the right and obligation to diligently defend, at its sole cost and expense, the Indemnified Party against such Third Party Claim. The Indemnifying Party shall have full control of such defense and proceedings, including any compromise or settlement thereof, unless the compromise or settlement includes the payment of any amount by (because of the Basket or otherwise), the performance of any obligation by or the limitation of any right or benefit of, the Indemnified Party, in which event such settlement or compromise shall not be effective without the consent of the Indemnified Party, which shall not be unreasonably withheld or delayed. If requested by the Indemnifying Party, the Indemnified Party agrees to cooperate (at the sole cost and expense of the

Indemnifying Party) in contesting any Third Party Claim which the Indemnifying Party elects to contest. The Indemnified Party may participate in, but not control, at its own expense, any defense or settlement of any Third Party Claim controlled by the Indemnifying Party pursuant to this Section 10.5. An Indemnifying Party shall not, without the written consent of the Indemnified Party, (a) settle any Third Party Claim or consent to the entry of any judgment with respect thereto which does not include an unconditional written release of the Indemnified Party from all liability in respect of such Third Party Claim or (B) settle any Third Party Claim or consent to the entry of any judgment with respect thereto in any manner that may materially and adversely affect the Indemnified Party (other than as a result of money damages fully covered by the indemnity).

10.5.5 If the Indemnifying Party does not admit its potential obligation, or admits its potential obligation to defend and indemnify the Indemnified Party against a Third Party Claim, but fails to diligently prosecute, indemnify against or settle the Third Party Claim, then the Indemnified Party shall have the right to defend against the Third Party Claim at the sole cost and expense of the Indemnifying Party, with counsel of the Indemnified Party's choosing, subject to the right of the Indemnifying Party to admit its potential liability and assume the defense of the Third Party Claim at any time prior to settlement or final determination thereof. If the Indemnifying Party has not yet admitted its potential obligation to defend and indemnify the Indemnified Party against a Third Party Claim, the Indemnified Party shall send written notice to the Indemnifying Party of any proposed settlement and the Indemnifying Party shall have the option for ten (10) days following receipt of such notice to (a) admit in writing its potential liability to indemnify the Indemnified Party from and against the liability and consent to such settlement, (b) if potential liability is so admitted, reject, in its reasonable judgment, the proposed settlement, or (c) deny liability. Any failure by the Indemnifying Party to respond to such notice shall be deemed to be an election under subsection (c) above.

10.5.6 In the case of a claim for indemnification not based upon a Third Party Claim, the Indemnifying Party shall have thirty (30) days from its receipt of the Claim Notice to (a) cure the Liabilities complained of, (b) admit its liability for such Liability or (c) dispute the claim for such Liabilities. If the Indemnifying Party does not notify the Indemnified Party within such thirty (30) day period that it has cured the Liabilities or that it disputes the claim for such Liabilities, then the Indemnifying Party shall be deemed to be disputing the claim for such Liabilities hereunder.

10.6. Certain Limitations on Indemnity Obligations.

10.6.1 No claim of the Buyer Indemnified Parties pursuant to Section 10.2(a) shall be made hereunder unless the amount of such claim exceeds an

amount equal to Twenty-Five Thousand Dollars (\$25,000) (each an "*Individual Claim*"). In addition, no claim of the Buyer Indemnified Parties pursuant to Section 10.2(a) shall be made hereunder until the total of all Individual Claims pursuant to such Section exceeds two percent (2%) of the unadjusted Purchase Price (the "*Basket*"). If the total amount of all of the Buyer Indemnified Parties' Individual Claims exceeds the Basket, then the Seller's obligations under Section 10.2(a) shall be limited to the amount by which the aggregate amount of such Individual Claims exceeds the Basket.

10.6.2 In no event will Seller's aggregate liability under Section 10.2(a) exceed fifteen percent (15%) of the unadjusted Purchase Price.

10.6.3 The amount of any indemnification provided under Section 10.2 or 10.3 shall be net of any amounts actually recovered by the indemnified party under insurance policies (net of any collection costs, and excluding the proceeds of any insurance policy issued or underwritten by the indemnified Person or its Affiliates); *provided, however*, that no Person shall be required to seek recovery under any policy of insurance as a condition to indemnification hereunder.

10.6.4 All of the representations and warranties set forth in this Agreement that are qualified as to "material," "materiality," "material respects," "material adverse effect," "material adverse effect" or words of similar import or effect shall be deemed to have been made without any such qualification for all purposes of this Section 10.6.4, including for purposes of determining the existence of a breach of a representation or warranty (and whether the indemnified Person is entitled hereunder to indemnification) as well as for purposes of determining whether a claim exceeds the Individual Claim threshold or Basket.

11. Reserved.

12. Reserved.

13. Miscellaneous. It is further agreed as follows:

13.1. Time. Time is of the essence of this Agreement.

13.2. Notices. All notices and communications required or permitted under this Agreement shall be in writing addressed as indicated below, and any communication or delivery hereunder shall be deemed to have been duly delivered upon the earliest of: (a) actual receipt by the Party to be notified; (b) if sent by U.S. certified mail, postage prepaid, return receipt requested, then the date shown as received on the return notice; (c) if by email, upon receipt, *provided* that if such email is received after 5:00 pm local time of such recipient, such email will be deemed to have been received on the following Business Day; or (d) if by Federal Express overnight delivery (or other reputable overnight delivery service),

the date shown on the notice of delivery. Addresses for all such notices and communication shall be as follows:

To Seller: Nacogdoches Oil and Gas, Inc.
816 North Street
Nacogdoches, Texas 75961
Attention: Michael L. Finley
Facsimile: (936) 560-5088
Email: mike.finley@nogtx.com

To Buyer: Nordic Oil USA 4 LLC
113 Jean Baptiste Dr.
Lafayette, Louisiana 70503
Attention: David Burns
Email: burns david@verizon.net

With a copy to: Porter Hedges LLP
1000 Main, 36th Floor
Houston, Texas 77002
Attention: McCaleb (Mac) Marshall
Facsimile: (713) 226-6312
Email: mmarshall@porterhedges.com

Either Party may, upon written notice to the other Party, change the address(es) and person(s) to whom such communications are to be directed. If the date specified in this Agreement for giving any notice or taking any action is not a Business Day (or if the period during which any notice is required to be given or any action taken expires on a date which is not a Business Day), then the date for giving such notice or taking such action (and the expiration date of such period during which notice is required to be given or action taken) shall be the next day which is a Business Day.

- 13.3. Survival. The Fundamental Representations and the special warranty of title in the Assignment will survive the Closing without time limit. All of the remaining representations and warranties of the Parties contained in Section 3 and Section 4 of this Agreement will survive the Closing Date for a period of twelve (12) months and shall thereafter be of no further force or effect. The remainder of this Agreement shall survive the Closing without time limit, except as may otherwise be expressly provided herein. Representations, warranties, covenants and agreements shall be of no further force and effect after the date of their expiration; *provided, however*, there shall be no termination of any bona fide claim that is asserted pursuant to this Agreement prior to its expiration date with respect to such a representation, warranty, covenant or agreement.

The indemnities in Sections 10.2(a), 10.2(b), 10.3(a), and 10.3(b) shall terminate as of the termination date of the respective representation, warranty, covenant or agreement that is subject to indemnification.

The indemnities in Sections 10.2(c), 10.3(c) and 10.3(d) shall survive the Closing without time limit. The indemnity in Section 10.2(d) with respect to Retained Liabilities shall be subject to the following survival periods: (i) the indemnity for the Retained Liabilities set forth in Section 10.1(b), Section 10.1(g), Section 10.1(h), and Section 10.1(k) shall survive the Closing without time limit; and (ii) the indemnity for the Retained Liabilities set forth in Section 10.1(a), Section 10.1(c), Section 10.1(d), Section 10.1(e), Section 10.1(f), Section 10.1(i), and Section 10.1(j) shall survive the Closing for a period of three (3) years.

- 13.4. Cooperation. At all times following the consummation of this Agreement, the Parties agree to execute and deliver, or cause to be executed and delivered, such documents and do, or cause to be done, such other acts and things as might reasonably be requested by any Party to this Agreement to assure that the benefits of this Agreement are realized by the Parties, including, without limitation, the execution and delivery any documents or applications necessary to transfer title to the vehicles, rolling stock and equipment described on Exhibit A.
- 13.5. No Third Party Beneficiaries. Except for the indemnification rights of the Seller Indemnified Parties and the Buyer Indemnified Parties under Section 10, nothing in this Agreement, express or implied, is intended to confer upon anyone, other than the Parties hereto and their respective successors and assigns, any rights or remedies under or by reason of this Agreement or to constitute any Person a third party beneficiary of this Agreement.
- 13.6. Cumulative Remedies. Subject to the other provisions hereof, no failure on the part of any Party to this Agreement to exercise and no delay in exercising any right hereunder will operate as a waiver thereof, nor will any single or partial exercise by any Party hereto of any right hereunder preclude any other or further right of exercise thereof or the exercise of any other right.
- 13.7. **CHOICE OF LAW; VENUE.** THIS AGREEMENT WILL BE INTERPRETED, CONSTRUED AND ENFORCED IN ACCORDANCE WITH THE LAWS OF THE STATE OF TEXAS (EXCEPT AS TO TITLE MATTERS, WHICH SHALL BE INTERPRETED AND CONSTRUED IN ACCORDANCE WITH THE LAWS OF THE STATE WHERE THE APPLICABLE PROPERTY IS LOCATED), WITHOUT GIVING EFFECT TO ANY RULES OR PRINCIPLES OF CONFLICTS OF LAW THAT MIGHT OTHERWISE REFER TO THE LAWS OF ANOTHER JURISDICTION. EACH OF SELLER AND BUYER CONSENT TO THE EXERCISE OF JURISDICTION IN PERSONAM BY THE COURTS OF THE STATE OF TEXAS FOR ANY ACTION ARISING OUT OF THIS AGREEMENT, THE OTHER TRANSACTION DOCUMENTS OR THE TRANSACTIONS CONTEMPLATED HEREBY. ALL PROCEEDINGS

WITH RESPECT TO, ARISING DIRECTLY OR INDIRECTLY IN CONNECTION WITH, OUT OF, RELATED TO OR FROM THIS AGREEMENT OR THE OTHER TRANSACTION DOCUMENTS SHALL BE EXCLUSIVELY LITIGATED IN COURTS HAVING SITES IN HOUSTON, HARRIS COUNTY, TEXAS, AND EACH PARTY WAIVES ANY OBJECTION IT MAY HAVE TO VENUE OR JURISDICTION THEREIN.

- 13.8. Entire Agreement. This Agreement, the Assignment and the other Transaction Documents constitute the entire agreement between the Parties with respect to the subject matter hereof and there are no agreements, understandings, warranties or representations except as set forth herein or therein.
- 13.9. Assignment. Except for any assignment to (i) an Affiliate of Buyer or (ii) any Debt Financing Party or any purchaser at any foreclosure sale in connection with a Financing or any assignee, designee or transferee under any instrument of assignment or transfer in lieu of foreclosure in connection with a Financing, no Party may assign its rights nor delegate its duties under this Agreement without the express written consent of the other Party to this Agreement. The terms and provisions of this Agreement shall be binding upon and inure to the benefit of Seller and Buyer and their respective successors and permitted assigns.
- 13.10. Like-Kind Exchanges. Each Party consents to the other Party's assignment of its rights and obligations under this Agreement to Petroleum Strategies, Inc. as Qualified Intermediary (as that term is defined in Section 1.1031(k)-1(g)(4)(v) of the Treasury Regulations), or to its Qualified Exchange Accommodation Titleholder (as that term is defined in Internal Revenue Service Revenue Procedure 2000-37), in connection with effectuation of a like-kind exchange. However, Seller and Buyer acknowledge and agree that any assignment of this Agreement to a Qualified Intermediary or to a Qualified Exchange Accommodation Titleholder does not release either Party from any of their respective liabilities and obligations to each other under the Agreement. Each Party agrees to reasonably cooperate with the other to attempt to structure the transaction as a like-kind exchange. Notwithstanding anything in this Section 13.10 to the contrary, (i) nothing in this Section 13.10 shall require any Party to pay additional costs or incur any additional liabilities, (ii) any assignee under this Section 13.10 shall be jointly and severally liable with the assigning Party for the liabilities and obligations of the assigning Party hereunder, and any such assignee shall acknowledge same in the applicable assignment, with the other Party to be made a direct third-party beneficiary of such acknowledgement, and (iii) neither Party is making any representation or warranty to the other Party or to any other Person as to whether any transaction or transactions qualify as a like-kind exchange or as to any other Tax matters.
- 13.11. Amendment. Neither this Agreement nor any of the provisions hereof can be changed, waived, discharged or terminated, except by an instrument in writing

signed by the Party against whom enforcement of the change, waiver, discharge or termination is sought.

- 13.12. Severability. If any clause or provision of this Agreement is illegal, invalid or unenforceable under any present or future Law or public policy, the remainder of this Agreement shall remain in full force and effect so long as the economic or legal substance of the transactions contemplated hereby is not affected in any materially adverse manner to any Party. It is the intention of the Parties that if any such provision is held to be illegal, invalid or unenforceable, the Parties will negotiate in good faith to modify the Agreement to add in lieu thereof a provision as similar in terms to such provisions as is possible to make such provision legal, valid and enforceable.
- 13.13. Attorney Fees. If a Party institutes an action or proceeding against the other Party relating to the provisions of this Agreement, then the Party to such action or proceeding which does not prevail (as determined by a court of competent jurisdiction in a final, non-appealable decision) shall reimburse the prevailing Party therein (regardless of whether the prevailing Party is plaintiff or defendant in such action or proceeding) for the reasonable legal fees and expenses incurred by the prevailing Party in connection with such action or proceeding, including any appeal therefrom. The applicable Governmental Authority shall be empowered to designate the prevailing party for purposes of this Section 14.12.
- 13.14. Waiver. Waiver of performance of any obligation or term contained in this Agreement by a Party, or waiver by a Party of the other's default hereunder, will not operate as a waiver of performance of any other obligation or term of this Agreement or a future waiver of the same obligation or a waiver of any future default.
- 13.15. Counterparts; Facsimiles; Electronic Transmission. This Agreement may be executed in multiple counterparts, each of which will be an original instrument, but all of which will constitute one agreement. The execution and delivery of this Agreement by any Party may be evidenced by facsimile or other electronic transmission (including scanned documents delivered by email), which shall be binding upon all Parties.
- 13.16. JOINT ACKNOWLEDGMENT. THIS WRITTEN AGREEMENT REPRESENTS THE FINAL AGREEMENT BETWEEN THE PARTIES AND MAY NOT BE CONTRADICTED BY EVIDENCE OF PRIOR, CONTEMPORANEOUS OR SUBSEQUENT ORAL AGREEMENTS OF THE PARTIES. THERE ARE NO UNWRITTEN ORAL AGREEMENTS BETWEEN THE PARTIES REGARDING THE SUBJECT MATTER CONTEMPLATED BY THIS AGREEMENT.
- 13.17. WAIVER OF JURY TRIAL, SPECIAL DAMAGES, ETC. EACH OF BUYER AND SELLER HEREBY KNOWINGLY, VOLUNTARILY, INTENTIONALLY AND IRREVOCABLY (A) WAIVES, TO THE

MAXIMUM EXTENT NOT PROHIBITED BY LAW, ANY RIGHT IT MAY HAVE TO A TRIAL BY A JURY IN RESPECT OF ANY LITIGATION BASED HEREON, OR DIRECTLY OR INDIRECTLY AT ANY TIME ARISING OUT OF, UNDER OR IN CONNECTION WITH THIS AGREEMENT OR ANY TRANSACTION CONTEMPLATED HEREBY OR ASSOCIATED HERewith, (B) WAIVES, TO THE MAXIMUM EXTENT NOT PROHIBITED BY LAW, ANY RIGHT IT MAY HAVE TO CLAIM OR RECOVER IN ANY SUCH LITIGATION OR ARBITRATION ANY SPECIAL DAMAGES, AND (C) ACKNOWLEDGES THAT IT HAS BEEN INDUCED TO ENTER INTO THIS AGREEMENT AND THE TRANSACTIONS CONTEMPLATED HEREBY BY, AMONG OTHER THINGS, THE MUTUAL WAIVERS AND CERTIFICATIONS CONTAINED IN THIS SECTION 13.17, IN EACH CASE IT BEING THE EXPRESS INTENT, UNDERSTANDING, AND AGREEMENT OF THE PARTIES THAT SUCH WAIVERS ARE TO BE GIVEN THE FULLEST EFFECT, NOTWITHSTANDING THE NEGLIGENCE (WHETHER SOLE, JOINT OR CONCURRENT), STRICT LIABILITY OR OTHER LEGAL FAULT OF ANY PARTY. AS USED IN THIS SECTION 13.17, "SPECIAL DAMAGES" MEANS ALL SPECIAL, EXEMPLARY, PUNITIVE, REMOTE AND SPECULATIVE DAMAGES (REGARDLESS OF HOW NAMED), BUT DOES NOT INCLUDE ANY PAYMENTS OR FUNDS WHICH ANY PARTY HAS EXPRESSLY PROMISED TO PAY OR DELIVER TO THE OTHER PARTY OR ANY CLAIMS OF ANY THIRD PARTY FOR WHICH ONE PARTY HAS AGREED TO INDEMNIFY THE OTHER PARTY UNDER THIS AGREEMENT.

- 13.18. Mutuality. The Parties acknowledge and declare that this Agreement is the result of extensive negotiations between them. Accordingly, if there is any ambiguity in this Agreement, there shall be no presumption that this instrument was prepared solely by either Party.
- 13.19. Schedules. The inclusion of any information (including dollar amounts) in any section of the disclosure Schedules hereto shall not be deemed to be an admission or acknowledgment by Seller that such information is required to be listed on such Schedule. The matters reflected in the Schedules are not necessarily limited to matters required by this Agreement to be reflected in the Schedules. Any such additional matters are set forth for informational purposes only and do not necessarily include other matters of a similar nature. The Schedules are qualified in their entirety by reference to the specific provisions of this Agreement, and are not intended to constitute, and shall not be construed as constituting representations or warranties of either Party, except as and to the extent provided in this Agreement. Headings have been inserted on the sections of the Schedules for convenience or reference only, shall not constitute a part of the Schedules or this Agreement, and shall to no extent have the effect of amending or changing the express description of the Sections as set forth in this Agreement. The information contained in this Agreement, the Exhibits and the Schedules hereto is disclosed solely for purposes of this Agreement, and no information contained

herein or therein shall be deemed to be an admission by any Party hereto to any Third Party of any matter whatsoever (including materiality, any violation of a legal requirement or breach of contract).

[REMAINDER OF PAGE INTENTIONALLY LEFT BLANK
SIGNATURE PAGES FOLLOW]

IN WITNESS WHEREOF, I have set forth my name below, solely in my capacity as President of the Seller, as of the date first written above.

SELLER:

NACOGDOCHES OIL AND GAS, INC.

By: 

Brent Ivy, Vice President

[FIRPTA CERTIFICATE - PSA]

IN WITNESS WHEREOF, Buyer has executed this Agreement as of the Execution Date.

BUYER:

NORDIC OIL USA 4 LLC, a Delaware limited
liability company

By: 

David Burns, President

Exhibit A

PROPERTIES AND ALLOCATED VALUES

Real Property Interests

DINEH-BI-KEYAH— ARIZONA (APACHE COUNTY, ARIZONA)

Lease#: 14-20-0603-8822 Allocated Value: \$4,155,121.19

Oil and Gas Mining Lease - Tribal Indian Lands, dated the 9th day of October, 1964, between the Chairman, Navajo Tribal Council of Apache County, State of Arizona, for and on behalf of the Navajo Tribe of Indians, as lessor, and Kerr-McGee Oil Industries, Inc., as lessee, recorded with the Department of the Interior, Bureau of Indian Affairs, on October 29, 1964, covering all of Sections 27, 28, 33 and 34 in Township 36 North, Range 30 East, G&SRM, Apache County, Arizona.

WI: 25%

NRI: 20.833333333%

Gross Acreage: 2,560 acres

Net Acreage: 640 acres

Lease#: 14-20-0603-8812 Allocated Value: \$4,203,814.03

Oil and Gas Mining Lease - Tribal Indian Lands, dated the 12th day of October, 1964, between the Chairman, Navajo Tribal Council of Apache County, State of Arizona, for and on behalf of the Navajo Tribe of Indians, as lessor, and Humble Oil & Refining Company, as lessee, recorded with the Department of the Interior, Bureau of Indian Affairs, on October 26, 1964, covering all of Sections 25, 26, 35, and 36 in Township 36 North, Range 29 East, G&SRM, Apache County, Arizona.

WI: 25%

NRI: 20.833333333%

Gross Acreage: 2,590 acres

Net Acreage: 647.50 acres

Lease#: 14-20-0603-8823 Allocated Value: \$4,111,297.65

Oil and Gas Mining Lease - Tribal Indian Lands, dated the 9th day of October, 1964, between the Chairman, Navajo Tribal Council of Apache County, State of Arizona, for and on behalf of the Navajo Tribe of Indians, as lessor, and Kerr-McGee Oil Industries, Inc., as lessee, recorded

with the Department of the Interior, Bureau of Indian Affairs, on October 29, 1964, covering all of Sections 29, 30, 31, and 32 in Township 36 North, Range 30 East, G&SRM, Apache County, Arizona.

WI: 25%

NRI: 20.8333333333%

Gross Acreage: 2,533 acres

Net Acreage: 633.25 acres

Lease#: 14-20-0603-8876 **Allocated Value: \$1,019,303.17**

Oil and Gas Mining Lease - Tribal Indian Lands, dated the 15th day of January, 1965, between the Chairman, Navajo Tribal Council of Apache County, State of Arizona, for and on behalf of the Navajo Tribe of Indians, as lessor, and Humble Oil & Refining Company, as lessee, recorded with the Department of the Interior, Bureau of Indian Affairs, on February 18, 1965, covering all of Section 6 in Township 35 North, Range 30 East, G&SRM, Apache County, Arizona.

WI: 25%

NRI: 20.8333333333%

Gross Acreage: 628 acres

Net Acreage: 157 acres

Lease#: 14-20-0603-8889 **Allocated Value: \$1,038,780.30**

Oil and Gas Mining Lease - Tribal Indian Lands, dated the 15th day of January, 1965, between the Chairman, Navajo Tribal Council of Apache County, State of Arizona, for and on behalf of the Navajo Tribe of Indians, as lessor, and Kerr-McGee Oil Industries, Inc., as lessee, recorded with the Department of the Interior, Bureau of Indian Affairs, on February 18, 1965, covering all of Section 5 in Township 35 North, Range 30 East, G&SRM, Apache County, Arizona.

