The State of Texas

Austin, Texas

General Land Office Relinquishment Act Lease Form Revised 1/23

OIL AND GAS LEASE

THIS OIL AND GAS LEASE is made and entered into to be effective	(the "effective date"), by and between the State of Texas,
acting by and through its agent,	
whose address is:	
said agent herein referred to as the owner of the soil (whether one or more) ("owner or	f the soil"), and
("Lessee"), whose address is:	
1. GRANTING CLAUSE; RESERVATION; BONUS. For good and valuable convenants contained herein, the State of Texas, acting by and through the owner of the explore for, and the exclusive right to produce and take, Oil and/or Gas from the Leased right hereunder to explore for Oil and Gas from the Leased Premises is non-exclusive concurrent right to grant third parties (i) seismic, geophysical and geological permits, shall allow such third parties to conduct geophysical, geological, or seismic surveys clease, and which seismic, geophysical, or geological surveys shall not unreasonably ingress and egress and use of the Leased Premises by the GLO and its lessees and per be covered in the future, under the terms of this lease, but that might be located with Leased Premises retained by the GLO and all of the rights in and to the Leased Preminduly interfere with the operations of the other. This lease is made and entered in exploration permits.	e soil, hereby demises, grants, leases and lets unto Lessee the non-exclusive right to Premises (defined below) on the terms and conditions set out in this lease. Lessee's the Texas General Land Office (the "GLO") expressly retains and reserves the and to enter into other agreements with third parties, which permits or agreements on, over, under, through, and across the land covered herein during the term of this interfere with Lessee's drilling or production activities on the Premises, and (ii mittees to explore for and produce minerals that are not covered, or that might no hin the surface boundaries of the Leased Premises. All of the rights in and to the ises granted to Lessee herein shall be exercised in such a manner that neither shall
The bonus consideration paid for this lease is as follows:	
To the State of Texas:	
Dollars (\$)	
To the owner of the soil:	
Dollars (\$)	
Total bonus consideration:	
Dollars (\$)	
The total bonus consideration paid represents a bonus ofacre, on net acres.	dollars (\$) per
2. TERM. This lease shall be for a term of () years and _ term"), and as long thereafter as Oil or Gas is produced in paying quantities from the first contract the state of the sta	
Part/Section:	
Block:	Abstract:
Grantee/Survey:	
Acres:	
County:	