WI: 25%

NRI: 20.8333333333%

Gross Acreage: 640 acres

Net Acreage: 160 acres

Wells and Well Equipment

DINEH-BI-KEYAH— ARIZONA (APACHE COUNTY, ARIZONA)

Allocated Value: \$671,683.66

Lease#: 14-20-0603-8823

Navajo 1— Oil; API #02-001-20001 WI: 25%; NRI: 20.833333333%

American 160-20-74 pump jack, rods, tubing, D-JAX pump off controller (POC), chemical and methanol tanks, Bluetick automation equipment, down hole pump.

Navajo 3X— Oil; API #02-001-20011 WI: 25%; NRI: 20.833333333%

Cabot 160 pump jack, rods, tubing, D-JAX pump off controller (POC), (1) 400 bbl. tank, chemical and methanol tanks, Bluetick automation equipment, down hole pump.

Navajo 4— Helium; API #02-001-20009 WI: 25%; NRI: 20.833333333%

Variable choke, meter run, ABB Total Flow meter, vertical separator, (1) 210 bbl. tank, Bluetick automation equipment, tubing, packer.

Navajo 6— Oil; API #02-001-20014 WI: 25%; NRI: 20.833333333%

Lufkin 114-64 pump jack, rods, tubing, D-JAX pump off controller (POC), chemical and methanol tanks, Bluetick automation equipment, down hole pump.

Navajo 7— Salt Water Injection Well (SWD); API #02-001-20013 WI: 25%; NRI: 20.833333333%

Free Water Knockout (FWKO), (2) 400 bbl. tanks, well head, ABB meter, chemical and methanol tank, Bluetick automation equipment, tubing, packer.

Navajo 9— Oil; API #02-001-20020 WI: 25%; NRI: 20.833333333%

American 160-200-74 pump jack, rods, tubing, D-JAX pump off controller (POC), variable frequency drive (VFD), chemical and methanol tanks, Bluetick automation equipment, down hole pump.

Navajo 11— Oil; API #02-001-20106 WI: 25%; NRI: 20.833333333%

Cont. Busco 160-200-74 pump jack, rods, tubing, D-JAX pump off controller (POC), variable frequency drive (VFD), chemical and methanol tanks, Bluetick automation equipment, down hole pump.

Navajo 14— Oil; API #02-001-20040 WI: 25%; NRI: 20.833333333%

Alten A12CFC pump jack, rods, tubing, D-JAX pump off controller (POC), chemical and methanol tanks, Bluetick automation equipment, down hole pump.

EXHIBIT A

Navajo 15— Helium; API #02-001-20041 WI: 25%; NRI: 20.833333333%

Variable choke, meter run, ABB Total Flow meter, horizontal separator, (1) 210 bbl. tank, Bluetick automation equipment, chemical injection tank and equipment, tubing, packer.

Navajo 16— Oil; API #02-001-20043 WI: 25%; NRI: 20.833333333%

Lufkin 114-64 pump jack, rods, tubing, D-JAX pump off controller (POC), chemical and methanol tanks, (1) 210 bbl. tank, Bluetick automation equipment, down hole pump.

Navajo 17— Oil; API #02-001-20190 WI: 25%; NRI: 20.833333333%

Permian C-640-365-168 pump jack, rods, tubing, D-JAX pump off controller (POC), variable frequency drive (VFD), chemical and methanol tanks, (1) 210 bbl. tank, vent tank, Bluetick automation equipment, down hole pump.

Navajo 19— Oil; API #02-001-20240 WI: 25%; NRI: 20.833333333%

American D160-200-74 pump jack, rods, tubing, D-JAX pump off controller (POC), chemical and methanol tanks, Bluetick automation equipment, down hole pump.

Navajo 20— Oil; API #02-001-20245 WI: 25%; NRI: 20.833333333%

American D160-200-74 pump jack, rods, tubing, D-JAX pump off controller (POC), chemical and methanol tanks, Bluetick automation equipment, down hole pump.

Navajo 21— Oil; API #02-001-20242 WI: 25%; NRI: 20.833333333%

American D160-200-74 pump jack, rods, tubing, D-JAX pump off controller (POC), chemical and methanol tanks, (1) 210 bbl. tank, Bluetick automation equipment, down hole pump.

Navajo 22— Oil; API #02-001-20241 WI: 25%; NRI: 20.833333333%

American D160-200-74 pump jack, rods, tubing, D-JAX pump off controller (POC), chemical and methanol tanks, (1) 210 bbl. tank, Bluetick automation equipment, down hole pump.

Navajo 24— Helium; API #02-001-20244 WI: 25%; NRI: 20.833333333%

Variable choke, meter run, ABB Total Flow meter, horizontal separator, (1) 210 bbl. tank, Bluetick automation equipment, chemical injection tank and equipment, tubing, packer.

Navajo 25— Oil; API #02-001-20249 WI: 25%; NRI: 20.833333333%

American 160-200-74 pump jack, rods, tubing, D-JAX pump off controller (POC), chemical and methanol tanks, (1) 210 bbl. tank, Bluetick automation equipment, down hole pump.

Navajo 26— Oil; API #02-001-20250 WI: 25%; NRI: 20.833333333%

American 160-200-74 pump jack, rods, tubing, D-JAX pump off controller (POC), variable frequency drive (VFD), chemical and methanol tanks, (1) 210 bbl. tank, Bluetick automation equipment, down hole pump.

Navajo 27— Oil; API #02-001-20251 WI: 25%; NRI: 20.833333333%

American 160-200-74 pump jack, rods, tubing, D-JAX pump off controller (POC), chemical and methanol tanks, (1) 210 bbl. tank, Bluetick automation equipment, down hole pump.

Miscellaneous Lease Fixtures:

(4) 400 bbl. oil tanks, (2) 500 bbl. oil tanks, (3) 400 bbl. water tanks, water injection pump, (2) metal buildings, computer, surveillance system, printer, (3) desks, (2) file cabinets, (2) desks chairs, miscellaneous hand tools, ~3,000 gallon fuel tank, (1) 600 bbl. gun barrel tank.

Lease#: 14-20-0603-8822

Navajo C-1— Oil; API #02-001-20092 WI: 25%; NRI: 20.833333333%

Cabot 114 pump jack, rods, tubing, D-JAX pump off controller (POC), chemical and methanol tanks, down hole pump.

Navajo C-2— Helium; API #02-001-20046 WI: 25%; NRI: 20.833333333%

Variable choke, meter run, ABB Total Flow meter, horizontal separator, (1) 210 bbl. tank, Bluetick automation equipment, chemical injection tank and equipment, tubing, packer.

Lease#: 14-20-0603-8876

Navajo 138-1— Helium; API #02-001-20012 WI: 25%; NRI: 20.833333333%

Variable choke, meter run, ABB Total Flow meter, horizontal separator, (1) 210 bbl. tank, Bluetick automation equipment, chemical injection tank and equipment, tubing, packer..

Navajo 138-3— Oil; API #02-001-20253 WI: 25%; NRI: 20.833333333%

American 160-200-74 pump jack, rods, tubing, D-JAX pump off controller (POC), chemical and methanol tanks, (1) 210 bbl. tank, Bluetick automation equipment, down hole pump.

Lease #: 14-20-0603-8812

Navajo 88-1— Oil; API #02-001-20045 WI: 25%; NRI: 20.833333333%

Cabot 160 pump jack, rods, tubing, D-JAX pump off controller (POC), chemical and methanol tanks, (1) 210 bbl. tank, Bluetick automation equipment, down hole pump.

Navajo 88-2— Helium; API #02-001-20055 WI: 25%; NRI: 20.833333333%

Variable choke, meter run, ABB Total Flow meter, horizontal separator, (2) 400 bbl. tanks, Bluetick automation equipment, tubing, packer, Cabot 160 pumpjack (not in use).

Navajo 88-3— Helium; API #02-001-20066 WI: 25%; NRI: 20.833333333%

Variable choke, meter run, ABB Total Flow meter, horizontal separator, (1) 210 bbl. tank, Bluetick automation equipment, chemical injection tank and equipment, tubing, packer

Navajo 88-6— Oil; API #02-001-20252 WI: 25%; NRI: 20.833333333%

American 228 pump jack, rods, tubing, D-JAX pump off controller (POC), chemical and methanol tanks, (1) 210 bbl. tank, Bluetick automation equipment, down hole pump.

Lease#: 14-20-0603-8889

Navajo B1-X— Oil; API #02-001-20068 WI: 25%; NRI: 20.833333333%

American 160-200-74 pump jack, rods, tubing, D-JAX pump off controller (POC), chemical and methanol tanks, (1) 210 bbl. tank, Bluetick automation equipment, tubing, packer, down hole pump.

Navajo B2— Helium; API #02-001-20010 WI: 25%; NRI: 20.833333333%

Variable choke, meter run, ABB Total Flow meter, horizontal separator, (1) 210 bbl. tank, Bluetick automation equipment, chemical injection tank and equipment, tubing, packer.

Exhibit B

FORM OF ASSIGNMENT, BILL OF SALE
AND CONVEYANCE

[ATTACHED]

EXHIBIT B

After Recording, Return to:

Nordic Oil USA 4 LLC
113 Jean Baptiste Dr.
Lafayette, Louisiana 70503
Attention: David Burns

NOTICE OF CONFIDENTIALITY RIGHTS: IF YOU ARE A NATURAL PERSON, YOU MAY REMOVE OR STRIKE ANY OR ALL OF THE FOLLOWING INFORMATION FROM ANY INSTRUMENT THAT TRANSFER AN INTEREST IN REAL PROPERTY BEFORE IT IS FILED FOR RECORD IN THE PUBLIC RECORDS: YOUR SOCIAL SECURITY NUMBER OR YOUR DRIVER'S LICENSE NUMBER.

ASSIGNMENT, BILL OF SALE AND CONVEYANCE

STATE OF ARIZONA §
 § KNOW ALL MEN BY THESE PRESENTS, THAT:
COUNTY OF APACHE §

This ASSIGNMENT, BILL OF SALE AND CONVEYANCE (this "*Assignment*") is from **NACOGDOCHES OIL AND GAS, INC.**, a Texas corporation ("*Assignor*"), whose address is 816 North Street, Nacogdoches, Texas 75961, to **NORDIC OIL USA 4 LLC**, a Delaware limited liability company ("*Assignee*"), whose address is 113 Jean Baptiste Dr., Lafayette, Louisiana 70503, and is effective as of 12:00:01 a.m. Central Time, March 1, 2019 (the "*Effective Time*").

RECITALS

WHEREAS, Assignor desires to assign to Assignee, and Assignee desires to receive from Assignor, the Properties described below in accordance with this Assignment and the Purchase and Sale Agreement (defined below).

NOW, THEREFORE, for and in consideration of the mutual promises contained herein and in the Purchase and Sale Agreement, the benefits to be derived by each party hereunder and under the Purchase and Sale Agreement, and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Assignor and Assignee agree as follows:

**ARTICLE I
DEFINED TERMS**

1.1 Definitions. Capitalized terms used herein and not otherwise defined herein shall have the meanings given such terms in the Purchase and Sale Agreement, dated as of March 29, 2019, as amended, by and between Assignor and Assignee (the "*Purchase and Sale Agreement*").

ARTICLE II ASSIGNMENT OF ASSETS

2.1 Assignment. For and in consideration of Ten Dollars (\$10.00) and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Assignor does hereby **GRANT, BARGAIN, SELL, CONVEY, ASSIGN, TRANSFER, SET OVER, AND DELIVER** unto Assignee, all of Assignor's right, title and interest in and to the assets and properties described below, less and except for the Excluded Assets (the "*Properties*");

(a) the oil, gas and mineral leases described on Exhibit A, whether producing or non-producing, together with all leasehold interests in and to the leasehold estates created thereby, and all royalties, working interests, net revenue interests, overriding royalties, production payments, carried interests, net profits interests, reversionary interests, and other Hydrocarbon interests of any kind or character created thereby, derived therefrom or attributable thereto, as well as any and all operating rights thereunder (collectively, the "*Real Property Interests*"), and the lands covered by the Real Property Interests and all lands pooled or unitized therewith (the "*Lands*");

(b) all oil, condensate, gas, helium, water, carbon dioxide, disposal, injection, observation and other wells located on the Lands, including the oil and gas wells shown on Exhibit A (collectively, the "*Wells*"), and all tangible personal property, supplies, inventory, equipment, fixtures and improvements, including all injection wells, salt water disposal and handling facilities, frac ponds, frac pits, pads, well heads, casing, tubing, pumps, motors, gauges, valves, heaters, treaters, water lines, vessels, tanks, boilers, separators, treating equipment, compressors, pipelines, gathering systems, other equipment, automation systems including meters and related telemetry on wells, power lines, telephone and communication lines and other appurtenances owned or held primarily for use in connection with operation, production, treating, storing, transportation or marketing of Hydrocarbons from the Wells (collectively, the "*Equipment*");

(c) all presently existing unitization, pooling and/or communitization agreements, declarations or designations, and statutorily, judicially or administratively created drilling, spacing and/or production units, whether recorded or unrecorded, insofar as the same are attributable or allocated to the Lands; and the properties covered or units created thereby;

(d) all Hydrocarbons in, on, under or produced from or attributable to the Lands from and after the Effective Time and the proceeds thereof, and all inventory purchased pursuant to Section 2.5(a) of the Purchase and Sale Agreement and the proceeds thereof; and

(e) all surface fee interests, easements, surface leases, surface use agreements, surface rights, servitudes, water rights, licenses and rights of way appurtenant to or otherwise used or held for use in connection with the Properties or the operation, production, treating, storing, transportation or marketing of Hydrocarbons therefrom or allocated thereto ("*Easements*"); and, to the extent the same are transferrable, all Permits used primarily in connection with the ownership or operation of the Properties;

(f) all presently existing and valid Hydrocarbon sales agreements, operating agreements, gathering agreements, transportation agreements, farmout and farmin agreements, purchase agreements, exploration agreements, area of mutual interest agreements, processing agreements, and other contracts, agreements and instruments, in each case, to the extent Assignor is a party or is otherwise bound and the above agreements cover, are attributable to or relate to the Properties and are set forth on Exhibit B (collectively, the "*Contracts*");

(g) all rights, benefits and obligations arising from or in connection with any Gas Imbalances as of the Effective Time;

(h) all audit rights, rights to receive refunds or payments of any nature, and all amounts of money, relating thereto, in each case, to the extent arising from, or relating to, the ownership, operation, or sale or other disposition of the Properties from and after the Effective Time and any claim of indemnity, contribution or reimbursement relating to the Assumed Obligations;

(i) all claims, rights, demands, causes of action, suits, actions, judgments, damages, awards, recoveries, settlements, indemnities, rights to insurance proceeds, duties, obligations and liabilities in favor of or owed to Assignor and relating to any Assumed Obligations or arising from acts, omissions or events, or damage to or destruction of Properties occurring from and after the Effective Time; and

(j) all of Assignor's files, records and data (including electronic data) that (1) primarily relate to the ownership, operation or development of the Properties described above, and (2) are in Assignor's or its Affiliates' possession, including but not limited to lease files, land files, division order files, abstracts, title files, maps, well files, well logs, well tests, mud logs, directional surveys, core reports, daily drilling records, machinery and equipment files, engineering and/or production files, Geological and Geophysical Information, regulatory files, environmental and health and safety files, Contracts and related files, and production, accounting and Tax records ("*Records*").

TO HAVE AND TO HOLD the Properties unto Assignee, its successors and assigns, forever, subject, however, to all the terms and conditions of this Assignment, including, without limitation, Article III.

2.2 Excluded Assets. Assignor specifically excepts from this Assignment and reserves unto itself the following (the "*Excluded Assets*"):

- (a) Assignor's minute books, financial and income or franchise tax records, Tax Returns to the extent relating to Assignor's income or franchise taxes, and legal records (other than title records);
- (b) any existing or future refund of costs, Taxes or expenses borne by any of Assignor, its Affiliates or its or their respective predecessors in title, to the extent attributable to the period prior to the Effective Time;
- (c) all claims and causes of action of Assignor or its Affiliates arising under or with respect to any of the Contracts that are attributable to periods of time prior to the Effective Time (including claims for adjustments or refunds);
- (d) all rights and interests of Assignor or its Affiliates (i) under any policy or agreement of insurance or indemnity to the extent and only to the extent such rights and interests relate to the ownership of the Properties prior to the Effective Time and not to any Assumed Obligations, and (ii) under any bond;
- (e) Assignor's rights with respect to Hydrocarbons produced from the Properties with respect to all periods prior to the Effective Time and all proceeds from the disposition thereof, other than inventory for which an adjustment is made under Section 2.5(a) of the Purchase and Sale Agreement; and any and all proceeds from production and from the settlements of contract disputes with purchasers of Hydrocarbons or byproducts from the Lands, including settlement of take-or-pay disputes, insofar as said proceeds are attributable to periods of time prior to the Effective Time;
- (f) all accounts receivable and audit rights arising under any of the Contracts or otherwise with respect to the Properties solely with respect to any period prior to the Effective Time or to any of the Excluded Assets, and except for any Gas Imbalances;
- (g) all claims of Assignor or any of its Affiliates for refunds of or loss carry forwards with respect to (1) production, ad valorem or any other Taxes attributable to any period prior to the Effective Time, (2) income or franchise Taxes, or (3) any Taxes attributable to the Excluded Assets;
- (h) all documents and instruments of Assignor or any of its Affiliates that may be protected by an attorney-client privilege, except to the extent relating to any Assumed Obligations;
- (i) all information that cannot be disclosed to Assignee as a result of confidentiality arrangements under agreements with Third Parties (other than title opinions and other title records relating to the Properties) for which Assignor is unable to secure permission (after using its commercially reasonable efforts, at no material out-of-pocket cost to Assignor) to provide or convey to Assignee;
- (j) all Hedge Contracts and all rights and Liabilities thereunder, and all Debt Instruments of Assignor and its Affiliates and all Liabilities thereunder;

(k) all of Assignor's proprietary computer software, patents, trade secrets, copyrights, names, trademarks, logos and other intellectual property;

(l) documents prepared or received by Assignor or its Affiliates with respect to (i) lists of prospective purchasers for the Properties, (ii) correspondence between or among Assignor, its representatives and any prospective purchaser other than Assignee, and (iii) correspondence between Assignor or any of its representatives with respect to any of the prospective purchasers or the transactions contemplated by the Purchase and Sale Agreement;

(m) all employee files of Assignor; and

(n) all e-mails and other electronic files on Assignor's servers and networks to the extent not primarily related to the ownership, operation or development of the Properties.

ARTICLE III SPECIAL WARRANTY; DISCLAIMERS

3.1 Special Warranty. Assignor does hereby bind itself and its successors and assigns to warrant and forever defend all and singular title to the Properties (with, in respect of the Real Property Interests and Wells, title to not less than the NRIs for such Real Property Interests and Wells set forth in Exhibit A to the Purchase and Sale Agreement, in respect of the Real Property Interests and Wells, title to not more than the Working Interests for such Real Property Interests and Wells set forth in Exhibit A to the Purchase and Sale Agreement, in each case, subject to the exceptions set forth in subparts (a) of the definition of "Defensible Title" under the Purchase and Sale Agreement, and in respect of the Real Property Interests, title to not less than the number of Net Acres for such Real Property Interests set forth in Exhibit A to the Purchase and Sale Agreement) unto Assignee and Assignee's successors and assigns, against every Person whomsoever lawfully claiming or to claim the same or any part thereof, by, through, or under Assignor, but not otherwise and subject to Permitted Encumbrances.

3.2 Subrogation. Assignor hereby assigns to Assignee all rights, claims and causes of action under title warranties given or made by Assignor's predecessors in interest with respect to the Properties, and Assignee is specifically subrogated to all rights which Assignor may have against such predecessors in interest with respect to the Properties, to the extent Assignor may legally transfer such rights and grant such subrogation.

3.3 Disclaimers of Warranties and Representations.

EXCEPT FOR THE REPRESENTATIONS AND WARRANTIES OF ASSIGNOR SET FORTH IN THE PURCHASE AND SALE AGREEMENT AND THE SPECIAL WARRANTY OF TITLE SET FORTH IN SECTION 3.1 ABOVE, ASSIGNEE ACKNOWLEDGES THAT ASSIGNOR HAS NOT MADE, AND ASSIGNOR HEREBY EXPRESSLY DISCLAIMS AND NEGATES, AND ASSIGNEE HEREBY EXPRESSLY WAIVES, ANY REPRESENTATION OR WARRANTY, EXPRESS, IMPLIED, AT COMMON LAW, BY STATUTE OR OTHERWISE. EXCEPT FOR THE REPRESENTATIONS AND WARRANTIES OF ASSIGNOR SET FORTH IN THE

PURCHASE AND SALE AGREEMENT AND THE SPECIAL WARRANTY OF TITLE SET FORTH IN SECTION 3.1 ABOVE, AND WITHOUT LIMITING THE GENERALITY OF THE FOREGOING, ASSIGNOR EXPRESSLY DISCLAIMS AND NEGATES, AND ASSIGNEE HEREBY WAIVES, AS TO PERSONAL PROPERTY, EQUIPMENT, INVENTORY, MACHINERY AND FIXTURES CONSTITUTING A PART OF THE PROPERTIES (A) ANY IMPLIED OR EXPRESS WARRANTY OF MERCHANTABILITY, (B) ANY IMPLIED OR EXPRESS WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, (C) ANY IMPLIED OR EXPRESS WARRANTY OF CONFORMITY TO MODELS OR SAMPLES OF MATERIALS, (D) ANY RIGHTS OF PURCHASERS UNDER APPROPRIATE STATUTES TO CLAIM DIMINUTION OF CONSIDERATION OR RETURN OF THE PURCHASE PRICE FOR BREACH OF AN IMPLIED OR EXPRESS REPRESENTATION OR WARRANTY, (E) ANY IMPLIED OR EXPRESS WARRANTY OF FREEDOM FROM DEFECTS, WHETHER KNOWN OR UNKNOWN, (F) ANY AND ALL IMPLIED WARRANTIES EXISTING UNDER APPLICABLE LAW, AND (G) ANY IMPLIED OR EXPRESS WARRANTY REGARDING ENVIRONMENTAL LAWS, THE RELEASE OF HAZARDOUS MATERIALS INTO THE ENVIRONMENT, OR PROTECTION OF THE ENVIRONMENT OR HEALTH, IT BEING THE EXPRESS INTENTION OF ASSIGNEE AND ASSIGNOR THAT, EXCEPT FOR THE REPRESENTATIONS AND WARRANTIES OF ASSIGNOR IN THE PURCHASE AND SALE AGREEMENT AND THE SPECIAL WARRANTY OF TITLE SET FORTH IN SECTION 3.1 ABOVE OR AS OTHERWISE PROVIDED IN THE PURCHASE AND SALE AGREEMENT AND THIS ASSIGNMENT, THE PERSONAL PROPERTY, EQUIPMENT, INVENTORY, MACHINERY AND FIXTURES IN WHICH ASSIGNOR HAS ANY INTEREST ARE BEING ACCEPTED BY ASSIGNEE, "AS IS, WHERE IS, WITH ALL FAULTS" AND IN THEIR PRESENT CONDITION AND STATE OF REPAIR.

ASSIGNOR AND ASSIGNEE AGREE THAT, TO THE EXTENT REQUIRED BY APPLICABLE LAW TO BE EFFECTIVE, THE DISCLAIMERS OF CERTAIN WARRANTIES CONTAINED IN THIS SECTION 3.3 ARE "CONSPICUOUS" DISCLAIMERS FOR THE PURPOSES OF ANY APPLICABLE LAW, RULE OR ORDER.

ARTICLE IV ASSUMED OBLIGATIONS AND RETAINED LIABILITIES

Subject to the terms and conditions of the Purchase and Sale Agreement, effective as of the date of this Assignment, Assignee hereby assumes and agrees to fulfill, perform, pay and discharge (or cause to be fulfilled, performed, paid or discharged) all of the Assumed Obligations, and Assignor shall retain and agrees to fulfill, perform, pay and discharge (or cause to be fulfilled, performed, paid or discharged) all of the Retained Liabilities.

ARTICLE V MISCELLANEOUS

5.1 *Separate Assignments.* Where separate assignments of the Properties have been or will be executed for filing in other recording jurisdictions or counties or for filing with, and

approval by, applicable Governmental Authorities, any such separate assignments (a) shall evidence this Assignment and assignment of the Properties herein made and shall not constitute any additional assignment of any of the Properties covered hereby or thereby, (b) are not intended to modify, and shall not modify, any of the terms, covenants and conditions or limitations on warranties set forth in this Assignment or the Purchase and Sale Agreement and are not intended to create, and shall not create, any representations, warranties or additional covenants of or by Assignor or Assignee, and (c) shall be deemed to contain all of the terms and provisions of this Assignment, as fully and to all intents and purposes as though the same were set forth at length in such separate assignments.

5.2 Assignment Subject to Purchase and Sale Agreement. This Assignment is expressly subject to the terms and conditions of the Purchase and Sale Agreement, including with respect to the interests assigned hereby. If there is a conflict between the terms of this Assignment and the Purchase and Sale Agreement, the terms of the Purchase and Sale Agreement shall control. This Assignment is intended by Assignor and Assignee to be an assignment and conveyance of the Properties, not a quitclaim.

5.3 Governing Law. EXCEPT TO THE EXTENT THE LAWS OF ANOTHER JURISDICTION WILL, UNDER CONFLICT OF LAWS PRINCIPLES, GOVERN TRANSFERS OF THE PROPERTIES LOCATED IN SUCH OTHER JURISDICTION, THIS ASSIGNMENT AND THE LEGAL RELATIONS AMONG ASSIGNOR AND ASSIGNEE SHALL BE GOVERNED AND CONSTRUED IN ACCORDANCE WITH THE LAWS OF THE STATE OF TEXAS.

5.4 Cooperation. In addition to this Assignment, Assignor shall execute, acknowledge, and deliver to Assignee, in a timely manner and without further consideration, any documents or instruments that Assignee may reasonably require, including further assignments or conveyances required by any Governmental Authorities, deeds, and consents to further evidence the assignment and conveyance of the Properties by Assignor to Assignee.

5.5 Successors and Assigns. This Assignment shall bind and inure to the benefit of the parties hereto and their respective successors and assigns.

5.6 Counterparts. This Assignment may be executed in any number of counterparts, and each such counterpart hereof shall be deemed to be an original instrument, but all of such counterparts shall constitute for all purposes one agreement.

[Signature pages follow]

IN WITNESS WHEREOF, this Assignment has been executed by Assignor as of the date of acknowledgment below, but is effective for all purposes as of the Effective Time.

ASSIGNOR:

NACOGDOCHES OIL AND GAS, INC.,
a Texas corporation

By: _____
Brent Ivy, Vice President

ACKNOWLEDGMENT

STATE OF TEXAS §
 §
COUNTY OF NACOGDOCHES §

This instrument was acknowledged before me on this ____ day of March, 2019, by Brent Ivy, as Vice President of **NACOGDOCHES OIL AND GAS, INC.**, a Texas corporation, as the act and deed and on behalf of such corporation.

Notary Public

My Commission Expires: _____

Commission Number: _____

IN WITNESS WHEREOF, this Assignment has been executed by Assignee as of the date of acknowledgment below, but is effective for all purposes as of the Effective Time.

ASSIGNEE:

NORDIC OIL USA 4 LLC,
a Delaware limited liability company

By: _____
David Burns, President

ACKNOWLEDGMENT

STATE OF LOUISIANA §
 §
PARISH OF LAFAYETTE §

This instrument was acknowledged before me on this ____ day of March, 2019, by David Burns, as President of **NORDIC OIL USA 4 LLC**, a Delaware limited liability company, as the act and deed and on behalf of such limited liability company.

Notary Public

My Commission Expires: _____

Commission Number: _____

EXHIBIT A
PROPERTIES

Real Property Interests

DINEH-BI-KEYAH— ARIZONA (APACHE COUNTY, ARIZONA)

Lease#: 14-20-0603-8822

Oil and Gas Mining Lease - Tribal Indian Lands, dated the 9th day of October, 1964, between the Chairman, Navajo Tribal Council of Apache County, State of Arizona, for and on behalf of the Navajo Tribe of Indians, as lessor, and Kerr-McGee Oil Industries, Inc., as lessee, recorded with the Department of the Interior, Bureau of Indian Affairs, on October 29, 1964, covering all of Sections 27, 28, 33 and 34 in Township 36 North, Range 30 East, G&SRM, Apache County, Arizona.

Gross Acreage: 2,560 acres

Lease#: 14-20-0603-8812

Oil and Gas Mining Lease - Tribal Indian Lands, dated the 12th day of October, 1964, between the Chairman, Navajo Tribal Council of Apache County, State of Arizona, for and on behalf of the Navajo Tribe of Indians, as lessor, and Humble Oil & Refining Company, as lessee, recorded with the Department of the Interior, Bureau of Indian Affairs, on October 26, 1964, covering all of Sections 25, 26, 35, and 36 in Township 36 North, Range 29 East, G&SRM, Apache County, Arizona.

Gross Acreage: 2,590 acres

Lease#: 14-20-0603-8823

Oil and Gas Mining Lease - Tribal Indian Lands, dated the 9th day of October, 1964, between the Chairman, Navajo Tribal Council of Apache County, State of Arizona, for and on behalf of the Navajo Tribe of Indians, as lessor, and Kerr-McGee Oil Industries, Inc., as lessee, recorded with the Department of the Interior, Bureau of Indian Affairs, on October 29, 1964, covering all of Sections 29, 30, 31, and 32 in Township 36 North, Range 30 East, G&SRM, Apache County, Arizona.

Gross Acreage: 2,533 acres

Lease#: 14-20-0603-8876

Oil and Gas Mining Lease - Tribal Indian Lands, dated the 15th day of January, 1965, between the Chairman, Navajo Tribal Council of Apache County, State of Arizona, for and on behalf of the Navajo Tribe of Indians, as lessor, and Humble Oil & Refining Company, as lessee, recorded

with the Department of the Interior, Bureau of Indian Affairs, on February 18, 1965, covering all of Section 6 in Township 35 North, Range 30 East, G&SRM, Apache County, Arizona.

Gross Acreage: 628 acres

Lease#: 14-20-0603-8889

Oil and Gas Mining Lease - Tribal Indian Lands, dated the 15th day of January, 1965, between the Chairman, Navajo Tribal Council of Apache County, State of Arizona, for and on behalf of the Navajo Tribe of Indians, as lessor, and Kerr-McGee Oil Industries, Inc., as lessee, recorded with the Department of the Interior, Bureau of Indian Affairs, on February 18, 1965, covering all of Section 5 in Township 35 North, Range 30 East, G&SRM, Apache County, Arizona.

Gross Acreage: 640 acres

Wells and Well Equipment

DINEH-BI-KEYAH— ARIZONA (APACHE COUNTY, ARIZONA)

Lease#: 14-20-0603-8823

Navajo 1— Oil; API #02-001-20001

American 160-20-74 pump jack, rods, tubing, D-JAX pump off controller (POC), chemical and methanol tanks, Bluetick automation equipment, down hole pump.

Navajo 3X— Oil; API #02-001-20011

Cabot 160 pump jack, rods, tubing, D-JAX pump off controller (POC), (1) 400 bbl. tank, chemical and methanol tanks, Bluetick automation equipment, down hole pump.

Navajo 4— Helium; API #02-001-20009

Variable choke, meter run, ABB Total Flow meter, vertical separator, (1) 210 bbl. tank, Bluetick automation equipment, tubing, packer.

Navajo 6— Oil; API #02-001-20014

Lufkin 114-64 pump jack, rods, tubing, D-JAX pump off controller (POC), chemical and methanol tanks, Bluetick automation equipment, down hole pump.

Navajo 7— Salt Water Injection Well (SWD); API #02-001-20013

Free Water Knockout (FWKO), (2) 400 bbl. tanks, well head, ABB meter, chemical and methanol tank, Bluetick automation equipment, tubing, packer.

Navajo 9— Oil; API #02-001-20020

American 160-200-74 pump jack, rods, tubing, D-JAX pump off controller (POC), variable frequency drive (VFD), chemical and methanol tanks, Bluetick automation equipment, down hole pump.

Navajo 11— Oil; API #02-001-20106

Cont. Busco 160-200-74 pump jack, rods, tubing, D-JAX pump off controller (POC), variable frequency drive (VFD), chemical and methanol tanks, Bluetick automation equipment, down hole pump.

Navajo 14— Oil; API #02-001-20040

Alten A12CFC pump jack, rods, tubing, D-JAX pump off controller (POC), chemical and methanol tanks, Bluetick automation equipment, down hole pump.

Navajo 15— Helium; API #02-001-20041

Variable choke, meter run, ABB Total Flow meter, horizontal separator, (1) 210 bbl. tank, Bluetick automation equipment, chemical injection tank and equipment, tubing, packer.

Navajo 16— Oil; API #02-001-20043

Lufkin 114-64 pump jack, rods, tubing, D-JAX pump off controller (POC), chemical and methanol tanks, (1) 210 bbl. tank, Bluetick automation equipment, down hole pump.

Navajo 17— Oil; API #02-001-20190

Permian C-640-365-168 pump jack, rods, tubing, D-JAX pump off controller (POC), variable frequency drive (VFD), chemical and methanol tanks, (1) 210 bbl. tank, vent tank, Bluetick automation equipment, down hole pump.

Navajo 19— Oil; API #02-001-20240

American D160-200-74 pump jack, rods, tubing, D-JAX pump off controller (POC), chemical and methanol tanks, Bluetick automation equipment, down hole pump.

Navajo 20— Oil; API #02-001-20245

American D160-200-74 pump jack, rods, tubing, D-JAX pump off controller (POC), chemical and methanol tanks, Bluetick automation equipment, down hole pump.

Navajo 21— Oil; API #02-001-20242

American D160-200-74 pump jack, rods, tubing, D-JAX pump off controller (POC), chemical and methanol tanks, (1) 210 bbl. tank, Bluetick automation equipment, down hole pump.

Navajo 22— Oil; API #02-001-20241

American D160-200-74 pump jack, rods, tubing, D-JAX pump off controller (POC), chemical and methanol tanks, (1) 210 bbl. tank, Bluetick automation equipment, down hole pump.

Navajo 24— Helium; API #02-001-20244

Variable choke, meter run, ABB Total Flow meter, horizontal separator, (1) 210 bbl. tank, Bluetick automation equipment, chemical injection tank and equipment, tubing, packer.

Navajo 25— Oil; API #02-001-20249

American 160-200-74 pump jack, rods, tubing, D-JAX pump off controller (POC), chemical and methanol tanks, (1) 210 bbl. tank, Bluetick automation equipment, down hole pump.

Navajo 26— Oil; API #02-001-20250

American 160-200-74 pump jack, rods, tubing, D-JAX pump off controller (POC), variable frequency drive (VFD), chemical and methanol tanks, (1) 210 bbl. tank, Bluetick automation equipment, down hole pump.

Navajo 27— Oil; API #02-001-20251

American 160-200-74 pump jack, rods, tubing, D-JAX pump off controller (POC), chemical and methanol tanks, (1) 210 bbl. tank, Bluetick automation equipment, down hole pump.

Miscellaneous Lease Fixtures:

(4) 400 bbl. oil tanks, (2) 500 bbl. oil tanks, (3) 400 bbl. water tanks, water injection pump, (2) metal buildings, computer, surveillance system, printer, (3) desks, (2) file cabinets, (2) desks chairs, miscellaneous hand tools, ~3,000 gallon fuel tank, (1) 600 bbl. gun barrel tank.

Lease#: 14-20-0603-8822

Navajo C-1— Oil; API #02-001-20092

Cabot 114 pump jack, rods, tubing, D-JAX pump off controller (POC), chemical and methanol tanks, down hole pump.

Navajo C-2— Helium; API #02-001-20046

Variable choke, meter run, ABB Total Flow meter, horizontal separator, (1) 210 bbl. tank, Bluetick automation equipment, chemical injection tank and equipment, tubing, packer.

Lease#: 14-20-0603-8876

Navajo 138-1— Helium; API #02-001-20012

Variable choke, meter run, ABB Total Flow meter, horizontal separator, (1) 210 bbl. tank, Bluetick automation equipment, chemical injection tank and equipment, tubing, packer..

Navajo 138-3— Oil; API #02-001-20253

American 160-200-74 pump jack, rods, tubing, D-JAX pump off controller (POC), chemical and methanol tanks, (1) 210 bbl. tank, Bluetick automation equipment, down hole pump.

Lease #: 14-20-0603-8812

Navajo 88-1— Oil; API #02-001-20045

Cabot 160 pump jack, rods, tubing, D-JAX pump off controller (POC), chemical and methanol tanks, (1) 210 bbl. tank, Bluetick automation equipment, down hole pump.

Navajo 88-2— Helium; API #02-001-20055

Variable choke, meter run, ABB Total Flow meter, horizontal separator, (2) 400 bbl. tanks, Bluetick automation equipment, tubing, packer, Cabot 160 pumpjack (not in use).

Navajo 88-3— Helium; API #02-001-20066

Variable choke, meter run, ABB Total Flow meter, horizontal separator, (1) 210 bbl. tank, Bluetick automation equipment, chemical injection tank and equipment, tubing, packer

Navajo 88-6— Oil; API #02-001-20252

American 228 pump jack, rods, tubing, D-JAX pump off controller (POC), chemical and methanol tanks, (1) 210 bbl. tank, Bluetick automation equipment, down hole pump.

Lease#: 14-20-0603-8889

Navajo B1-X— Oil; API #02-001-20068

American 160-200-74 pump jack, rods, tubing, D-JAX pump off controller (POC), chemical and methanol tanks, (1) 210 bbl. tank, Bluetick automation equipment, tubing, packer, down hole pump.

Navajo B2— Helium; API #02-001-20010

Variable choke, meter run, ABB Total Flow meter, horizontal separator, (1) 210 bbl. tank, Bluetick automation equipment, chemical injection tank and equipment, tubing, packer.

EXHIBIT B

CONTRACTS

That certain Joint Operating Agreement dated September, 30 2016 (Dineh-Bi-Keyah (DBK) Field – Apache County, Arizona), among CAPITOL OPERATING GROUP, LLC, as Operator, and NORDIC OIL USA 2, LLLP, and NACOGDOCHES OIL AND GAS, INC., as Non-Operators.

SCHEDULES

TO

PURCHASE AND SALE AGREEMENT

BY AND BETWEEN

NACOGDOCHES OIL AND GAS, INC., AS SELLER,

AND

NORDIC OIL USA 4 LLC, AS BUYER

DATED MARCH 29, 2019

SCHEDULES

Schedule 1.1(a)	Buyer Knowledge Persons
Schedule 1.1(b)	Seller Knowledge Persons
Schedule 3.3	No Breaches
Schedule 3.4	Litigation
Schedule 3.5	Taxes
Schedule 3.8	Contracts
Schedule 3.9	Environmental and Safety Matters
Schedule 3.10	Current Commitments
Schedule 3.11	Suspended Funds
Schedule 3.12	Gas Imbalances
Schedule 3.13	Advance Payments
Schedule 3.14	Payout Balances
Schedule 3.15	PPRs, Rights and Required Consents
Schedule 3.17	Wells and Equipment
Schedule 5.8	Governmental Bonds

Schedule 1.1(a)

BUYERS KNOWLEDGE PERSONS

David Burns

Schedule 1.1(b)

SELLER'S KNOWLEDGE PERSONS

Mike Finley

Brent Ivy

Schedule 3.3

NO BREACHES

None.

Schedule 3.4

LITIGATION

None.

Schedule 3.5

TAXES

None.

Schedule 3.8

CONTRACTS

That certain Joint Operating Agreement dated September, 30 2016 (Dineh-Bi-Keyah (DBK) Field – Apache County, Arizona), among CAPITOL OPERATING GROUP, LLC, as Operator, and NORDIC OIL USA 2, LLLP, and NACOGDOCHES OIL AND GAS, INC., as Non-Operators.

Schedule 3.9

ENVIRONMENTAL AND SAFETY MATTERS

None.

Schedule 3.10
CURRENT COMMITMENTS

None.

Schedule 3.11

SUSPENDED FUNDS

None.

Schedule 3.12

GAS IMBALANCES

None.

Schedule 3.13

ADVANCE PAYMENTS

None.

Schedule 3.14

PAYOUT BALANCES

None.

Schedule 3.15

PPRS, RIGHTS AND REQUIRED CONSENTS

PPRs

Navajo Nation:

The Navajo Nation has a right of first refusal under 18 N.N.C. § 605 for any transfer of a mine or mineral interest pertaining to Navajo lands.

Required Consents

None.

Schedule 3.17

WELLS AND EQUIPMENT

None.

Schedule 5.8

GOVERNMENTAL BONDS

The following letter of credit has been extended to Capital Operating Group, LLC, as principal, in connection with the Properties, requiring cash-collateralization by Buyer:

1. Letter of Credit No. 8021092 issued on May 17, 2012 by the West Texas National Bank with Seller, as principal, for the benefit of the Bureau of Indian Affairs, Navajo Region Office, as beneficiary, in the original face amount of \$713,500.00, as amended on March 16, 2016 to add Nordic Oil USA 2, LLLP as an additional principal and to increase the face amount to Nine Hundred Seventy Thousand One Hundred and No/100 Dollars (\$970,100.00), and as further amended on December 1, 2016 to name Capital Operating Group, LLC as principal.

APPENDIX VII – COPY OF DBK LEASE ASSIGNMENTS

THE NAVAJO NATION
MINERALS DEPARTMENT
DIVISION OF NATURAL RESOURCES

ASSIGNMENT OF OIL AND GAS LEASE

ASSIGNMENT FOR: ☒ TITLE ☒ OPERATING RIGHTS ☐ FARM-OUT

Lease No. 14-20-0603-8822

1. Original Lessee: Kerr-McGee Oil Industries, Inc.
2. Approval Date of Original Lease: October 29, 1964
3. Royalty Rate: 16 2/3%
4. Current Land Description: Township 36 North, Range 30 East
All of Sections 27, 28, 33, & 34 containing 2560 Acres in Apache County, Arizona
5. Description of Land Being Assigned: Same as above.
6. Assignor: Nacogdoches Oil and Gas, Inc.
7. Assignee: Nordic Oil USA 4 LLC
8. Portion of Rights/Title Under Transfer: All of Assignor's right, title and interest
9. Reserved Overriding Royalties: None.
10. Previous Assignments and Portion of Rights/Title Transferred:

(1) Assignment of Mining Lease dated December 2, 1993 from Kerr-McGee Corporation, formerly Kerr-McGee Oil Industries, Inc., conveying all of their interest to Mountain States Petroleum. Approved on July 18, 1994. No overriding royalty interest reserved.

(2) Assignment of Record Title and Operating Rights dated August 31, 2007, from Mountain States Petroleum Corporation to Nacogdoches Oil and Gas, Inc., insofar as said lease covers Township 36 North, Range 30 East. All of Sections 27, 28, 33 & 34 containing 2560 Acres in Apache County, Arizona. Approved November 17, 2008. No overriding royalty interest reserved.

(3) Assignment of Operating Rights dated April 5, 2012, from Nacogdoches Oil and Gas, Inc. to Nordic Oil USA 2, LLLP, conveying forty-five percent (45%) of their interest, insofar as said lease covers Township 36 North, Range 30 East. All of Sections 27, 28, 33 & 34 containing 2560 Acres in Apache County, Arizona. Approved on April 1, 2016. No overriding royalty interest reserved.

(4) Assignment of Record Title and Operating Rights dated September 29, 2016, from Nacogdoches Oil and Gas, Inc. to Nordic Oil USA 2, LLLP, conveying a seventy-five percent (75%) of 8/8ths interest in title (being 75% of Nacogdoches Oil and Gas, Inc.'s then current interest) and thirty percent (30%) of 8/8ths interest in operating rights (being 54.54% of Nacogdoches Oil and Gas, Inc.'s then current interest), insofar as said lease covers Township 36 North, Range 30 East. All of Sections 27, 28, 33 & 34 containing 2560 Acres in Apache County, Arizona. Approved on October 2, 2017. No overriding royalty interest reserved.

The assignee shall furnish to the lessor, the Navajo Nation, c/o the Minerals Department, P.O. Box 1910, Window Rock, AZ 86515, copies of all reports filed with the U.S. Office of Natural Resources Revenue and the Bureau of Land Management pursuant to federal laws and regulations. The assignee shall furnish also all oil and gas run tickets, copies of drillstem tests, pressure tests, core analysis, seismic data and any other information required by the Minerals Department for this lease.

March 29, 2019

DATE



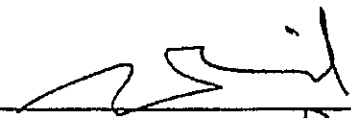
ASSIGNEE'S SIGNATURE

STATE OF LOUISIANA

PARISH OF LAFAYETTE

Before me, a notary public, in and for said county and state on this 29th day of March, 2019, personally appeared Mr. David Burns, to me known to be the identical person who subscribed the name of the maker thereof to the foregoing instrument as its President and acknowledged to me that he executed the same as his free and voluntary act and deed of such limited liability company, for the use and purposes therein set forth.

My Commission Expires at death



NOTARY Rene Guidry
LSBA # 26910

March 29, 2019

DATE

ASSIGNOR'S SIGNATURE

STATE OF TEXAS

COUNTY OF NACOGDOCHES

Before me, a notary public, in and for said county and state on this 29th day of March, 2019, personally appeared Mr. Brent Ivy, to me known to be the identical person who subscribed the name of the maker thereof to the foregoing instrument as its Vice President and acknowledged to me that he executed the same as his free and voluntary act and deed of such corporation, for the use and purposes therein set forth.

My Commission Expires _____

NOTARY

President's Office -- Approval

This assignment has been reviewed by the appropriate Departments of the Navajo Nation and is hereby approved.

DATE

PRESIDENT, THE NAVAJO NATION

The assignee shall furnish to the lessor, the Navajo Nation, c/o the Minerals Department, P.O. Box 1910, Window Rock, AZ 86515, copies of all reports filed with the U.S. Office of Natural Resources Revenue and the Bureau of Land Management pursuant to federal laws and regulations. The assignee shall furnish also all oil and gas run tickets, copies of drillstem tests, pressure tests, core analysis, seismic data and any other information required by the Minerals Department for this lease.

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NOTARY

March 29, 2019

DATE

ASSIGNOR'S SIGNATURE

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NOTARY

President's Office – Approval

This assignment has been reviewed by the appropriate Departments of the Navajo Nation and is hereby approved.

DATE

PRESIDENT, THE NAVAJO NATION

**THE NAVAJO NATION
MINERALS DEPARTMENT
DIVISION OF NATURAL RESOURCES**

ASSIGNMENT OF OIL AND GAS LEASE

ASSIGNMENT FOR: ☒ TITLE ☒ OPERATING RIGHTS ☐ FARM-OUT

Lease No. 14-20-0603-8812

1. Original Lessee: Humble Oil & Refining Company
2. Approval Date of Original Lease: October 26, 1964
3. Royalty Rate: 16 2/3%
4. Current Land Description: Township 36 North, Range 29 East
All of Sections 25, 26, 35 & 36 containing 2560 Acres in Apache County, Arizona
5. Description of Land Being Assigned: Same as above.
6. Assignor: Nacogdoches Oil and Gas, Inc.
7. Assignee: Nordic Oil USA 4 LLC
8. Portion of Rights/Title Under Transfer: All of Assignor's right, title and interest
9. Reserved Overriding Royalties: None.
10. Previous Assignments and Portion of Rights/Title Transferred:

(1) Assignment of Mining Lease dated December 22, 1972 from Humble Oil & Refining Company, conveying all of their interest to Kerr-McGee Corporation. Approved on February 15, 1973. No overriding royalty interest reserved.

(2) Assignment of Mining Lease dated December 1, 1993 from Kerr-McGee Corporation, conveying all of their interest to Mountain States Petroleum. Approved on July 18, 1994. No overriding royalty interest reserved.

(3) Assignment of Record Title and Operating Rights dated August 31, 2007, from Mountain States Petroleum Corporation to Nacogdoches Oil and Gas, Inc., insofar as said lease covers Township 36 North, Range 29 East. All of Sections 25, 26, 35 & 36 containing 2560 Acres in Apache County, Arizona. Approved on November 17, 2008. No overriding royalty interest reserved.

(4) Assignment of Operating Rights dated April 5, 2012, from Nacogdoches Oil and Gas, Inc. to Nordic Oil USA 2, LLLP, conveying forty-five percent (45%) of their interest, insofar as said lease covers Township 36 North, Range 29 East. All of Sections 25, 26, 35 & 36 containing 2560 Acres in Apache County, Arizona. Approved on April 1, 2016. No overriding royalty interest reserved.

(5) Assignment of Record Title and Operating Rights dated September 29, 2016, from Nacogdoches Oil and Gas, Inc. to Nordic Oil USA 2, LLLP, conveying a seventy-five percent (75%) of 8/8ths interest in title (being 75% of Nacogdoches Oil and Gas, Inc.'s then current interest) and thirty percent (30%) of 8/8ths interest in operating rights (being 54.54% of Nacogdoches Oil and Gas, Inc.'s then current interest), insofar as said lease covers Township 36 North, Range 29 East. All of Sections 25, 26, 35 & 36 containing 2560 Acres in Apache County, Arizona. Approved on October 2, 2017. No overriding royalty interest reserved.

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March 29, 2019

DATE



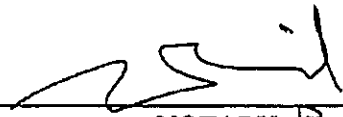
ASSIGNEE'S SIGNATURE

STATE OF LOUISIANA

PARISH OF LAFAYETTE

Before me, a notary public, in and for said county and state on this 29th day of March, 2019, personally appeared Mr. David Burns, to me known to be the identical person who subscribed the name of the maker thereof to the foregoing instrument as its President and acknowledged to me that he executed the same as his free and voluntary act and deed of such limited liability company, for the use and purposes therein set forth.

My Commission Expires at death



NOTARY Rene Guidry
LSBA # 26910

March 29, 2019

DATE

ASSIGNOR'S SIGNATURE

STATE OF TEXAS

COUNTY OF NACOGDOCHES

Before me, a notary public, in and for said county and state on this 29th day of March, 2019, personally appeared Mr. Brent Ivy, to me known to be the identical person who subscribed the name of the maker thereof to the foregoing instrument as its Vice President and acknowledged to me that he executed the same as his free and voluntary act and deed of such corporation, for the use and purposes therein set forth.

My Commission Expires _____

NOTARY

President's Office – Approval

This assignment has been reviewed by the appropriate Departments of the Navajo Nation and is hereby approved.

DATE

PRESIDENT, THE NAVAJO NATION

The assignee shall furnish to the lessor, the Navajo Nation, c/o the Minerals Department, P.O. Box 1910, Window Rock, AZ 86515, copies of all reports filed with the U.S. Office of Natural Resources Revenue and the Bureau of Land Management pursuant to federal laws and regulations. The assignee shall furnish also all oil and gas run tickets, copies of drillstem tests, pressure tests, core analysis, seismic data and any other information required by the Minerals Department for this lease.

March 29, 2019

DATE

ASSIGNEE'S SIGNATURE

STATE OF LOUISIANA

PARISH OF LAFAYETTE

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My Commission Expires _____

NOTARY

March 29, 2019

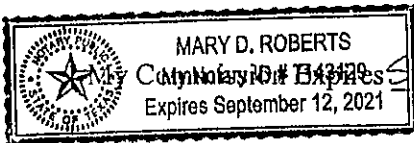
DATE

ASSIGNOR'S SIGNATURE

STATE OF TEXAS

COUNTY OF TARRANT

Before me, a notary public, in and for said county and state on this 29th day of March, 2019, personally appeared Mr. Brent Ivy, to me known to be the identical person who subscribed the name of the maker thereof to the foregoing instrument as its Vice President and acknowledged to me that he executed the same as his free and voluntary act and deed of such corporation, for the use and purposes therein set forth.



MARY D. ROBERTS

Notary Public, State of Texas

Expires September 12, 2021

SEPTEMBER 12, 2021

NOTARY

President's Office – Approval

This assignment has been reviewed by the appropriate Departments of the Navajo Nation and is hereby approved.

DATE

PRESIDENT, THE NAVAJO NATION

THE NAVAJO NATION
MINERALS DEPARTMENT
DIVISION OF NATURAL RESOURCES

ASSIGNMENT OF OIL AND GAS LEASE

ASSIGNMENT FOR: ☒ TITLE ☒ OPERATING RIGHTS ☐ FARM-OUT

Lease No. 14-20-0603-8823

1. Original Lessee: Kerr-McGee Oil Industries, Inc.
2. Approval Date of Original Lease: October 29, 1964
3. Royalty Rate: 16 2/3%
4. Current Land Description: Township 36 North, Range 30 East
All of Sections 29, 30, 31 and 32, containing 2533 Acres in Apache County, Arizona
5. Description of Land Being Assigned: Same as above.
6. Assignor: Nacogdoches Oil and Gas, Inc.
7. Assignee: Nordic Oil USA 4 LLC
8. Portion of Rights/Title Under Transfer: All of Assignor's right, title and interest
9. Reserved Overriding Royalties: None.
10. Previous Assignments and Portion of Rights/Title Transferred:

(1) Assignment of Mining Lease dated December 2, 1993 from Kerr-McGee Corporation, formerly Kerr-McGee Oil Industries, Inc., conveying all of their interest to Mountain States Petroleum. Approved on July 18, 1994. No overriding royalty interest reserved.

(2) Assignment of Record Title and Operating Rights dated August 31, 2007, from Mountain States Petroleum Corporation to Nacogdoches Oil and Gas, Inc., insofar as said lease covers Township 36 North, Range 30 East. All of Sections 29, 30, 31 and 32, containing 2533 Acres in Apache County, Arizona. Approved November 17, 2008. No overriding royalty interest reserved.

(3) Assignment of Operating Rights dated April 5, 2012, from Nacogdoches Oil and Gas, Inc. to Nordic Oil USA 2, LLLP, conveying forty-five percent (45%) of their interest, insofar as said lease covers Township 36 North, Range 30 East. All of Sections 29, 30, 31 and 32, containing 2533 Acres in Apache County, Arizona. Approved on April 1, 2016. No overriding royalty interest reserved.

(4) Assignment of Record Title and Operating Rights dated September 29, 2016, from Nacogdoches Oil and Gas, Inc. to Nordic Oil USA 2, LLLP, conveying a seventy-five percent (75%) of 8/8ths interest in title (being 75% of Nacogdoches Oil and Gas, Inc.'s then current interest) and thirty percent (30%) of 8/8ths interest in operating rights (being 54.54% of Nacogdoches Oil and Gas, Inc.'s then current interest), insofar as said lease covers Township 36 North, Range 30 East. All of Sections 29, 30, 31 and 32, containing 2533 Acres in Apache County, Arizona. Approved on October 2, 2017. No overriding royalty interest reserved.

The assignee shall furnish to the lessor, the Navajo Nation, c/o the Minerals Department, P.O. Box 1910, Window Rock, AZ 86515, copies of all reports filed with the U.S. Office of Natural Resources Revenue and the Bureau of Land Management pursuant to federal laws and regulations. The assignee shall furnish also all oil and gas run tickets, copies of drillstem tests, pressure tests, core analysis, seismic data and any other information required by the Minerals Department for this lease.

March 29, 2019

DATE




ASSIGNEE'S SIGNATURE

STATE OF LOUISIANA

PARISH OF LAFAYETTE

Before me, a notary public, in and for said county and state on this 29th day of March, 2019, personally appeared Mr. David Burns, to me known to be the identical person who subscribed the name of the maker thereof to the foregoing instrument as its President and acknowledged to me that he executed the same as his free and voluntary act and deed of such limited liability company, for the use and purposes therein set forth.

My Commission Expires at death



NOTARY Rene Guidry
LSBA # 26910

March 29, 2019

DATE

ASSIGNOR'S SIGNATURE

STATE OF TEXAS

COUNTY OF NACOGDOCHES

Before me, a notary public, in and for said county and state on this 29th day of March, 2019, personally appeared Mr. Brent Ivy, to me known to be the identical person who subscribed the name of the maker thereof to the foregoing instrument as its Vice President and acknowledged to me that he executed the same as his free and voluntary act and deed of such corporation, for the use and purposes therein set forth.

My Commission Expires _____

NOTARY

President's Office – Approval

This assignment has been reviewed by the appropriate Departments of the Navajo Nation and is hereby approved.

DATE

PRESIDENT, THE NAVAJO NATION

The assignee shall furnish to the lessor, the Navajo Nation, c/o the Minerals Department, P.O. Box 1910, Window Rock, AZ 86515, copies of all reports filed with the U.S. Office of Natural Resources Revenue and the Bureau of Land Management pursuant to federal laws and regulations. The assignee shall furnish also all oil and gas run tickets, copies of drillstem tests, pressure tests, core analysis, seismic data and any other information required by the Minerals Department for this lease.

March 29, 2019

DATE

ASSIGNEE'S SIGNATURE

STATE OF LOUISIANA

PARISH OF LAFAYETTE

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My Commission Expires _____

NOTARY

March 29, 2019

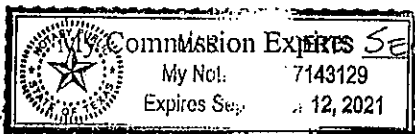
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COUNTY OF TARRANT

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NOTARY

President's Office - Approval

This assignment has been reviewed by the appropriate Departments of the Navajo Nation and is hereby approved.

DATE

PRESIDENT, THE NAVAJO NATION

THE NAVAJO NATION
MINERALS DEPARTMENT
DIVISION OF NATURAL RESOURCES

ASSIGNMENT OF OIL AND GAS LEASE

ASSIGNMENT FOR: ☒ TITLE ☒ OPERATING RIGHTS ☐ FARM-OUT

Lease No. 14-20-0603-8876

1. Original Lessee: Humble Oil & Refining Company
2. Approval Date of Original Lease: February 18, 1965
3. Royalty Rate: 16 2/3%
4. Current Land Description: Township 35 North, Range 30 East
All of Section 6, containing 615.01 Acres in Apache County, Arizona
5. Description of Land Being Assigned: Same as above.
6. Assignor: Nacogdoches Oil and Gas, Inc.
7. Assignee: Nordic Oil USA 4 LLC
8. Portion of Rights/Title Under Transfer: All of Assignor's right, title and interest
9. Reserved Overriding Royalties: None.
10. Previous Assignments and Portion of Rights/Title Transferred:

(1) Assignment of Mining Lease dated December 22, 1972 from Humble Oil & Refining Company, conveying all of their interest to Kerr-McGee Corporation. Approved on February 15, 1973. No overriding royalty interest reserved.

(2) Assignment of Mining Lease dated December 2, 1993 from Kerr-McGee Corporation, conveying all of their interest to Mountain States Petroleum. Approved on July 19, 1994. No overriding royalty interest reserved.

(3) Assignment of Record Title and Operating Rights dated August 31, 2007, from Mountain States Petroleum Corporation to Nacogdoches Oil and Gas, Inc., insofar as said lease covers Township 35 North, Range 30 East. All of Section 6, containing 615.01 Acres in Apache County, Arizona. Approved November 17, 2008. No overriding royalty interest reserved.

(4) Assignment of Operating Rights dated April 5, 2012, from Nacogdoches Oil and Gas, Inc. to Nordic Oil USA 2, LLLP, conveying forty-five percent (45%) of their interest, insofar as said lease covers Township 35 North, Range 30 East. All of Section 6, containing 615.01 Acres in Apache County, Arizona. Approved on April 1, 2016. No overriding royalty interest reserved.

(5) Assignment of Record Title and Operating Rights dated September 29, 2016, from Nacogdoches Oil and Gas, Inc. to Nordic Oil USA 2, LLLP, conveying a seventy-five percent (75%) of 8/8ths interest in title (being 75% of Nacogdoches Oil and Gas, Inc.'s then current interest) and thirty percent (30%) of 8/8ths interest in operating rights (being 54.54% of

Nacogdoches Oil and Gas, Inc.'s then current interest), insofar as said lease covers Township 35 North, Range 30 East. All of Section 6, containing 615.01 Acres in Apache County, Arizona. Approved on October 2, 2017. No overriding royalty interest reserved.

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The assignee shall furnish to the lessor, the Navajo Nation, c/o the Minerals Department, P.O. Box 1910, Window Rock, AZ 86515, copies of all reports filed with the U.S. Office of Natural Resources Revenue and the Bureau of Land Management pursuant to federal laws and regulations. The assignee shall furnish also all oil and gas run tickets, copies of drillstem tests, pressure tests, core analysis, seismic data and any other information required by the Minerals Department for this lease.

March 29, 2019

DATE



ASSIGNEE'S SIGNATURE

STATE OF LOUISIANA

PARISH OF LAFAYETTE

Before me, a notary public, in and for said county and state on this 29th day of March, 2019, personally appeared Mr. David Burns, to me known to be the identical person who subscribed the name of the maker thereof to the foregoing instrument as its President and acknowledged to me that he executed the same as his free and voluntary act and deed of such limited liability company, for the use and purposes therein set forth.

My Commission Expires at death


NOTARY Rene Guidry
LSBA # 26910

March 29, 2019

DATE

ASSIGNOR'S SIGNATURE

STATE OF TEXAS

COUNTY OF NACOGDOCHES

Before me, a notary public, in and for said county and state on this 29th day of March, 2019, personally appeared Mr. Brent Ivy, to me known to be the identical person who subscribed the name of the maker thereof to the foregoing instrument as its Vice President and acknowledged to me that he executed the same as his free and voluntary act and deed of such corporation, for the use and purposes therein set forth.

My Commission Expires _____

NOTARY

President's Office – Approval

This assignment has been reviewed by the appropriate Departments of the Navajo Nation and is hereby approved.

DATE

PRESIDENT, THE NAVAJO NATION

The assignee shall furnish to the lessor, the Navajo Nation, c/o the Minerals Department, P.O. Box 1910, Window Rock, AZ 86515, copies of all reports filed with the U.S. Office of Natural Resources Revenue and the Bureau of Land Management pursuant to federal laws and regulations. The assignee shall furnish also all oil and gas run tickets, copies of drillstem tests, pressure tests, core analysis, seismic data and any other information required by the Minerals Department for this lease.

March 29, 2019

DATE

ASSIGNEE'S SIGNATURE

STATE OF LOUISIANA

PARISH OF LAFAYETTE

Before me, a notary public, in and for said county and state on this 29th day of March, 2019, personally appeared Mr. David Burns, to me known to be the identical person who subscribed the name of the maker thereof to the foregoing instrument as its President and acknowledged to me that he executed the same as his free and voluntary act and deed of such limited liability company, for the use and purposes therein set forth.

My Commission Expires _____

NOTARY

March 29, 2019

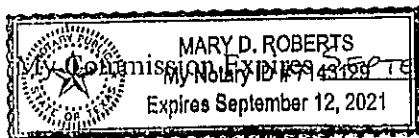
DATE

ASSIGNOR'S SIGNATURE

STATE OF TEXAS

COUNTY OF NACOGDOCHES

Before me, a notary public, in and for said county and state on this 29th day of March, 2019, personally appeared Mr. Brent Ivy, to me known to be the identical person who subscribed the name of the maker thereof to the foregoing instrument as its Vice President and acknowledged to me that he executed the same as his free and voluntary act and deed of such corporation, for the use and purposes therein set forth.



My Commission Expires September 12, 2021 Mary D. Roberts

NOTARY

President's Office – Approval

This assignment has been reviewed by the appropriate Departments of the Navajo Nation and is hereby approved.

DATE

PRESIDENT, THE NAVAJO NATION

THE NAVAJO NATION
MINERALS DEPARTMENT
DIVISION OF NATURAL RESOURCES

ASSIGNMENT OF OIL AND GAS LEASE

ASSIGNMENT FOR: ☒ TITLE ☒ OPERATING RIGHTS ☐ FARM-OUT

Lease No. 14-20-0603-8889

1. Original Lessee: Kerr-McGee Oil Industries, Inc.
2. Approval Date of Original Lease: February 18, 1965
3. Royalty Rate: 16 2/3%
4. Current Land Description: Township 35 North, Range 30 East
All of Section 5, containing 640 Acres in Apache County, Arizona
5. Description of Land Being Assigned: Same as above.
6. Assignor: Nacogdoches Oil and Gas, Inc.
7. Assignee: Nordic Oil USA 4 LLC
8. Portion of Rights/Title Under Transfer: All of Assignor's right, title and interest
9. Reserved Overriding Royalties: None.
10. Previous Assignments and Portion of Rights/Title Transferred:

(1) Assignment of Mining Lease dated December 2, 1993 from Kerr-McGee Corporation, formerly Kerr-McGee Oil Industries, Inc., conveying all of their interest to Mountain States Petroleum. Approved on July 19, 1994. No overriding royalty interest reserved.

(2) Assignment of Record Title and Operating Rights dated August 31, 2007, from Mountain States Petroleum Corporation to Nacogdoches Oil and Gas, Inc., insofar as said lease covers Township 35 North, Range 30 East. All of Section 5, containing 640 Acres in Apache County, Arizona. Approved November 17, 2008. No overriding royalty interest reserved.


(3) Assignment of Operating Rights dated April 5, 2012, from Nacogdoches Oil and Gas, Inc. to Nordic Oil USA 2, LLLP, conveying forty-five percent (45%) of their interest, insofar as said lease covers Township 35 North, Range 30 East. All of Section 5, containing 640 Acres in Apache County, Arizona. Approved on April 1, 2016. No overriding royalty interest reserved.

(4) Assignment of Record Title and Operating Rights dated September 29, 2016, from Nacogdoches Oil and Gas, Inc. to Nordic Oil USA 2, LLLP, conveying a seventy-five percent (75%) of 8/8ths interest in title (being 75% of Nacogdoches Oil and Gas, Inc.'s then current interest) and thirty percent (30%) of 8/8ths interest in operating rights (being 54.54% of Nacogdoches Oil and Gas, Inc.'s then current interest), insofar as said lease covers Township 35 North, Range 30 East. All of Section 5, containing 640 Acres in Apache County, Arizona. Approved on October 2, 2017. No overriding royalty interest reserved.

The assignee shall furnish to the lessor, the Navajo Nation, c/o the Minerals Department, P.O. Box 1910, Window Rock, AZ 86515, copies of all reports filed with the U.S. Office of Natural Resources Revenue and the Bureau of Land Management pursuant to federal laws and regulations. The assignee shall furnish also all oil and gas run tickets, copies of drillstem tests, pressure tests, core analysis, seismic data and any other information required by the Minerals Department for this lease.

March 29, 2019

DATE



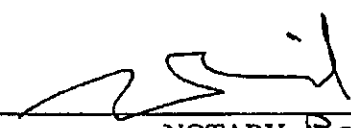
ASSIGNEE'S SIGNATURE

STATE OF LOUISIANA

PARISH OF LAFAYETTE

Before me, a notary public, in and for said county and state on this 29th day of March, 2019, personally appeared Mr. David Burns, to me known to be the identical person who subscribed the name of the maker thereof to the foregoing instrument as its President and acknowledged to me that he executed the same as his free and voluntary act and deed of such limited liability company, for the use and purposes therein set forth.

My Commission Expires at death



NOTARY Rene Guidry
LSBA # 26910

March 29, 2019

DATE

ASSIGNOR'S SIGNATURE

STATE OF TEXAS

COUNTY OF NACOGDOCHES

Before me, a notary public, in and for said county and state on this 29th day of March, 2019, personally appeared Mr. Brent Ivy, to me known to be the identical person who subscribed the name of the maker thereof to the foregoing instrument as its Vice President and acknowledged to me that he executed the same as his free and voluntary act and deed of such corporation, for the use and purposes therein set forth.

My Commission Expires _____

NOTARY

President's Office – Approval

This assignment has been reviewed by the appropriate Departments of the Navajo Nation and is hereby approved.

DATE

PRESIDENT, THE NAVAJO NATION

The assignee shall furnish to the lessor, the Navajo Nation, c/o the Minerals Department, P.O. Box 1910, Window Rock, AZ 86515, copies of all reports filed with the U.S. Office of Natural Resources Revenue and the Bureau of Land Management pursuant to federal laws and regulations. The assignee shall furnish also all oil and gas run tickets, copies of drillstem tests, pressure tests, core analysis, seismic data and any other information required by the Minerals Department for this lease.

March 29, 2019

DATE

ASSIGNEE'S SIGNATURE

STATE OF LOUISIANA

PARISH OF LAFAYETTE

Before me, a notary public, in and for said county and state on this 29th day of March, 2019, personally appeared Mr. David Burns, to me known to be the identical person who subscribed the name of the maker thereof to the foregoing instrument as its President and acknowledged to me that he executed the same as his free and voluntary act and deed of such limited liability company, for the use and purposes therein set forth.

My Commission Expires _____

NOTARY

March 29, 2019

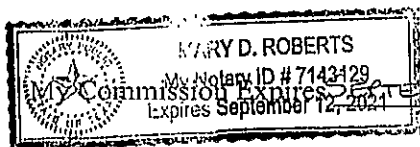
DATE

[Signature]
ASSIGNOR'S SIGNATURE

STATE OF TEXAS

COUNTY OF NACOGDOCHES

Before me, a notary public, in and for said county and state on this 29th day of March, 2019, personally appeared Mr. Brent Ivy, to me known to be the identical person who subscribed the name of the maker thereof to the foregoing instrument as its Vice President and acknowledged to me that he executed the same as his free and voluntary act and deed of such corporation, for the use and purposes therein set forth.



Mary D. Roberts
NOTARY

President's Office – Approval

This assignment has been reviewed by the appropriate Departments of the Navajo Nation and is hereby approved.

DATE

PRESIDENT, THE NAVAJO NATION

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF INDIAN AFFAIRS

Lease No:
14-20-0603-8822

ASSIGNMENT OF OIL AND GAS LEASE
OPERATING RIGHTS

WHEREAS, for and in consideration of Ten Dollars (\$10.00) and other valuable consideration, the receipt of which is hereby acknowledged, the said Nacogdoches Oil and Gas, Inc., a Texas corporation, the owner of the above-described lease (hereafter called "Assignor"), hereby bargains, sells, transfers, assigns, and conveys to Nordic Oil USA 4 LLC, a Delaware limited liability company (hereafter called "Assignee"), right title, and interest in and to said operating rights, subject to the approval of the Secretary of the Interior, the following described interest to wit:

All of Assignor's operating rights interest in an Oil and Gas Mining Lease - Tribal Indian Lands, dated the 9th day of October, 1964, between the Chairman, Navajo Tribal Council of Apache County, State of Arizona, for and on behalf of the Navajo Tribe of Indians, as lessor, and Kerr-McGee Oil Industries, Inc., as lessee, recorded with the Department of the Interior, Bureau of Indian Affairs, on October 29, 1964, covering all of Sections 27, 28, 33 and 34 in Township 36 North, Range 30 East, G&SRM, Apache County, Arizona.

That Assignor's interest in the lands is a Twenty-Five percent (25%) of 8/8ths operating rights interest, the interest being transferred is a Twenty-Five percent (25%) of 8/8ths operating rights interest and the interest being retained is a Zero percent (0%) of 8/8ths operating rights interest. The Assignor reserves an overriding royalty in the amount of Zero percent (0%). Said operating rights assignment to be effective from the date of approval hereby by the Secretary of the Interior.

And for the same consideration the Assignor covenants with the Assignee, its heirs, successors or assigns: that the Assignor is the lawful owner of and has good title to the interest above assigned in and to said lease, free and clear from all liens, encumbrances or adverse claims; that said lease is a valid and subsisting lease on the lands above described, and all rentals and royalties due thereunder have been paid and all conditions necessary to keep the same in full force have been duly performed.

Attach all appropriate documentation relevant to this document.

IN WITNESS WHEREOF, the said Assignor has hereunto set its hand and seal, this 29th day of March, 2019.

Nacogdoches Oil and Gas, Inc.,
a Texas corporation

By: 

Brent Ivy, its Vice President

ACKNOWLEDGEMENT OF CORPORATION

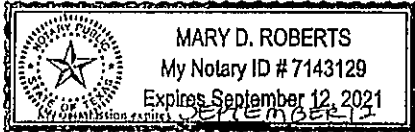
STATE OF TEXAS)

COUNTY OF NACOGDOCHES)

) SS:

Before me, a notary public in and for said county and state on this 29 day of March, 2019, personally appeared
Brent Ivy, on behalf of NACOGDOCHES OIL AND GAS, INC. to me known to be the

identical person who subscribed the name of the foregoing instrument as its Vice President
and acknowledged to me that he executed the same as his free and voluntary act and deed, as the free and voluntary act and deed of such corporation, for the uses and purposes therein set forth.



Mary D. Roberts
Notary Public

ACKNOWLEDGEMENT OF INDIVIDUAL

STATE OF _____)

COUNTY OF _____)

) SS:

Before me, a notary public, in and for said county and state on this _____ day of _____, 20____, personally appeared _____
to me known to be the identical person _____ who executed the within and foregoing
instrument, and acknowledged to me that _____ executed the same as _____ free and voluntary act
and deed, for the uses and purposes therein set forth.

Notary Public

My commission expires _____ 20____

ACCEPTANCE BY ASSIGNEE

NORDIC OIL USA 4 LLC

the assignee in the above and foregoing assignment made subject to the approval of the
Secretary of the Interior, hereby accepts such assignment, assumes full liability under the lease from its effective date and agrees to fulfill all the obligations, conditions, terms, restrictions and stipulations in said described
indenture of lease, and the rules and regulations of the Secretary of the Interior applicable thereto, and to furnish proper bond guaranteeing a faithful compliance with said lease and this agreement. In addition assignee is
in compliance to with all regulations and authorizing acts

IN WITNESS WHEREOF, the said assignee has hereunto set its hand and seal this 29th day of March, 2019

NORDIC OIL USA 4 LLC

By:

David Burns, President

CONSENT OF SURETY

I, _____, Surety for

on the bond accompanying the lease above described, hereby consents to
the assignment and transfer of said lease as above made and agrees that said bond shall remain in force and effect covering obligations of assignee

Dated at _____ this _____ day of _____, 20____

STATE OF TEXAS

COUNTY OF NACOGDOCHES

135:

Before me, a notary public in and for said county and state on this 29 day of March, 19 , personally appeared Brent Ivy, on behalf of NACOGDOCHES OIL AND GAS, INC.

Vice President
 I, _____, a legal person who subscribed the name of the foregoing instrument, do hereby
 and acknowledge to me that he executed the same at his free and voluntary act and deed, as the free and voluntary act and deed of said corporation, for the uses and purposes therein set forth.

ΔΕΥΤΕΡΟΝ ΕΥΑΓΓΕΛΙΟΝ

Yields and Analysis

STATE OF

COUNTY OF

1551

Before me, a notary public in and for said county and state on this _____ day of _____, 20____, at _____ personally appeared _____ to me known to be the identical person _____ who executed the within and foregoing instrument, and acknowledged to me that _____ executed the same as _____ free and voluntary act and deed, for the uses and purposes therein set forth.

Διευθυντής: Π. ΠΑΠΑΔΟΠΟΥΛΟΣ

Various factors:

NORDIC OIL USA 4 LLC

the assignee's share above and foregoing assignment, made subject to the approval of the Secretary of the Interior, hereby accepts such assignment, assumes full liability under the lease from its effective date and agrees to fulfill all the obligations, conditions, terms, restrictions and representations and covenants made by the lessor and the rules and regulations of the Secretary of the Interior applicable thereto, and to observe proper land management in full compliance with said lease and this agreement. In doing so, assignee agrees to comply with all applicable laws, rules and regulations, and to observe proper land management in full compliance with said lease and this agreement.

IN WITNESS WHEREOF, the said assembles have set its hand and seal this 29th day of March, 19

NORDIC OIL USA 4 LLC

By:

David Burns, President

CONSENT OF SURETY

File _____

the assignment and transfer of said lease as shown made and agrees that said bond shall remain in force and effect covering obligations of assignee

Date: _____ Re: _____ Page 17

LEASE NO. _____

**UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF INDIAN AFFAIRS**

APPROVED: Pursuant to Secretarial
Redelegation Order 209 DM 8,
230 DM 1 and 3 IAM 4

Date Approved

Regional Director, Navajo

This assignment is approved **ONLY** as to the operating rights in & to said lease subject to the provisions of 25 CFR 211, and the conditions that approval will not serve to modify any of the terms of the lease. This action does not constitute approval of any other agreement mentioned in the assignment.

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF INDIAN AFFAIRS

Lease No:
14-20-0603-8812

ASSIGNMENT OF OIL AND GAS LEASE
OPERATING RIGHTS

WHEREAS, for and in consideration of Ten Dollars (\$10.00) and other valuable consideration, the receipt of which is hereby acknowledged, the said Nacogdoches Oil and Gas, Inc., a Texas corporation, the owner of the above-described lease (hereafter called "Assignor"), hereby bargains, sells, transfers, assigns, and conveys to Nordic Oil USA 4 LLC, a Delaware limited liability company (hereafter called "Assignee"), right title, and interest in and to said operating rights, subject to the approval of the Secretary of the Interior, the following described interest to wit:

All of Assignor's operating rights interest in an Oil and Gas Mining Lease - Tribal Indian Lands, dated the 12th day of October, 1964, between the Chairman, Navajo Tribal Council of Apache County, State of Arizona, for and on behalf of the Navajo Tribe of Indians, as lessor, and Humble Oil & Refining Company, as lessee, recorded with the Department of the Interior, Bureau of Indian Affairs, on October 26, 1964, covering all of Sections 25, 26, 35, and 36 in Township 36 North, Range 29 East, G&SRM, Apache County, Arizona.


That Assignor's interest in the lands is a Twenty-Five percent (25%) of 8/8ths operating rights interest, the interest being transferred is a Twenty-Five percent (25%) of 8/8ths operating rights interest and the interest being retained is a Zero percent (0%) of 8/8ths operating rights interest. The Assignor reserves an overriding royalty in the amount of Zero percent (0%). Said operating rights assignment to be effective from the date of approval hereby by the Secretary of the Interior.

And for the same consideration the Assignor covenants with the Assignee, its heirs, successors or assigns: that the Assignor is the lawful owner of and has good title to the interest above assigned in and to said lease, free and clear from all liens, encumbrances or adverse claims; that said lease is a valid and subsisting lease on the lands above described, and all rentals and royalties due thereunder have been paid and all conditions necessary to keep the same in full force have been duly performed.

Attach all appropriate documentation relevant to this document.

IN WITNESS WHEREOF, the said Assignor has hereunto set its hand and seal, this 29th day of March, 2019.

Nacogdoches Oil and Gas, Inc.,
a Texas corporation

By: 
Brent Ivy, its Vice President

ACKNOWLEDGEMENT OF CORPORATION

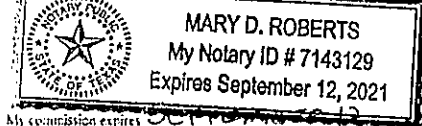
STATE OF TEXAS)

) SS:

COUNTY OF NACOGDOCHES)

Before me, a notary public, in and for said county and state on this 29 day of March, 2019, personally appeared
Brent Ivy, on behalf of NACOGDOCHES OIL AND GAS, INC. _____ to me known to be the

identical person who subscribed the name of the foregoing instrument as its Vice President
and acknowledged to me that he executed the same as his free and voluntary act and deed, as the free and voluntary act and deed of such corporation, for the uses and purposes therein set forth.



Mary D. Roberts
Notary Public

ACKNOWLEDGEMENT OF INDIVIDUAL

STATE OF _____)

) SS:

COUNTY OF _____)

Before me, a notary public, in and for said county and state on this _____ day of _____, 20____, personally appeared _____
_____ to me known to be the identical person _____ who executed the within and foregoing
instrument, and acknowledged to me that _____ executed the same as _____ free and voluntary act
and deed, for the uses and purposes therein set forth.

Notary Public _____

My commission expires _____, 20____

ACCEPTANCE BY ASSIGNEE

NORDIC OIL USA 4 LLC

_____, the assignee in the above and foregoing assignment made subject to the approval of the
Secretary of the Interior, hereby accepts such assignment, assumes full liability under the lease from its effective date and agrees to fulfill all the obligations, conditions, terms, restrictions and stipulations in said described
instrument of lease, and the rules and regulations of the Secretary of the Interior applicable thereto, and to furnish proper bond guaranteeing a faithful compliance with said lease and this agreement. In addition assignee is
in compliance to with all regulations and authorizing acts.

IN WITNESS WHEREOF, the said assignee has hereto set its _____ hand and seal this 29th day of March, 2019

NORDIC OIL USA 4 LLC

By: _____

David Burns, President _____

CONSENT OF SURETY

The _____, surety for _____

_____ on the bond accompanying the lease above described, hereby consents to
the assignment and transfer of said lease as above made and agrees that said bond shall remain in force and effect covering obligations of assignee.

Dated at _____ this _____ day of _____, 20____

ACKNOWLEDGEMENT OF CORPORATION

STATE OF TEXAS

COUNTY OF NACOGDOCHES

) SS:

Before me, a notary public in and for said county and state on this 29 day of March, 2019, personally appeared Brant Ivy, on behalf of NACOGDOCHES OIL AND GAS, INC. to me known to be the

identical person who subscribed the name of the foregoing instrument as Vice President and acknowledged to me that he executed the same as his free and voluntary act and deed, as the free and voluntary act and deed of such corporation, for the uses and purposes therein set forth.

My commission expires 2/1/20

Notary Public

ACKNOWLEDGEMENT OF INDIVIDUAL

STATE OF _____

COUNTY OF _____

) SS:

Before me, a notary public in and for said county and state on this _____ day of _____, 20____, personally appeared _____ to me known to be the identical person _____ who executed the within and foregoing instrument, and acknowledged to me that _____ executed the same as _____ free and voluntary act and deed for the uses and purposes therein set forth.

My commission expires _____

Notary Public

ACCEPTANCE BY ASSIGNEE

NORDIC OIL USA 4 LLC

The assignee in the above and foregoing assignment made subject to the approval of the Secretary of the Interior, hereby accepts such assignment, assumes full liability under the lease from its effective date and agrees to fulfill all the obligations, covenants, terms, restrictions and stipulations in said described instrument of lease, and the rules and regulations of the Secretary of the Interior applicable thereto, and to furnish proper bond guaranteeing a faithful compliance with said lease and this agreement. In said then assignee is in compliance with all regulations and authority acts.

IN WITNESS WHEREOF, the said assignee has hereunto set its hand and seal this 29th day of March, 2019

NORDIC OIL USA 4 LLC

By: _____

David Burns, President

CONSENT OF SURETY

He _____, Surety for _____

at the time and accompanying the lease above described, hereby consents to the assignment and transfer of said lease as above made and agrees that he (they) shall remain in force and effect covering obligations of assignee

Dated at _____ this _____ day of _____, 20____

LEASE NO. _____

**UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF INDIAN AFFAIRS**

APPROVED: Pursuant to Secretarial
Redelegation Order 209 DM 8,
230 DM 1 and 3 IAM 4

Date Approved

Regional Director, Navajo

This assignment is approved **ONLY** as to the operating rights in & to said lease subject to the provisions of 25 CFR 211, and the conditions that approval will not serve to modify any of the terms of the lease. This action does not constitute approval of any other agreement mentioned in the assignment.

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF INDIAN AFFAIRS

Lease No:
14-20-0603-8823

ASSIGNMENT OF OIL AND GAS LEASE
OPERATING RIGHTS

WHEREAS, for and in consideration of Ten Dollars (\$10.00) and other valuable consideration, the receipt of which is hereby acknowledged, the said Nacogdoches Oil and Gas, Inc., a Texas corporation, the owner of the above-described lease (hereafter called "Assignor"), hereby bargains, sells, transfers, assigns, and conveys to Nordic Oil USA 4 LLC, a Delaware limited liability company (hereafter called "Assignee"), right title, and interest in and to said operating rights, subject to the approval of the Secretary of the Interior, the following described interest to wit:

All of Assignor's operating rights interest in an Oil and Gas Mining Lease - Tribal Indian Lands, dated the 9th day of October, 1964, between the Chairman, Navajo Tribal Council of Apache County, State of Arizona, for and on behalf of the Navajo Tribe of Indians, as lessor, and Kerr-McGee Oil Industries, Inc., as lessee, recorded with the Department of the Interior, Bureau of Indian Affairs, on October 29, 1964, covering all of Sections 29, 30, 31, and 32 in Township 36 North, Range 30 East, G&SRM, Apache County, Arizona.

That Assignor's interest in the lands is a Twenty-Five percent (25%) of 8/8ths operating rights interest, the interest being transferred is a Twenty-Five percent (25%) of 8/8ths operating rights interest and the interest being retained is a Zero percent (0%) of 8/8ths operating rights interest. The Assignor reserves an overriding royalty in the amount of Zero percent (0%). Said operating rights assignment to be effective from the date of approval hereby by the Secretary of the Interior.

And for the same consideration the Assignor covenants with the Assignee, its heirs, successors or assigns: that the Assignor is the lawful owner of and has good title to the interest above assigned in and to said lease, free and clear from all liens, encumbrances or adverse claims; that said lease is a valid and subsisting lease on the lands above described, and all rentals and royalties due thereunder have been paid and all conditions necessary to keep the same in full force have been duly performed.

Attach all appropriate documentation relevant to this document.

IN WITNESS WHEREOF, the said Assignor has hereunto set its hand and seal, this 29th day of March, 2019.

Nacogdoches Oil and Gas, Inc.,
a Texas corporation

By: _____

Brent Ivy, its Vice President

ACKNOWLEDGEMENT OF CORPORATION

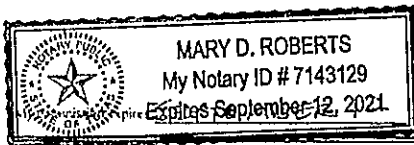
STATE OF TEXAS)

COUNTY OF NACOGDOCHES)

) SS:

Before me, a notary public in and for said county and state on this 29 day of March, 2019, personally appeared
Brent Ivy, on behalf of NACOGDOCHES OIL AND GAS, INC. to me known to be the

identical person who subscribed the name of the foregoing instrument as its Vice President
and acknowledged to me that he executed the same as his free and voluntary act and deed, as the free and voluntary act and deed of such corporation, for the uses and purposes therein set forth



Mary D. Roberts
Notary Public

ACKNOWLEDGEMENT OF INDIVIDUAL

STATE OF _____)

COUNTY OF _____)

) SS:

Before me, a notary public, in and for said county and state on this _____ day of _____, 20____, personally appeared _____
to me known to be the identical person _____ who executed the within and foregoing
instrument, and acknowledged to me that _____ executed the same as _____ free and voluntary act
and deed, for the uses and purposes therein set forth.

Notary Public

My commission expires _____ 20____

ACCEPTANCE BY ASSIGNEE

NORDIC OIL USA 4 LLC

the assignee in the above and foregoing assignment, made subject to the approval of the
Secretary of the Interior, hereby accepts such assignment, assumes full liability under the lease from its effective date and agrees to fulfill all the obligations, conditions, terms, restrictions and stipulations in said described
indenture of lease, and the rules and regulations of the Secretary of the Interior applicable thereto, and to furnish proper bond guaranteeing a faithful compliance with said lease and this agreement. In addition assignee is
in compliance to with all regulations and authorizing acts

IN WITNESS WHEREOF, the said assignee has hereto set its hand and seal this 29th day of March, 2019

NORDIC OIL USA 4 LLC

By:

David Burns, President

CONSENT OF SURETY

The _____ surety for

on the bond accompanying the lease above described, hereby consents to
the assignment and transfer of said lease as above made and agrees that said bond shall remain in force and effect covering obligations of assignee

Dated at _____ this _____ day of _____ 19____

STATE OF TEXAS

) 55:

Before me, a notary public, to and for said entity and date on this 29 day of March, 2019, personally appeared Brent Ivy, on behalf of NACOGDOCHES OIL AND GAS, INC.

Vice President

I, _____, General person who subscribed the name of the foregoing instrument, do hereby
and acknowledge to me that he executed the same as his free and voluntary act and deed, as the Vice and voluntary act and deed of such corporation, for the uses and purposes therein set forth.

Als commission exgrev 26

ਅਰਜੁਨ ਪੁਰਾਣ

STATE OF

COUNTY OF

155

Before me, a notary public, on and for said county and state on the _____ day of _____, 20____, personally appeared _____, known to me to be the identical person _____ who executed the within and foregoing instrument, and acknowledged to me that _____ executed the same as _____ free and voluntary act and deed for the uses and purposes therein set forth.

My contact with you is _____.

Since 1970,

NORDIC OIL USA 4 LLC

NORDIC OIL USA A LLC the assignor ("Assignor") hereby assigns and transfers to the assignee ("Assignee") all of its right, title and interest in and to the above and foregoing assignment, made subject to the approval of the Secretary of the Interior, hereby accepts such assignment, assumes full liability under it, and is released from its entire debt and obligation to the Assignor, and agrees to hold the Assignor harmless from and defend and indemnify the Assignor, and the rules and regulations of the Secretary of the Interior applicable thereto, and to perform proper bond guaranteeing a faithful compliance with said law and this agreement. In addition assignor is in compliance with all regulations and authorities, acts

IN WITNESS WHEREOF, the said association has hereunto set its hand and seal this 29th day of March, 19

NORDIC OIL USA 4 LLC

By: _____

David Burns, President

The _____ 120812

_____ on the back accompanying the leave check, directed her/his contacts to the Assymptote and transfer of said leave to a(n) _____ and agrees that said/they shall remain in force and effect covering obligations of a(n) _____

Dated at _____ this _____ day of _____ 19____

LEASE NO. _____

**UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF INDIAN AFFAIRS**

APPROVED: Pursuant to Secretarial
Redelegation Order 209 DM 8,
230 DM 1 and 3 IAM 4

Date Approved

Regional Director, Navajo

This assignment is approved **ONLY** as to the operating rights in & to said lease subject to the provisions of 25 CFR 211, and the conditions that approval will not serve to modify any of the terms of the lease. This action does not constitute approval of any other agreement mentioned in the assignment.

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF INDIAN AFFAIRS

Lease No:
14-20-0603-8876

ASSIGNMENT OF OIL AND GAS LEASE
OPERATING RIGHTS

WHEREAS, for and in consideration of Ten Dollars (\$10.00) and other valuable consideration, the receipt of which is hereby acknowledged, the said Nacogdoches Oil and Gas, Inc., a Texas corporation, the owner of the above-described lease (hereafter called "Assignor"), hereby bargains, sells, transfers, assigns, and conveys to Nordic Oil USA 4 LLC, a Delaware limited liability company (hereafter called "Assignee"), right title, and interest in and to said operating rights, subject to the approval of the Secretary of the Interior, the following described interest to wit:

All of Assignor's operating rights interest in an Oil and Gas Mining Lease - Tribal Indian Lands, dated the 15th day of January, 1965, between the Chairman, Navajo Tribal Council of Apache County, State of Arizona, for and on behalf of the Navajo Tribe of Indians, as lessor, and Humble Oil & Refining Company, as lessee, recorded with the Department of the Interior, Bureau of Indian Affairs, on February 18, 1965, covering all of Section 6 in Township 35 North, Range 30 East, G&SRM, Apache County, Arizona.

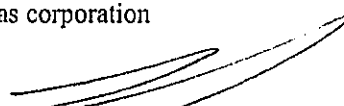
That Assignor's interest in the lands is a Twenty-Five percent (25%) of 8/8ths operating rights interest, the interest being transferred is a Twenty-Five percent (25%) of 8/8ths operating rights interest and the interest being retained is a Zero percent (0%) of 8/8ths operating rights interest. The Assignor reserves an overriding royalty in the amount of Zero percent (0%). Said operating rights assignment to be effective from the date of approval hereby by the Secretary of the Interior.

And for the same consideration the Assignor covenants with the Assignee, its heirs, successors or assigns: that the Assignor is the lawful owner of and has good title to the interest above assigned in and to said lease, free and clear from all liens, encumbrances or adverse claims; that said lease is a valid and subsisting lease on the lands above described, and all rentals and royalties due thereunder have been paid and all conditions necessary to keep the same in full force have been duly performed.

Attach all appropriate documentation relevant to this document.

IN WITNESS WHEREOF, the said Assignor has hereunto set its hand and seal, this 29th day of March, 2019.

Nacogdoches Oil and Gas, Inc.,
a Texas corporation

By: 
Brent Ivy, its Vice President

ACKNOWLEDGEMENT OF CORPORATION

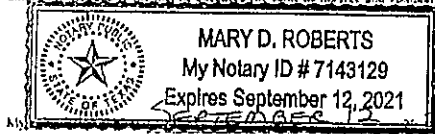
STATE OF TEXAS)

) SS:

COUNTY OF NACOGDOCHES)

Before me, a notary public in and for said county and state on this 29 day of March, 2019, personally appeared
Brent Ivy, on behalf of NACOGDOCHES OIL AND GAS, INC. to me known to be the

identical person who subscribed the name of the foregoing instrument as its Vice President
and acknowledged to me that he executed the same as his free and voluntary act and deed, as the free and voluntary act and deed of such corporation, for the uses and purposes therein set forth.



Mary D. Roberts
Notary Public

ACKNOWLEDGEMENT OF INDIVIDUAL

STATE OF _____)

) SS:

COUNTY OF _____)

Before me, a notary public, in and for said county and state on this _____ day of _____, 20____, personally appeared _____
to me known to be the identical person _____ who executed the within and foregoing
instrument, and acknowledged to me that _____ executed the same as _____ free and voluntary act
and deed, for the uses and purposes therein set forth.

Notary Public

My commission expires _____, 20____.

ACCEPTANCE BY ASSIGNEE

NORDIC OIL USA 4 LLC

the assignee in the above and foregoing assignment, made subject to the approval of the
Secretary of the Interior, hereby accepts such assignment, assumes full liability under the lease from its effective date and agrees to fulfill all the obligations, conditions, terms, restrictions and stipulations in said described
instrument of lease, and the rules and regulations of the Secretary of the Interior applicable thereto, and to furnish proper bond guaranteeing a faithful compliance with said lease and this agreement. In addition assignee is
in compliance to with all regulations and authorizing acts.

IN WITNESS WHEREOF, the said assignee has hereto set its hand and seal this 29th day of March, 2019

NORDIC OIL USA 4 LLC

By: _____

David Burns, President

CONSENT OF SURETY

I, _____, surety for _____

on the bond accompanying the lease above described, hereby consents to
the assignment and transfer of said lease as above made and agrees that said bond shall remain in force and effect covering obligations of assignee.

Dated at _____ this _____ day of _____, 20____.

STATE OF TEXAS

COUNTY OF NACOGDOCHES

Before me, a notary public, on and for said county and state on this 29 day of March, 19 personally appeared Brent Ivy, on behalf of NACOGDOCHES OIL AND GAS, INC.

I, Herbert A. Benson, who subscribed the name of the foregoing instrument as Vice President and acknowledged to me that he executed the same as his free and voluntary act and deed, as the free and voluntary act and deed of such corporation, for the uses and purposes therein set forth.

My commission expires _____ 24.

Yoshida, T. & M. Saito

STATE OF

COUNTY OF

Before me, a notary public in and for said county and state on this _____ day of _____, 20____ personally appeared _____ to me known to be the identical person _____ who executed the within and foregoing instrument, and acknowledged to me that _____ executed the same as _____ and deed, for the uses and purposes therein set forth.

My (unhappy) experience _____ 29

Signatures: 7/24/10

NORDIC OIL USA 4 LLC

Secretary of the Interior, hereby accepts such assignment, assumed full faith and credit the lease from its effective date and agrees to fulfil, at all of its own conditions, terms, restrictions and stipulations in said described indenture of lease, and the rules and regulations of the Secretary of the Interior, applicable thereto, and to furnish proper bond guaranteeing a faithful compliance with said lease and this agreement. In add seen attested, in compliance with all regulations and governing acts

IN WITNESS WHEREOF, the said signers has hereunto set its hand and seal the 29th day of March, 19

NORDIC OIL USA 4 LLC

By:

David Burns, President

CONSENT OF SURETY

112

the assignment and transfer of said lease to those made and agrees that said bond shall remain in force and effect covering all portions of assignment

Datum: _____

LEASE NO. _____

**UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF INDIAN AFFAIRS**

APPROVED: Pursuant to Secretarial
Redelegation Order 209 DM 8,
230 DM 1 and 3 IAM 4

Date Approved

Regional Director, Navajo

This assignment is approved **ONLY** as to the operating rights in & to said lease subject to the provisions of 25 CFR 211, and the conditions that approval will not serve to modify any of the terms of the lease. This action does not constitute approval of any other agreement mentioned in the assignment.

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF INDIAN AFFAIRS

Lease No:
14-20-0603-8889

ASSIGNMENT OF OIL AND GAS LEASE
OPERATING RIGHTS

WHEREAS, for and in consideration of Ten Dollars (\$10.00) and other valuable consideration, the receipt of which is hereby acknowledged, the said Nacogdoches Oil and Gas, Inc., a Texas corporation, the owner of the above-described lease (hereafter called "Assignor"), hereby bargains, sells, transfers, assigns, and conveys to Nordic Oil USA 4 LLC, a Delaware limited liability company (hereafter called "Assignee"), right title, and interest in and to said operating rights, subject to the approval of the Secretary of the Interior, the following described interest to wit:

All of Assignor's operating rights interest in an Oil and Gas Mining Lease - Tribal Indian Lands, dated the 15th day of January, 1965, between the Chairman, Navajo Tribal Council of Apache County, State of Arizona, for and on behalf of the Navajo Tribe of Indians, as lessor, and Kerr-McGee Oil Industries, Inc., as lessee, recorded with the Department of the Interior, Bureau of Indian Affairs, on February 18, 1965, covering all of Section 5 in Township 35 North, Range 30 East, G&SRM, Apache County, Arizona.

That Assignor's interest in the lands is a Twenty-Five percent (25%) of 8/8ths operating rights interest, the interest being transferred is a Twenty-Five percent (25%) of 8/8ths operating rights interest and the interest being retained is a Zero percent (0%) of 8/8ths operating rights interest. The Assignor reserves an overriding royalty in the amount of Zero percent (0%). Said operating rights assignment to be effective from the date of approval hereby by the Secretary of the Interior.

And for the same consideration the Assignor covenants with the Assignee, its heirs, successors or assigns: that the Assignor is the lawful owner of and has good title to the interest above assigned in and to said lease, free and clear from all liens, encumbrances or adverse claims; that said lease is a valid and subsisting lease on the lands above described, and all rentals and royalties due thereunder have been paid and all conditions necessary to keep the same in full force have been duly performed.

Attach all appropriate documentation relevant to this document.

IN WITNESS WHEREOF, the said Assignor has hereunto set its hand and seal, this 29th day of March, 2019.

Nacogdoches Oil and Gas, Inc.,
a Texas corporation

By: 

Brent Ivy, its Vice-President

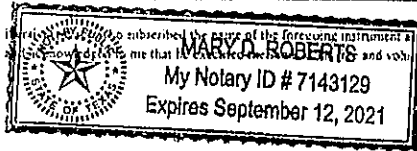
ACKNOWLEDGEMENT OF CORPORATION

STATE OF TEXAS)

COUNTY OF NACOGDOCHES)

) SS:

Before me, a notary public, in and for said county and state on this 29 day of March, 2019, personally appeared
Brent Ivy, on behalf of NACOGDOCHES OIL AND GAS, INC. to me known to be the



Vice President

and acknowledged to me that he executed the within and foregoing instrument, as the free and voluntary act and deed of such corporation, for the uses and purposes therein set forth.

Mary D. Roberts
Notary Public

My commission expires SEPTEMBER 12, 2021

ACKNOWLEDGEMENT OF INDIVIDUAL

STATE OF _____)

COUNTY OF _____)

) SS:

Before me, a notary public, in and for said county and state on this _____ day of _____, 20____, personally appeared _____
to me known to be the identical person _____ who executed the within and foregoing
instrument, and acknowledged to me that _____ executed the same as _____ free and voluntary act
and deed, for the uses and purposes therein set forth.

Notary Public

My commission expires _____ 20____

ACCEPTANCE BY ASSIGNEE

NORDIC OIL USA 4 LLC

the assignee in the above and foregoing assignment, made subject to the approval of the Secretary of the Interior, hereby accepts such assignment, assumes full liability under the lease from its effective date and agrees to fulfill all the obligations, conditions, terms, restrictions and stipulations in said described indenture of lease, and the rules and regulations of the Secretary of the Interior applicable thereto, and to furnish proper bond guaranteeing a faithful compliance with said lease and this agreement. In addition assignee is in compliance with all regulations and authorizing acts.

IN WITNESS WHEREOF, the said assignee has herein set its hand and seal this 29th day of March, 2019

NORDIC OIL USA 4 LLC

By:

David Burns, President

CONSENT OF SURETY

The _____ surety for

on the bond accompanying the lease above described, hereby consents to the assignment and transfer of said lease as above made and agrees that said bond shall remain in force and effect covering obligations of assignee.

Dated at _____ this _____ day of _____, 19____

ACKNOWLEDGEMENT OF CORPORATION

STATE OF TEXAS)

COUNTY OF NACOGDOCHES)

) SS:

Before me, a notary public in and for said county and state on this 29 day of March, 2019, personally appeared Brent Ivy, on behalf of NACOGDOCHES OIL AND GAS, INC. to me known to be the

identical person who subscribed the name of the foregoing instrument as its Vice President and acknowledged to me that he executed the same as his free and voluntary act and deed, as the free and voluntary act and deed of such corporation, for the uses and purposes therein set forth.

Notary Public

My commission expires 2022

ACKNOWLEDGEMENT OF INDIVIDUAL

STATE OF _____)

COUNTY OF _____)

) SS:

Before me, a notary public in and for said county and state on this _____ day of _____, 20____, personally appeared _____ to me known to be the identical person _____ who executed the within and foregoing instrument, and acknowledged to me that _____ executed the same as _____ free and voluntary act and deed, for the uses and purposes therein set forth.

Notary Public

My commission expires 20

ACCEPTANCE BY ASSIGNEE

NORDIC OIL USA 4 LLC

the assignee in the above and foregoing assignment, made subject to the approval of the Secretary of the Interior, hereby accepts such assignment, assumes full liability under the lease from its effective date and agrees to fulfill all the obligations, conditions, terms, restrictions and stipulations in said described indenture of lease, and the rules and regulations of the Secretary of the Interior applicable thereto, and to furnish proper bond guaranteeing a faithful compliance with said lease and this agreement. In addition assignee is in compliance to with all regulations and ordinances, acts

IN WITNESS WHEREOF, the said assignee has hereunto set its hand and seal this 29th day of March, 2019

NORDIC OIL USA 4 LLC

By:

David Burns, President

CONSENT OF SURETY

The _____ Secretary of the

on the basis accompanying the lease above identified hereby consents to the assignment and transfer of said lease as above made and agrees that said bond shall remain in force and effect covering all portions of assignee

Dated at _____ this _____ day of _____, 19____

LEASE NO. _____

**UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF INDIAN AFFAIRS**

APPROVED: Pursuant to Secretarial
Redelegation Order 209 DM 8,
230 DM 1 and 3 IAM 4

Date Approved

Regional Director, Navajo

This assignment is approved **ONLY** as to the operating rights in & to said lease subject to the provisions of 25 CFR 211, and the conditions that approval will not serve to modify any of the terms of the lease. This action does not constitute approval of any other agreement mentioned in the assignment.

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF INDIAN AFFAIRS

ASSIGNMENT OF MINING LEASE

Whereas, the Secretary of the Interior or his authorized representative has heretofore approved _____
an Oil and Gas _____ mining lease, dated the 9th day of October _____, 1964,
entered into by and between Chairman, Navajo Tribal Council of Apache County, State of Arizona, for and on behalf of the Navajo Tribe of Indians, lessor,
and Kerr-McGee Oil Industries, Inc., lessee,
covering the following-described lands in the Navajo Nation
(Insert name of Reservation, Pueblo Nation, etc, as needed)
in the State of _____
Arizona, covering all of Sections 27, 28, 33 and 34 in Township 36 North, Range 30 East, G&SRM,
_____ Apache County, Arizona

NOW, THEREFORE, for and in consideration of Ten _____ dollars (\$ 10.00), the receipt of which
is hereby acknowledged, the said Nacogdoches Oil and Gas, Inc., a Texas corporation
the owner of the above-described lease, hereby bargains, sells, transfers, assigns, and conveys _____
all of its _____ right, title, and interest in and to said lease, subject to the approval of the Secretary of the Interior or
his authorized representative to _____ of Nordic Oil USA 4 LLC, a Delaware limited liability company.
Said assignment to be effective from the date of approval hereby by the Secretary of the Interior or his authorized
representative.

IN WITNESS WHEREOF, the said assignor has hereunto set its _____ hand and seal, this 29th
day of March, 2019.

Nacogdoches Oil and Gas, Inc.

By: _____

Brent Ivy, its Vice President

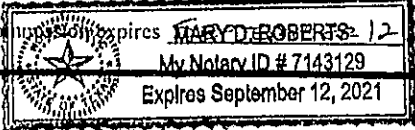
(Over)

ACKNOWLEDGMENT OF CORPORATION

STATE OF TEXAS)
) ss:
 COUNTY OF NACOGDOCHES)

Before me, a notary public, in and for said county and State on this 29th day of March, 2019 personally appeared Brent Ivy, on behalf of NACOGDOCHES OIL AND GAS, INC. to me known to be the identical person who subscribed the name of the maker thereof to the foregoing instrument as its Vice President and acknowledged to me that he executed the same as his free and voluntary act and deed, and as the free and voluntary act and deed of such corporation, for the uses and purposes therein set forth.

My commission expires MARY D. ROBERTS 12 2021



Mary D. Roberts

Notary Public

ACKNOWLEDGMENT OF INDIVIDUAL

STATE OF _____)
) ss:
 COUNTY OF _____)

Before me, a notary public, in and for said county and State on this _____ day of _____, 20____ personally appeared _____

_____ to me known to be the identical person _____ who executed the within and foregoing instrument, and acknowledged to me that _____ executed the same as _____ free and voluntary act and deed, for the uses and purposes therein set forth.

My commission expires _____, 20____

Notary Public

ACCEPTANCE BY ASSIGNEE

The assignee in the above and foregoing assignment, made subject to the approval of the Secretary of the Interior, hereby accepts such assignment, assumes full liability under the lease from its effective date and agrees to fulfill all the obligations, conditions, terms, restrictions and stipulations in said described indenture of lease, and the rules and regulations of the Secretary of the Interior applicable thereto, and to furnish proper bond guaranteeing a faithful compliance with said lease and this agreement. In addition assignee is in compliance with all regulations and authorizing acts.

IN WITNESS WHEREOF, the said assignee has hereto set its _____ hand and seal this 29th day of March, 2019.

NORDIC OIL USA 4 LLC

By:

David Burns, President

CONSENT OF SURETY

The _____, of _____, surety for _____ on the bond accompanying the lease above described, hereby consents to the assignment and transfer of said lease as above made and agrees that said bond shall remain in force and effect covering obligations of assignee.

Dated at _____ this _____ day of _____, 20____.

**UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF INDIAN AFFAIRS**

APPROVED: Pursuant to the Secretarial Redlegation Order
209 DM 8, 230 DM 1 and 3 IAM 4.

Date

REGIONAL DIRECTOR, NAVAJO

ACKNOWLEDGMENT OF CORPORATION

STATE OF TEXAS)
) ss:
COUNTY OF NACOGDOCHES)

Before me, a notary public, in and for said county and State on this 29th day of March, 2019 personally appeared Brent Ivy, on behalf of NACOGDOCHES OIL AND GAS, INC. to me known to be the identical person who subscribed the name of the maker thereof to the foregoing instrument as its Vice President and acknowledged to me that he executed the same as his free and voluntary act and deed, and as the free and voluntary act and deed of such corporation, for the uses and purposes therein set forth.

My commission expires _____, 20____

Notary Public

ACKNOWLEDGMENT OF INDIVIDUAL

STATE OF _____)
) ss:
COUNTY OF _____)

Before me, a notary public, in and for said county and State on this _____ day of _____, 20____ personally appeared _____

_____ to me known to be the identical person _____ who executed the within and foregoing instrument, and acknowledged to me that _____ executed the same as _____ free and voluntary act and deed, for the uses and purposes therein set forth.

My commission expires _____, 20____

Notary Public

ACCEPTANCE BY ASSIGNEE

The assignee in the above and foregoing assignment, made subject to the approval of the Secretary of the Interior, hereby accepts such assignment, assumes full liability under the lease from its effective date and agrees to fulfill all the obligations, conditions, terms, restrictions and stipulations in said described indenture of lease, and the rules and regulations of the Secretary of the Interior applicable thereto, and to furnish proper bond guaranteeing a faithful compliance with said lease and this agreement. In addition assignee is in compliance with all regulations and authorizing acts.

IN WITNESS WHEREOF, the said assignee has hereto set its _____ hand and seal this 29th day of March, 2019.

NORDIC OIL USA 4 LLC

By: _____

David Burns, President

CONSENT OF SURETY

The _____, of _____, surety for _____ on the bond accompanying the lease above described, hereby consents to the assignment and transfer of said lease as above made and agrees that said bond shall remain in force and effect covering obligations of assignee.

Dated at _____ this _____ day of _____, 20____.

UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF INDIAN AFFAIRS

APPROVED: Pursuant to the Secretarial Relegation Order
209 DM 8, 230 DM 1 and 3 IAM 4.

Date

REGIONAL DIRECTOR, NAVAJO

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF INDIAN AFFAIRS

ASSIGNMENT OF MINING LEASE

Whereas, the Secretary of the Interior or his authorized representative has heretofore approved _____
an Oil and Gas _____ mining lease, dated the 12th day of October _____, 1964 _____,
entered into by and between Chairman, Navajo Tribal Council of Apache County, State of Arizona, for and on behalf of the Navajo Tribe of Indians, lessor,
and Humble Oil & Refining Company _____, lessee,
covering the following-described lands in the Navajo Nation
(Insert name of Reservation, Pueblo Nation, etc, as needed)
in the State of _____
Arizona, covering all of Sections 25, 26, 35, and 36 in Township 36 North, Range 29 East, G&SRM,
Apache County, Arizona _____

NOW, THEREFORE, for and in consideration of Ten _____ dollars (\$ 10.00 _____), the receipt of which
is hereby acknowledged, the said Nacogdoches Oil and Gas, Inc., a Texas corporation
the owner of the above-described lease, hereby bargains, sells, transfers, assigns, and conveys _____
all of its _____ right, title, and interest in and to said lease, subject to the approval of the Secretary of the Interior or
his authorized representative to _____ of Nordic Oil USA 4 LLC, a Delaware limited liability company
Said assignment to be effective from the date of approval hereby by the Secretary of the Interior or his authorized
representative.

IN WITNESS WHEREOF, the said assignor has hereunto set its _____ hand and seal, this 29th
day of March _____, 20 19 _____.

Nacogdoches Oil and Gas, Inc.

By: _____

Brent Ivy, its Vice President

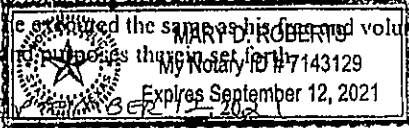
(Over)

ACKNOWLEDGMENT OF CORPORATION

STATE OF TEXAS)
) ss:
 COUNTY OF NACOGDOCHES)

Before me, a notary public, in and for said county and State on this 29th day of March, 2019 personally appeared Brent Ivy, on behalf of NACOGDOCHES OIL AND GAS, INC. to me known to be the identical person who subscribed the name of the maker thereof to the foregoing instrument as its Vice President and acknowledged to me that he executed the same as his free and voluntary act and deed, and as the free and voluntary act and deed of such corporation, for the uses and purposes therein set forth.

My commission expires September 12, 2021



Mary D Roberts
 Notary Public

ACKNOWLEDGMENT OF INDIVIDUAL

STATE OF _____)
) ss:
 COUNTY OF _____)

Before me, a notary public, in and for said county and State on this _____ day of _____, 20____ personally appeared _____

_____ to me known to be the identical person _____ who executed the within and foregoing instrument, and acknowledged to me that _____ executed the same as _____ free and voluntary act and deed, for the uses and purposes therein set forth.

My commission expires _____, 20____

Notary Public

ACCEPTANCE BY ASSIGNEE

The assignee in the above and foregoing assignment, made subject to the approval of the Secretary of the Interior, hereby accepts such assignment, assumes full liability under the lease from its effective date and agrees to fulfill all the obligations, conditions, terms, restrictions and stipulations in said described indenture of lease, and the rules and regulations of the Secretary of the Interior applicable thereto, and to furnish proper bond guaranteeing a faithful compliance with said lease and this agreement. In addition assignee is in compliance with all regulations and authorizing acts.

IN WITNESS WHEREOF, the said assignee has hereto set its _____ hand and seal this 29th day of March, 2019.

Nordic Oil USA 4 LLC

By:

David Burns, President

CONSENT OF SURETY

The _____, of _____, surety for _____ on the bond accompanying the lease above described, hereby consents to the assignment and transfer of said lease as above made and agrees that said bond shall remain in force and effect covering obligations of assignee.

Dated at _____ this _____ day of _____, 20____.

UNITED STATES DEPARTMENT OF THE INTERIOR
 BUREAU OF INDIAN AFFAIRS

APPROVED: Pursuant to the Secretarial Delegation Order
 209 DM 8, 230 DM 1 and 3 IAM 4.

Date

REGIONAL DIRECTOR, NAVAJO

ACKNOWLEDGMENT OF CORPORATION

STATE OF TEXAS)
) ss:
COUNTY OF NACOGDOCHES)

Before me, a notary public, in and for said county and State on this 29th day of March, 2019 personally appeared Brant Ivy, on behalf of NACOGDOCHES OIL AND GAS, INC. to me known to be the identical person who subscribed the name of the maker thereof to the foregoing instrument as its Vice President and acknowledged to me that he executed the same as his free and voluntary act and deed, and as the free and voluntary act and deed of such corporation, for the uses and purposes therein set forth.

My commission expires _____, 20__

Notary Public

ACKNOWLEDGMENT OF INDIVIDUAL

STATE OF _____)
) ss:
COUNTY OF _____)

Before me, a notary public, in and for said county and State on this _____ day of _____, 20__ personally appeared _____

_____ to me known to be the identical person _____ who executed the within and foregoing instrument, and acknowledged to me that _____ executed the same as _____ free and voluntary act and deed, for the uses and purposes therein set forth.

My commission expires _____, 20__

Notary Public

ACCEPTANCE BY ASSIGNEE

The assignee in the above and foregoing assignment, made subject to the approval of the Secretary of the Interior, hereby accepts such assignment, assumes full liability under the lease from its effective date and agrees to fulfill all the obligations, conditions, terms, restrictions and stipulations in said described indenture of lease, and the rules and regulations of the Secretary of the Interior applicable thereto, and to furnish proper bond guaranteeing a faithful compliance with said lease and this agreement. In addition assignee is in compliance with all regulations and authorizing acts.

IN WITNESS WHEREOF, the said assignee has hereto set its hand and seal this 29th day of March, 2019.

NORDIC OIL USA 4 LLC

By: _____

David Burns, President

CONSENT OF SURETY

The _____, of _____, surety for _____ on the bond accompanying the lease above described, hereby consents to the assignment and transfer of said lease as above made and agrees that said bond shall remain in force and effect covering obligations of assignee.

Dated at _____ this _____ day of _____, 20__.

UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF INDIAN AFFAIRS

APPROVED: Pursuant to the Secretarial Delegation Order
209 DM 8, 230 DM 1 and 3 IAM 4.

Date

REGIONAL DIRECTOR, NAVAJO

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF INDIAN AFFAIRS

ASSIGNMENT OF MINING LEASE

Whereas, the Secretary of the Interior or his authorized representative has heretofore approved _____
an Oil and Gas _____ mining lease, dated the 9th day of October _____, 1964,
entered into by and between Chairman, Navajo Tribal Council of Apache County, State of Arizona, for and on behalf of the Navajo Tribe of Indians, lessor,
and Kerr-McGee Oil Industries, Inc. _____, lessee,
covering the following-described lands in the Navajo Nation
(Insert name of Reservation, Pueblo Nation, etc, as needed)
in the State of _____
Arizona, covering all of Sections 29, 30, 31, and 32 in Township 36 North, Range 30 East, G&SRM,
Apache County, Arizona _____

NOW, THEREFORE, for and in consideration of Ten _____ dollars (\$ 10.00), the receipt of which
is hereby acknowledged, the said Nacogdoches Oil and Gas, Inc., a Texas corporation
the owner of the above-described lease, hereby bargains, sells, transfers, assigns, and conveys _____
all of its _____ right, title, and interest in and to said lease, subject to the approval of the Secretary of the Interior or
his authorized representative to _____ of Nordic Oil USA 4 LLC, a Delaware limited liability company
Said assignment to be effective from the date of approval hereby by the Secretary of the Interior or his authorized
representative.

IN WITNESS WHEREOF, the said assignor has hereunto set its _____ hand and seal, this 29th
day of March _____, 2019.

Nacogdoches Oil and Gas, Inc.

By: _____

Brent Ivy, its Vice President

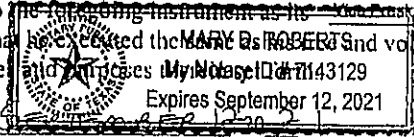
(Over)

ACKNOWLEDGMENT OF CORPORATION

STATE OF TEXAS)
) ss:
 COUNTY OF NACOGDOCHES)

Before me, a notary public, in and for said county and State on this 29th day of March, 2019 personally appeared Brent Ivy, on behalf of NACOGDOCHES OIL AND GAS, INC. to me known to be the identical person who subscribed the name of the maker thereof to the foregoing instrument as its Vice President and acknowledged to me that he executed the same as MAY D. ROBERTS and voluntary act and deed, and as the free and voluntary act and deed of such corporation, for the use and purposes My Notary ID # 1143129

My commission expires September 12, 2021



May D. Roberts
 Notary Public

ACKNOWLEDGMENT OF INDIVIDUAL

STATE OF _____)
) ss:
 COUNTY OF _____)

Before me, a notary public, in and for said county and State on this _____ day of _____, 20____ personally appeared _____

_____ to me known to be the identical person _____ who executed the within and foregoing instrument, and acknowledged to me that _____ executed the same as _____ free and voluntary act and deed, for the uses and purposes therein set forth.

My commission expires _____, 20____

Notary Public

ACCEPTANCE BY ASSIGNEE

The assignee in the above and foregoing assignment, made subject to the approval of the Secretary of the Interior, hereby accepts such assignment, assumes full liability under the lease from its effective date and agrees to fulfill all the obligations, conditions, terms, restrictions and stipulations in said described indenture of lease, and the rules and regulations of the Secretary of the Interior applicable thereto, and to furnish proper bond guaranteeing a faithful compliance with said lease and this agreement. In addition assignee is in compliance with all regulations and authorizing acts.

IN WITNESS WHEREOF, the said assignee has hereto set its hand and seal this 29th day of March, 2019.

NORDIC OIL USA 4 LLC

By: _____

David Burns, President

CONSENT OF SURETY

The _____, of _____, surety for _____ on the bond accompanying the lease above described, hereby consents to the assignment and transfer of said lease as above made and agrees that said bond shall remain in force and effect covering obligations of assignee.

Dated at _____ this _____ day of _____, 20____.

UNITED STATES DEPARTMENT OF THE INTERIOR
 BUREAU OF INDIAN AFFAIRS

APPROVED: Pursuant to the Secretarial Redlegation Order
 209 DM 8, 230 DM 1 and 3 IAM 4.

Date _____

REGIONAL DIRECTOR, NAVAJO

ACKNOWLEDGMENT OF CORPORATION

STATE OF TEXAS)
) ss:
COUNTY OF NACOGDOCHES)

Before me, a notary public, in and for said county and State on this 29th day of March, 2019 personally appeared Brent Ivy, on behalf of NACOGDOCHES OIL AND GAS, INC. to me known to be the identical person who subscribed the name of the maker thereof to the foregoing instrument as its Vice President and acknowledged to me that he executed the same as his free and voluntary act and deed, and as the free and voluntary act and deed of such corporation, for the uses and purposes therein set forth.

My commission expires _____, 20____

Notary Public

ACKNOWLEDGMENT OF INDIVIDUAL

STATE OF _____)
) ss:
COUNTY OF _____)

Before me, a notary public, in and for said county and State on this _____ day of _____, 20____ personally appeared _____

_____ to me known to be the identical person _____ who executed the within and foregoing instrument, and acknowledged to me that _____ executed the same as _____ free and voluntary act and deed, for the uses and purposes therein set forth.

My commission expires _____, 20____

Notary Public

ACCEPTANCE BY ASSIGNEE

The assignee in the above and foregoing assignment, made subject to the approval of the Secretary of the Interior, hereby accepts such assignment, assumes full liability under the lease from its effective date and agrees to fulfill all the obligations, conditions, terms, restrictions and stipulations in said described indenture of lease, and the rules and regulations of the Secretary of the Interior applicable thereto, and to furnish proper bond guaranteeing a faithful compliance with said lease and this agreement. In addition assignee is in compliance with all regulations and authorizing acts.

IN WITNESS WHEREOF, the said assignee has hereto set its hand and seal this 29th day of March, 2019.

NORDIC OIL USA 4 LLC

By: _____

David Burns, President

CONSENT OF SURETY

The _____, of _____, surety for _____ on the bond accompanying the lease above described, hereby consents to the assignment and transfer of said lease as above made and agrees that said bond shall remain in force and effect covering obligations of assignee.

Dated at _____ this _____ day of _____, 20____.

UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF INDIAN AFFAIRS

APPROVED: Pursuant to the Secretarial Redlegation Order
209 DM 8, 230 DM 1 and 3 IAM 4.

Date

REGIONAL DIRECTOR, NAVAJO

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF INDIAN AFFAIRS

ASSIGNMENT OF MINING LEASE

Whereas, the Secretary of the Interior or his authorized representative has heretofore approved _____
an Oil and Gas _____ mining lease, dated the 15th day of January _____, 1965,
entered into by and between Chairman, Navajo Tribal Council of Apache County, State of Arizona, for and on behalf of the Navajo Tribe of Indians, lessor,
and Humble Oil & Refining Company _____, lessee,
covering the following-described lands in the Navajo Nation
(Insert name of Reservation, Pueblo Nation, etc, as needed)
in the State of _____
Arizona, covering all of Section 6 in Township 35 North, Range 30 East, G&SRM,
Apache County, Arizona

NOW, THEREFORE, for and in consideration of Ten _____ dollars (\$10.00), the receipt of which
is hereby acknowledged, the said Nacogdoches Oil and Gas, Inc., a Texas corporation
the owner of the above-described lease, hereby bargains, sells, transfers, assigns, and conveys _____
all of its _____ right, title, and interest in and to said lease, subject to the approval of the Secretary of the Interior or
his authorized representative to _____ of Nordic Oil USA 4 LLC, a Delaware limited liability company.
Said assignment to be effective from the date of approval hereby by the Secretary of the Interior or his authorized
representative.

IN WITNESS WHEREOF, the said assignor has hereunto set its _____ hand and seal, this 29th
day of March _____, 2019.

Nacogdoches Oil and Gas, Inc.

By: _____

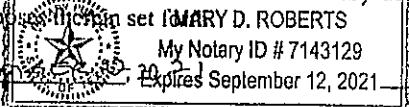
Brent Ivy, its Vice-President

(Over)

ACKNOWLEDGMENT OF CORPORATION

STATE OF TEXAS)
) ss:
 COUNTY OF NACOGDOCHES)

Before me, a notary public, in and for said county and State on this 29th day of March, 2019 personally appeared Brent Ivy, on behalf of NACOGDOCHES OIL AND GAS, INC. to me known to be the identical person who subscribed the name of the maker thereof to the foregoing instrument as its Vice President and acknowledged to me that he executed the same as his free and voluntary act and deed, and as the free and voluntary act and deed of such corporation, for the uses and purposes therein set forth.

My commission expires SEPTEMBER 12, 2021  Mary D. Roberts
 Notary Public

ACKNOWLEDGMENT OF INDIVIDUAL

STATE OF _____)
) ss:
 COUNTY OF _____)

Before me, a notary public, in and for said county and State on this _____ day of _____, 20____ personally appeared _____

_____ to me known to be the identical person _____ who executed the within and foregoing instrument, and acknowledged to me that _____ executed the same as _____ free and voluntary act and deed, for the uses and purposes therein set forth.

My commission expires _____, 20____

Notary Public

ACCEPTANCE BY ASSIGNEE

The assignee in the above and foregoing assignment, made subject to the approval of the Secretary of the Interior, hereby accepts such assignment, assumes full liability under the lease from its effective date and agrees to fulfill all the obligations, conditions, terms, restrictions and stipulations in said described indenture of lease, and the rules and regulations of the Secretary of the Interior applicable thereto, and to furnish proper bond guaranteeing a faithful compliance with said lease and this agreement. In addition assignee is in compliance with all regulations and authorizing acts.

IN WITNESS WHEREOF, the said assignee has hereto set its _____ hand and seal this 29th day of March, 2019.

NORDIC OIL USA 4 LLC

By: _____

David Burns, President

CONSENT OF SURETY

The _____, of _____, surety for _____ on the bond accompanying the lease above described, hereby consents to the assignment and transfer of said lease as above made and agrees that said bond shall remain in force and effect covering obligations of assignee.

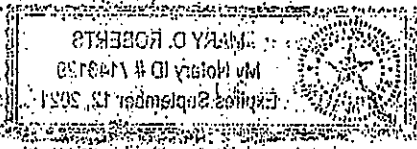
Dated at _____ this _____ day of _____, 20____.

UNITED STATES DEPARTMENT OF THE INTERIOR
 BUREAU OF INDIAN AFFAIRS

APPROVED: Pursuant to the Secretarial Redlegation Order
 209 DM 8, 230 DM 1 and 3 IAM 4.

Date _____

REGIONAL DIRECTOR, NAVAJO



ACKNOWLEDGMENT OF CORPORATION

STATE OF TEXAS)
) ss:
COUNTY OF NACOGDOCHES)

Before me, a notary public, in and for said county and State on this 29th day of March, 2019 personally appeared Brent Ivy, on behalf of NACOGDOCHES OIL AND GAS, INC. to me known to be the identical person who subscribed the name of the maker thereof to the foregoing instrument as its Vice President and acknowledged to me that he executed the same as his free and voluntary act and deed, and as the free and voluntary act and deed of such corporation, for the uses and purposes therein set forth.

My commission expires _____, 20____

Notary Public

ACKNOWLEDGMENT OF INDIVIDUAL

STATE OF _____)
) ss:
COUNTY OF _____)

Before me, a notary public, in and for said county and State on this _____ day of _____, 20____ personally appeared _____

_____ to me known to be the identical person _____ who executed the within and foregoing instrument, and acknowledged to me that _____ executed the same as _____ free and voluntary act and deed, for the uses and purposes therein set forth.

My commission expires _____, 20____

Notary Public

ACCEPTANCE BY ASSIGNEE

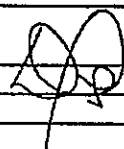
The assignee in the above and foregoing assignment, made subject to the approval of the Secretary of the Interior, hereby accepts such assignment, assumes full liability under the lease from its effective date and agrees to fulfill all the obligations, conditions, terms, restrictions and stipulations in said described indenture of lease, and the rules and regulations of the Secretary of the Interior applicable thereto, and to furnish proper bond guaranteeing a faithful compliance with said lease and this agreement. In addition assignee is in compliance with all regulations and authorizing acts.

IN WITNESS WHEREOF, the said assignee has hereto set its hand and seal this 29th day of March, 2019.

NORDIC OIL USA 4 LLC

By: _____

David Burns, President



CONSENT OF SURETY

The _____, of _____, surety for _____ on the bond accompanying the lease above described, hereby consents to the assignment and transfer of said lease as above made and agrees that said bond shall remain in force and effect covering obligations of assignee.

Dated at _____ this _____ day of _____, 20____.

UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF INDIAN AFFAIRS

APPROVED: Pursuant to the Secretarial Redlegation Order
209 DM 8, 230 DM 1 and 3 IAM 4.

Date

REGIONAL DIRECTOR, NAVAJO

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF INDIAN AFFAIRS

ASSIGNMENT OF MINING LEASE

Whereas, the Secretary of the Interior or his authorized representative has heretofore approved _____
an Oil and Gas _____ mining lease, dated the 15th day of January _____, 1965,
entered into by and between Chairman, Navajo Tribal Council of Apache County, State of Arizona, for and on behalf of the Navajo Tribe of Indians, lessor,
and Kerr-McGee Oil Industries, Inc., lessee,
covering the following-described lands in the Navajo Nation
(Insert name of Reservation, Pueblo Nation, etc., as needed)
in the State of _____
Arizona, covering all of Section 5 in Township 35 North, Range 30 East, G&SRM,
Apache County, Arizona

NOW, THEREFORE, for and in consideration of Ten _____ dollars (\$ 10.00), the receipt of which
is hereby acknowledged, the said Nacogdoches Oil and Gas, Inc., a Texas corporation
the owner of the above-described lease, hereby bargains, sells, transfers, assigns, and conveys _____
all of its _____ right, title, and interest in and to said lease, subject to the approval of the Secretary of the Interior or
his authorized representative to _____ of Nordic Oil USA 4 LLC, a Delaware limited liability company.
Said assignment to be effective from the date of approval hereby by the Secretary of the Interior or his authorized
representative.

IN WITNESS WHEREOF, the said assignor has hereunto set its _____ hand and seal, this 29th
day of March _____, 2019.

Nacogdoches Oil and Gas, Inc.

By: _____

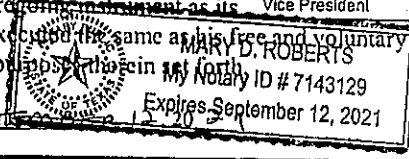
Brent Ivy, its Vice President

(Over)

ACKNOWLEDGMENT OF CORPORATION

STATE OF TEXAS)
) ss:
 COUNTY OF NACOGDOCHES)

Before me, a notary public, in and for said county and State on this 29th day of March, 2019 personally appeared Brent Ivy, on behalf of NACOGDOCHES OIL AND GAS, INC. to me known to be the identical person who subscribed the name of the maker thereof to the foregoing instrument as its Vice President and acknowledged to me that he executed the same as his free and voluntary act and deed, and as the free and voluntary act and deed of such corporation, for the uses and purposes therein set forth.



My commission expires September 12, 2021 Mary D. Roberts
 Notary Public

ACKNOWLEDGMENT OF INDIVIDUAL

STATE OF _____)
) ss:
 COUNTY OF _____)

Before me, a notary public, in and for said county and State on this _____ day of _____, 20____ personally appeared _____ to me known to be the identical person _____ who executed the within and foregoing instrument, and acknowledged to me that _____ executed the same as _____ free and voluntary act and deed, for the uses and purposes therein set forth.

My commission expires _____, 20____

Notary Public

ACCEPTANCE BY ASSIGNEE

The assignee in the above and foregoing assignment, made subject to the approval of the Secretary of the Interior, hereby accepts such assignment, assumes full liability under the lease from its effective date and agrees to fulfill all the obligations, conditions, terms, restrictions and stipulations in said described indenture of lease, and the rules and regulations of the Secretary of the Interior applicable thereto, and to furnish proper bond guaranteeing a faithful compliance with said lease and this agreement. In addition assignee is in compliance with all regulations and authorizing acts.

IN WITNESS WHEREOF, the said assignee has hereto set its _____ hand and seal this 29th day of March, 2019.

NORDIC OIL USA 4 LLC

By:

David Burns, President

CONSENT OF SURETY

The _____, of _____, surety for _____ on the bond accompanying the lease above described, hereby consents to the assignment and transfer of said lease as above made and agrees that said bond shall remain in force and effect covering obligations of assignee.

Dated at _____ this _____ day of _____, 20____.

UNITED STATES DEPARTMENT OF THE INTERIOR
 BUREAU OF INDIAN AFFAIRS

APPROVED: Pursuant to the Secretarial Redlegation Order
 209 DM 8, 230 DM 1 and 3 IAM 4.

Date

REGIONAL DIRECTOR, NAVAJO

STATE OF TEXAS)
) ss:
COUNTY OF NACOGDOCHES)

Notary Public

STATE OF _____)
COUNTY OF _____) ss:

Notary Public

David Burns, President

Dated at _____ this _____ day of _____, 20____.

REGIONAL DIRECTOR, NAVAJO

APPENDIX VIII – MEMO TO DELEGATE CROTTY FROM MINERALS

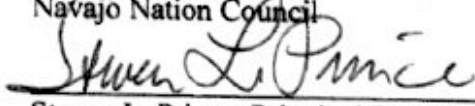


THE NAVAJO NATION

RUSSELL BEGAYE
JONATHAN NEZ

INTER-OFFICE MEMORANDUM

TO : Honorable Amber Crotty, Delegate
Navajo Nation Council

FROM : 
Steven L. Prince, Principal Petroleum Engineer
Minerals Department

DATE : March 6, 2018

SUBJECT: RED VALLEY CHAPTER OIL AND GAS CONCERNS

This memorandum is in response to your request to provide a written report to address the concerns raised in your letter dated 9/11/2017 and received by me on 2/22/2018. You requested a meeting to address questions and concerns raised at a meeting at the Red Valley Chapter house "regarding the increase of possible Oil and Gas extraction" and shared those questions and concerns in the letter. There has been no increase of oil and gas extraction at the Dineh Bi Keyah (DBK) field near Red Valley Chapter, where oil and gas extraction had been declining in the past several years until extraction of helium began a few years ago, however, oil and gas extraction is still well below extraction levels at the peak of the field's productivity. I will try to address each of the points raised in the letter in the following narrative.

Non-consent of Grazing Permittee

The five leases that comprise the DBK field were approved in 1964/5. In a continuation sheet attached to each of the leases, the following is stated: "Navajo grazing rights to the surface of any lands so leased shall be protected, and Navajo rights respecting the use of water shall be unimpaired." Besides that clause, there is no indication in our lease files to indicate that consent of the grazing permittee was given or required back then. Therefore, in order to determine if consent was given or not, someone would have to research the records of grazing permittees from that period of time and I presume that those records would be found at the Navajo Land Department (NLD) or with the General Land Development Department (GLDD). I have copied Mike Halona, Director of NLD, and Elerina Yazzie, Director of GLDD, to provide information on the status of the grazing consents. The current grazing permit holder expressed a desire to have a copy of the lease and I believe that copies of those leases may be publically available from the U.S. Department of Interior's Bureau of Indian Affairs (BIA) with tribal consent. We have copies of the leases in our files and with Navajo Nation Department of Justice consent and approval, we would be happy to provide copies of the leases to you.

Traffic

At the outset of the development of the DBK field in the mid-1960s, the operator was required to build a new road to be used exclusively by the vehicles belonging to the operation, so they would not tear up the local roads used by the local residents and also to prevent traffic on that road from adversely impacting the local residents. Over time, local residents have begun to use the oil field access road instead of the existing local roads because they have consistently been better maintained than the existing local roads. Many residents have chosen over time to locate their residences along the oil field access road primarily for this reason as well and they now use that road as if it were a road intended for local access and traffic.

Smell

Some of the wells in the DBK field have small percentages of naturally occurring hydrogen sulfide (H_2S) gas mixed into the natural gas and oil which is produced from the wells. The operator of the leases uses a technology which employs another chemical called a "scavenger" to remove the H_2S from the natural gas and oil stream before it reaches the surface as it is brought to the surface. In simplest terms, the scavenger is sent to the bottom of the well where it absorbs all of the H_2S , transforming it into a benign byproduct of the oil and gas production. The scavenger has a unique odor which is distinctly different from the "rotten egg" smell emanating from H_2S . The scent of the scavenger remains in close proximity to the well where it is being used. Although there are signs in both Navajo and English at all of the wells where H_2S is potentially present at the surface, warning that toxic gases may be present, as long as the scent of the scavenger and not that of H_2S is detected at the well site, there is no danger from the H_2S in that area.

Impact to Land/Water

I am not aware of any impacts to the land/water which have not been addressed and rectified. The Navajo Nation Minerals Department's Oil and Gas Inspection and Enforcement (I&E) team which is trained, certified, and overseen by the BLM inspects the wells, facilities, pipelines, and surrounding land/water on a regular basis and issue citations and potential fines to the operator if any of the operations are out of compliance with Federal and Tribal laws. Several years ago, one of our inspectors found oil leaking onto the ground at DBK and alerted the operator to repair the leak and clean up the spill before any of the leaking oil reached the nearby creek bed. Our inspectors consistently find small problems before they become major problems and make sure that any damage is promptly rectified.

Lack of Communication with the Operator

In a recent meeting at my office with Mr. Gary Chavez, Vice President, Red Valley Chapter and Mr. Lee Zhonnie, I was told that recently the operator of the DBK field generously provided uniforms for the local school's entire boys' and girls' sports teams. In order for the operator to provide that generous donation, there must be someone in the community communicating with the operator.

Ownership or Operation of the Site and Community Unawareness of Owner/Operator of the Site

The "major issue" regarding the ownership or operation of the site was not explained in the letter. Assuming that the "major issue" is the community's lack of knowledge of who is the operator, below I share contact information for the operator in addition to explaining about the recent changes in the ownership of the leases. The ownership of the leases and operational facilities recently passed from Nacogdoches Oil and Gas, Inc. to Nordic Oil USA 2, LLLP (Nordic) and the name of the designated operator is Capitol Operating Group, LLC. Nordic's President is David Burns and the business address for the company is: 5000 Ambassador Caffrey Parkway, Province Building 15B, Lafayette, Louisiana 70508. Mr. Burns' email address is: burns david@verizon.net. Mr. Burns should be able to provide contact information for the designated operator if that is needed.

cc: Bidtah Becker, Executive Director, Division of Natural Resources
Akhtar Zaman, Director, Minerals Department
Mike Halona, Director, Land Department
Elerina Yazzie, Director, General Land Development Department

APPENDIX IX – WESTERN ENVIRONMENTAL LAW CENTER REQUESTS FOR
INFORMATION

**Headquarters**

120 Shelton McMurphey Blvd.
Suite 340
Eugene, Oregon 97401
(541) 485-2471
info@westernlaw.org

Offices

Portland, Oregon
Seattle, Washington
Taos, New Mexico
Santa Fe, New Mexico
Helena, Montana

Defending the Westwesternlaw.org

Western Environmental Law Center

May 17, 2019

Mr. Oliver Whaley, Executive Director
Navajo Nation Environmental Protection Agency
P.O. Box 339
Window Rock, AZ 86515

Sent via USPS certified mail

Re: Request for records of oil and helium leases in Red Valley, Arizona pursuant to the Navajo Nation Privacy and Access to Information Act

Dear Mr. Whaley:

This letter is a request for information pursuant to the Navajo Nation Privacy and Access to Information Act, 2 N.N.C. §81 et seq., for all documents pertaining to helium and/or oil and gas leases in the Dineh-Bi-Keyah ("DBK") Field adjacent to the Red Valley, Arizona community. This request is submitted by the Western Environmental Law Center, a public interest environmental law firm, on behalf of Diné Citizens Against Ruining our Environment, a Navajo community-based organization.

We request copies of the following documents:

- Water Permits for operation in the DBK field;
- Inspection Reports of the DBK wells and the helium processing site in Red Valley;
- Emissions reports from wells in the DBK field and helium processing site in Red Valley; and
- Copies of BLM and Capitol Operating Groups reports on quarterly air monitoring data and H2S monitoring data, which Navajo EPA's Air Quality Follow-up Report recommended that Navajo Minerals Department request and provide copies of to Navajo EPA.

Please send the documents, in hard copy or digital format, to the mailing or email address in the signature line, below.

We additionally request your response to the following questions:

1. Are the wells in the DBK field considered minor source air emissions?
2. Is the helium processing site considered minor source, as well?

If you believe any records amongst those requested is protected from disclosure, please provide a description of each record so protected, in addition to the reasons why it is protected under the Privacy and Access to Information Act. If you believe another entity, such as the Bureau of Indian Affairs, possesses any documents you do not possess, we request that you inform us of that belief or any other information you have that might help us locate those documents.

Thank you very much for taking the time to respond to this request. If I can provide any further clarification please contact me at the phone number or email address below.

Sincerely,

A handwritten signature in black ink, appearing to read 'JG', with a long horizontal flourish extending to the right.

Julia Guarino, Attorney
Western Environmental Law Center
208 Paseo del Pueblo Sur, #602
Taos, NM 87571
guarino@westernlaw.org
575-224-6205

**Headquarters**

120 Shelton McMurphey Blvd.
Suite 340
Eugene, Oregon 97401
(541) 485-2471
info@westernlaw.org

Offices

Portland, Oregon
Seattle, Washington
Taos, New Mexico
Santa Fe, New Mexico
Helena, Montana

Defending the Westwesternlaw.org

Western Environmental Law Center

May 17, 2019

Mr. Ahktar Zaman, Director
Navajo Nation Minerals Department
P.O. Box 9000
Window Rock, AZ 86515

Sent via USPS certified mail

Re: Request for records of oil and helium leases in Red Valley, Arizona pursuant to the Navajo Nation Privacy and Access to Information Act

Dear Mr. Zaman:

This letter is a request for information pursuant to the Navajo Nation Privacy and Access to Information Act, 2 N.N.C. §81 et seq., for all leases and related documents pertaining to helium and/or oil and gas leases in the Dineh-Bi-Keyah ("DBK") Field adjacent to the Red Valley, Arizona community. This request is submitted by the Western Environmental Law Center, a public interest environmental law firm, on behalf of Diné Citizens Against Ruining our Environment, a Navajo community-based organization.

We request copies of the following documents:

- All original lease or permitting documents as well as any lease modifications, related approvals of infrastructure or right of ways, or other related permits or approvals in the DBK field;
- Water Permits for operation in the DBK field;
- Inspection Reports of the DBK wells and the helium processing site in Red Valley;
- Emissions reports from wells in the DBK field and helium processing site in Red Valley; and
- Copies of BLM and Capitol Operating Groups reports on quarterly air monitoring data and H2S monitoring data, which Navajo EPA's Air Quality Follow-up Report recommended that Navajo Minerals Department request and provide copies of to Navajo EPA.

Please send the documents, in hard copy or digital format, to the mailing or email address in the signature line, below.

If you believe any records amongst those requested is protected from disclosure, please provide a description of each record so protected, in addition to the reasons why it is protected under the Privacy and Access to Information Act. If you believe another entity, such as the Bureau of Indian Affairs, possesses any documents you do not possess, we request that you inform us of that belief or any other information you have that might help us locate those documents.

Thank you very much for taking the time to respond to this request. If I can provide any further clarification please contact me at the phone number or email address below.

Sincerely,

A handwritten signature in black ink, appearing to read 'J. Guarino', with a long horizontal flourish extending to the right.

Julia Guarino, Attorney
Western Environmental Law Center
208 Paseo del Pueblo Sur, #602
Taos, NM 87571
guarino@westernlaw.org
575-224-6205

**Headquarters**

120 Shelton McMurphey Blvd.
Suite 340
Eugene, Oregon 97401
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Offices

Portland, Oregon
Seattle, Washington
Taos, New Mexico
Santa Fe, New Mexico
Helena, Montana

Defending the Westwesternlaw.org

Western Environmental Law Center

May 17, 2019

Mr. Jason John, Acting Director
Navajo Nation Minerals Department
P.O. Box 678
Fort Defiance, AZ 86504

Sent via USPS certified mail

Re: Request for records of oil and helium leases in Red Valley, Arizona pursuant to the Navajo Nation Privacy and Access to Information Act

Dear Mr. John:

This letter is a request for information pursuant to the Navajo Nation Privacy and Access to Information Act, 2 N.N.C. §81 et seq., for all documents pertaining to water permits related to helium and/or oil and gas leases in the Dineh-Bi-Keyah ("DBK") Field adjacent to the Red Valley, Arizona community. This request is submitted by the Western Environmental Law Center, a public interest environmental law firm, on behalf of Diné Citizens Against Ruining our Environment, a Navajo community-based organization.

We request copies of the following documents:

- Water Permits for operation in the DBK field.

Please send the documents, in hard copy or digital format, to the mailing or email address in the signature line, below.

If you believe any records amongst those requested is protected from disclosure, please provide a description of each record so protected, in addition to the reasons why it is protected under the Privacy and Access to Information Act. If you believe another entity, such as the Bureau of Indian Affairs, possesses any documents you do not possess, we request that you inform us of that belief or any other information you have that might help us locate those documents.

Thank you very much for taking the time to respond to this request. If I can provide any further clarification please contact me at the phone number or email address below.

Sincerely,

A handwritten signature in black ink, appearing to be 'JG' with a long horizontal flourish extending to the right.

Julia Guarino, Attorney
Western Environmental Law Center
208 Paseo del Pueblo Sur, #602
Taos, NM 87571
guarino@westernlaw.org
575-224-6205

THE NAVAJO NATION



JONATHAN NEZ | PRESIDENT MYRON LIZER | VICE PRESIDENT

August 15, 2019

Julia Guarino, Attorney
Western Environmental Law Center
208 Paseo del Pueblo Sur, #602
Taos, NM 87571
VIA EMAIL: guarino@westernlaw.org

RE: Response to request for records of oil and helium leases in Red Valley, Arizona pursuant to the Navajo Nation Privacy and Access to Information Act

Ms. Guarino,

We received your request dated May 17, 2019 for information pursuant to the Navajo Nation Privacy and Access to Information Act, 2 N.N.C. §81 et seq., for all documents pertaining to water permits related to helium and/or oil and gas leases in the Dineh-Bi-Keyah ("DBK") Field adjacent to the Red Valley, Arizona community. This request was submitted by the Western Environmental Law Center on behalf of Diné Citizens Against Ruining our Environment, a Navajo community-based organization.

You requested copies of the following documents: Water Permits for operation in the DBK field.

The Navajo Department of Water Resources does not have any water use permits issued to operators of the Dineh-Bi-Keyah Field.

Sincerely,

A handwritten signature in blue ink, appearing to read "Jason John", with a long horizontal flourish extending to the right.

Jason John, Director
Navajo Department of Water Resources

Copy:
Veronica Blackhat, Navajo Department of Justice
Najam Tariq, Navajo Department of Water Resources

THE NAVAJO NATION

JONATHAN NEZ | **PRESIDENT** MYRON LIZER | **VICE PRESIDENT**



August 15, 2019

Julia Guarino
Western Environmental Law Center
208 Paseo del Pueblo Sur, #602
Taos, New Mexico 87571

RE: Request for records of oil and helium leases in Red Valley, Arizona pursuant to the Navajo Nation Privacy and Access to Information Act

Dear Ms. Guarino:

This letter is in response to the above-referenced request for records submitted to the Navajo Nation Environmental Protection Act (Navajo EPA) on May 17, 2019. Enclosed please find a May 8, 2018 "Air Quality Compliant Follow-Up Report" and its attachments prepared by Navajo EPA's Air Quality Control/Operating Permit Program. These attachments include a spreadsheet of air emissions data received from the United States Environmental Protection Agency in June 2018.

Navajo EPA also offers the following responses:

- Water Permits for operation in the DBK field
 - Response: Navajo EPA does not have any water permits in its possession related to the DBK field. The Navajo Nation Department of Water Resources may maintain water permits associated with the DBK field. Our office recommends that you contact Jason John, Director, Navajo Nation Department of Water Resources, PO Box 678, Fort Defiance, AZ 86504.
- Copies of BLM and Capitol Operating Groups reports on quarterly air monitoring data and H2S monitoring data, which Navajo EPA's Air Quality Follow-Up Report recommended that Navajo Minerals Department request and provide copies of to Navajo EPA
 - Response: Navajo EPA does not have copies of these documents in its possession. The Navajo Nation Minerals Department may have copies of these documents. Our office recommends that you contact Akhtar Zaman, Director, Navajo Nation Minerals Department, PO Box 1910, Window Rock, AZ 86515.

In your letter, you also asked two questions: (1) Are the wells in the DBK field considered minor source air emissions? and (2) Is the helium processing site considered minor

source, as well? The answer to both of these questions is yes.

Sincerely,

A handwritten signature in black ink, appearing to read "Oliver B. Whaley", written over a horizontal line.

Oliver B. Whaley
NNEPA Executive Director

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- ⁱ Steven Rauzi, "Review of Helium Production and Potential in Arizona" (Arizona Geological Survey, 2003); Jere McKenny and John Masters, "Dineh-Bi-Keyah Field, Apache County, Arizona," *American Association of Petroleum Geologists Bulletin* 52, no. 10 (1968): 2045–57. See also well files for relevant wells.
- ⁱⁱ John Samuel Ezell, *Innovations in Energy: The Story of Kerr-McGee* (Norman, OK: University of Oklahoma Press, 1979); McKenny and Masters, "Dineh-Bi-Keyah Field" (1968);
- ⁱⁱⁱ Syenite is a type of igneous rock that resembles granite, and in the Chuska Mountains it is grayish green. A sill a tabular sheet intrusion that forms between layers of rock.
- ^{iv} T.C. Danie, "Dineh-Bi-Keyah," in *Four Corners Geological Society - Oil and Gas Fields of the Four Corners Area, Volumes I-II*, 1978.
- ^v McKenny and Masters, "Dineh-Bi-Keyah Field" (1968)
- ^{vi} Jere McKenny and John Masters, "Dineh-Bi-Keyah Field, Apache County, Arizona," *American Association of Petroleum Geologists Bulletin* 52, no. 10 (1968): 2045–57; Navajo Times, "33-Mile Pipeline Flows Out: Kerr-McGee Doubles Oil Out-Put," *Navajo Times*, July 27, 1967, <https://newspaperarchive.com/window-rock-navajo-times-jul-27-1967-p-5/>.
- ^{vii} Navajo Times, "Dineh Bi Keyah Chalks up 10th Oil Well," *Navajo Times*, August 31, 1967, <https://newspaperarchive.com/window-rock-navajo-times-aug-31-1967-p-17/>.
- ^{viii} Ezell, *Innovations in Energy*, (1979).
- ^{ix} Navajo Times, "New Oil Field on Navajo Reservation Holds Promise of Boosting Econom," *Navajo Times*, September 21, 1967. P. 14. <https://newspaperarchive.com/window-rock-navajo-times-sep-21-1967-p-14/>.
- ^x *ibid*
- ^{xi} Navajo Times, "Get Top Oil Bids," *Navajo Times*, June 15, 1967, <https://newspaperarchive.com/window-rock-navajo-times-jun-15-1967-p-31/>.
- ^{xii} Steven Rauzi, "Arizona Has Oil and Gas Potential!" (Arizona Geological Survey, 2001).
- ^{xiii} Rauzi, "Arizona Has Oil and Gas Potential!" (2001); United States Energy Information Administration, "Arizona Field Production of Crude Oil," *Petroleum & Other Liquids*, 2021, <https://www.eia.gov/dnav/pet/hist/LeafHandler.ashx?n=PET&s=MCRFPAZ1&f=M>.
- ^{xiv} EIA, "Arizona Field Production of Crude Oil," 2021.
- ^{xv} "Victor Eaton" (Farmington Daily Times, February 17, 2010), <https://www.legacy.com/us/obituaries/daily-times/name/victor-eaton-obituary?n=victor-eaton&pid=139786397>.
- ^{xvi} See All Pueblo Council of Governors's Amicus Brief in *Diné Citizens et al. v Bernhardt et al.* in the United States Court of Appeals for the 10th Circuit 18-2089 (2019)
- ^{xvii} As quoted in Red Valley Chapter Resolution RVC-33-18. March 11th, 2018.
- ^{xviii} Navajo Times, "New Oil Field on Navajo Reservation Holds Promise of Boosting Econom," *Navajo Times*, September 21, 1967, <https://newspaperarchive.com/window-rock-navajo-times-sep-21-1967-p-14/>. See well files for Navajo 1 (API 02-001-20001)
- ^{xix} Ezell, *Innovations in Energy*, (1979)
- ^{xx} See *Neptune Leasing, Inc. v. Mountain States* (No. SC-CV-24-10).
- ^{xxi} "Apollo Resources International Acquires Mountain States Petroleum," *Hart Energy*, November 20, 2008, sec. Acquisitions and Divestitures, [Apollo Resources International Acquires Mountain States Petroleum](https://www.hartenergy.com/news/apollo-resources-international-acquires-mountain-states-petroleum).
- ^{xxii} In the matter of American Resource Technologies Inc., et al.: Order Making Findings and Revoking Registrations By Default As To Five Respondents, No. File No. 3-24378 (Securities and Exchange Commission June 16, 2011).
- ^{xxiii} Taylor Matthews and Nacogdoches Oil and Gas, Inc., "To Armand Southall, Regulatory Specialist, Office of Natural Resources Revenue, Re. Indian Oil Valuation Amendments, 79 Fed. Reg. 35102 (June 19, 2014)," August 18, 2014.
- ^{xxiv} Peter Thilo Hasler, "NASCO: Significant Increase in Value after Helium Acquisitions," Pre-IPO Valuation Report (Sphene Capital GmbH, June 15, 2021).
- ^{xxv} *Ibid*.
- ^{xxvi} *Ibid*.
- ^{xxvii} Hasler, "NASCO", (2021); Anish Kapadia, "Helium: A Super Cool Commodity," Equity Research (London: Hannam&Partners, 2020).
- ^{xxviii} Arup, "Nasco Helium Processing Facilities", 2019.
- ^{xxix} Diveena Danabalan, "On the Hunt for Helium," *Physics World*, 2017, <https://physicsworld.com/a/on-the-hunt-for-helium/>.
- ^{xxx} McKenny and Masters, "Dineh-Bi-Keyah Field" (1968); Rauzi, "Arizona Has Oil and Gas Potential!" (2001).
- ^{xxxi} Arup North America Ltd, "Nasco Helium Processing Facilities Technical Due Diligence," 2019.
- ^{xxxii} See well files and Rauzi 2001
- ^{xxxiii} Rauzi, "Arizona Has Oil and Gas Potential!" (2001). This information can also be gleaned from individual well files, available online from the AZOGCC.
- ^{xxxiv} NASCO Energie & Rohstoff AG, "NASCO AG: Progress in the Planned Doubling of Helium Production in 2017," May 11, 2017.
- ^{xxxv} Hasler, "NASCO", (2021).
- ^{xxxvi} NASCO Energie & Rohstoff AG, "NASCO AG: New Helium Plant Commenced Operation at DBK," February 6, 2019.
- ^{xxxvii} NASCO Energie & Rohstoff AG, "NASCO AG: New Helium Plant Commenced Operation at DBK," February 6, 2019. Hasler, "NASCO", (2021).
- ^{xxxviii} NASCO Energie & Rohstoff AG, "NASCO AG", 2017.

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- ^{xxxix} AMCS, "AMCS Corporation Enters into Agreement with Shiprock Helium, LP to Provide an INNOVA-HEU™ in Arizona," October 2016, <http://www.amcscorp.com/news-and-events/news.html/30/>.
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- ^{xli} IACX Energy, "Helium Projects," 2021, <https://iacx.com/helium-projects/>.
- ^{xlii} Arup, "Nasco Helium Processing Facilities", 2019; Hasler, "NASCO", (2021).
- ^{xliii} King, Michael, "Air Quality Complaint Follow-up Report" (Fort Defiance, AZ: Navajo Nation Environmental Protection Agency - Air Quality Control Program, 2018).
- ^{xliv} Tennille Denetdeel, "Navajo Nation Minor Source Regulations" (Counselor Chapter, 2018); Navajo Nation Environmental Protection Agency, "Public Notice: Proposed Rule Navajo Nation Clean Air Act: Minor Source Program Regulations," 2018.
- ^{xlv} Robert Gruenig, "EPA's New Air Rules Mean Monumental Changes for Emissions in Indian Country," *American Bar Association*, July 1, 2012, https://www.americanbar.org/groups/environment_energy_resources/publications/trends/2011_12/july_august/epa_new_air_rules_mean_monumental_changes_emissions_indian_country/.
- ^{xlvi} United States Environmental Protection Agency. "Tribal New Source Review Implementation Manual". May 2021. https://www.epa.gov/sites/default/files/2016-02/documents/tribal2_nsr_training_manualfinal05_16_12v7.pdf
- ^{xlvii} King, "Air Quality Complaint Follow-up Report", (2018).
- ^{xlviii} Navajo Times, "Kerr-McGee Is Most Active Energy Company," August 3, 1978, <https://newspaperarchive.com/navajo-times-aug-03-1978-p-22/>.
- ^{xlix} Navajo Times, "Kerr-McGee", 1978
- ⁱ All quotes in this section are from Red Valley Chapter Resolution RVC-33-18, March 11th, 2018.
- ⁱⁱ This analysis is based on the Texas Council on Environmental Quality's (TCEQ) 2020 list of Effects Screening Levels (<https://www.tceq.texas.gov/toxicology/esl>). According to the TCEQ, ESLs "are used to evaluate the potential for effects to occur as a result of exposure to concentrations of constituents in the air. ESLs are based on data concerning health effects, the potential for odors to be a nuisance, and effects on vegetation." Note that these values are represented in concentrations, in contrast to the volumes used in determining allowable pollution levels in permits.
- ⁱⁱⁱ United States Occupational Safety and Health Administration, "Hydrogen Sulfide Health Hazards," 2021, <https://www.osha.gov/hydrogen-sulfide/hazards>.
- ⁱⁱⁱⁱ See hazardous substances fact sheets from the NJ Department of Health, <https://nj.gov/health/workplacehealthandsafety/right-to-know/hazardous-substances/index.shtml>; the Agency for Toxic Substances and Disease Registry, Toxic Substances Portal: <https://www.atsdr.cdc.gov/substances/index.asp>; and the National Institutes of Health Library of Medicine, <https://www.nlm.nih.gov/>.
- ^{lv} This interpretation of the air quality data is drawn directly from an August 2021 report by Nadia Steinzor, Senior Policy Analyst at Earthworks, entitled "Air sampling at Apache County, Arizona oil well sites, 2019 and 2021".
- ^{lv} Red Valley Chapter Resolution RVC-33-18, March 11th, 2018.
- ^{lvi} Navajo Times, "Kerr-McGee", 1978
- ^{lvii} For an analysis of the cumulative impacts of oil and gas extraction in Diné communities in Eastern Navajo Agency, see David Tsosie et al., "A Cultural, Spiritual and Health Impact Assessment of Oil Drilling Operations in the Navajo Nation Area of Counselor, Torreon and Ojo Encino Chapters," trans. Esther Yazzie-Lewis, 2021.
- ^{lviii} Silvio Marcacci, "Plugging Abandoned Oil Wells Is One 'Green New Deal' Aspect Loved By Both Republicans And Democrats," *Forbes*, September 21, 2020, <https://www.forbes.com/sites/energyinnovation/2020/09/21/plugging-abandoned-wells-the-green-new-deal-jobs-plan-republicans-and-democrats-love/?sh=27eae5e2e100>.
- ^{lix} Theresa Davis, "State Land Office Sues over Abandoned Wells," *Albuquerque Journal*, April 22, 2021, <https://www.abqjournal.com/2383179/state-land-office-sues-over-abandoned-wells-ex-area-affected-covers-500-acres-in-mckinley-county.html>; Stephanie Garcia Richard, Commissioner of Public Lands of the State of New Mexico v. BC & D Operating, Inc. and Dominion Production Company, LLC (2021).
- ^{lx} See <http://www.wrapair2.org>