	AY RENTALS. If no well is commenced on the Leased Premises on or before one (1)	year from the effective date, this lease shall term	
etore sud it	ch anniversary date Lessee shall pay to the owner of the soil or to his credit in the or its successors (which	shall continue as the depository regardless of ch	Bank, anges in the ownership
AT AUS	nd), the amount specified below; in addition, Lessee shall pay to the COMMISSIONEI ITIN, TEXAS, a like sum on or before said date. Payments under this paragraph sh	all operate as a rental and shall cover the pri	
commenc	ement of a well for one (1) year from said date. Payments under this paragraph shall be	in the following amounts:	
	To the owner of the soil:	Dollars (\$)
	To the State of Texas:	Dollars (\$)
	Total Delay Rental:	Dollars (\$)
erm. All late. If th eason fai	nanner and upon like payments annually, the commencement of a well may be further payments of rental to the owner of the soil may be made by check of Lessee or any asse bank designated in this paragraph (or its successor bank) should cease to exist, suspel or refuse to accept rental, Lessee shall not be held in default for failure to make such pacessee a proper recordable instrument naming another bank as agent to receive such pa	gnee of this lease, and may be delivered on or be nd business, liquidate, fail or be succeeded by a payments of rental until thirty (30) days after the	before the rental paying nother bank, or for any
Administrof the roy	YALTY: All capitalized terms used in this lease that are not defined in this lease shall hative Code (the "Rules"). Upon production of Oil, Gas, and/or other products from the lalty provided for in this lease to the GLO, for the use and benefit of the State of Texas, royalties as applicable to the substances actually produced from the Leased Premises and	Leased Premises, Lessee agrees to pay or cause t and one-half (1/2) of such royalty to the owner	o be paid one-half (1/2)
(a)	OIL: As a royalty on Oil, a monetary royalty of percent (Ready for Sale and Use and without deduction for premium, if any, paid or offered for Oil of a like	ralty in kind pursuant to r expenses, as described type and gravity in the
(b)	NON-PROCESSED GAS: As a royalty on any Non-Processed Gas, a monetary royal Production, unless the Commissioner or the owner of the soil, at the option of either, ethe Gross Production shall be calculated (i) at the point at which the Non-Processed described in section (4)(k), (ii) on a Dry Gas basis as to both volume and energy contentingher of:	lects to receive its royalty in kind pursuant to see Gas is Ready for Sale and Use and without ded	luction for expenses, as
	(A) the highest market price paid or offered for Gas of comparable quality is	n the general area where produced and when run	; or
	(B) the gross price paid or offered to the Lessee; provided that the maximum 14.65 pounds per square inch absolute, and the standard base temperature staccording to Boyle's Law, and for specific gravity according to a test made.	hall be sixty (60) degrees Fahrenheit, correction	to be made for pressure
	Provided, however, that if Non-Processed Gas is sold to a parent, subsidiary or affiliar of the Gas as either Non-Processed Gas or Processed Gas, as the case may be, in the fit		
(c)	PROCESSED GAS: As a royalty on any Processed Gas, Lessee agrees to pay a monthe Residue Gas and the NGLs extracted, unless the Commissioner or the owner of the to section 4(I). The value of the Gross Production shall be calculated at the point the All royalties due herein shall be on 100% of the volume of the Gas produced from the energy content, as described in the section 30 definitions below) as measured or attribute the based on the greater value of:	soil, at the option of either, elects to receive its residue Gas and/or the NGLs, respectively, are I Leased Premises (calculated on a Dry Gas basis	royalty in kind pursuant Ready for Sale and Use. s as to both volume and
	(1) the sum of the values of (A) 100% of the Residue Gas MMBtus attribut each NGL component, plus (B) the net value of the NGLs after deduction capplicable liquids percent of proceeds accruing to the Processing Plant; or		
	(2) the sum of the values of (A) 100% of the available Residue Gas MMBtuminimum liquids POP%, established herein in section 4(d), without deduction other fees or adjustments of any type, form, or character; or		
	(3) the "keep whole" value of the Gas as described in section (4)(f).		
	For purposes of calculating the royalty due hereunder, the respective values of the Resident	lue Gas and the NGLs shall be based on the grea	ter of:
	(1) the highest market price paid or offered in the general area for (A) an merchantable and marketable commercial grades and/or blends of each of the general area, or	y Pipeline-Quality Residue Gas, and (B) NGLs	, as either Raw Mix or
	(2) the (A) gross price paid or offered to Lessee for such Pipeline-Quality Rerespective grades of NGLs, as either Raw Mix or merchantable and marketab after fractionation.		

No fees or costs of any kind shall be deducted from the value of Gas that is bypassed around a Gas Processing Plant and then blended with Gas that was processed to remove liquefiable hydrocarbons at, or at a point downstream of, the tailgate of the Processing Plant, a.k.a. "conditioning". The value of Gas bypassed around a plant in which no liquefiable hydrocarbons or NGLs are removed from the Gas shall equal that for Non-Processed Gas per section (4)(b).

Provided, however, that if NGLs are recovered from Gas processed in a plant in which Lessee (or its parent, subsidiary or affiliate) owns an interest, then the POP% applicable to NGLs shall be the greater of (x) the applicable POP% per section 4(d), or (y) the highest percent accruing to a third party processing Gas through such plant under a processing agreement negotiated at arms' length.

- (d) APPLICABLE MINIMUM LIQUIDS PERCENT OF PROCEEDS: (1) The applicable minimum liquids percent of proceeds ("POP%") of the total available liquid hydrocarbon content volume for all NGLs, except ethane, shall, regardless of the natural Gas liquids recovery process or Gas processing agreement terms and/or conditions, be equal to the following:
 - (A) 70% for Gas with a heating content or BTU value equal to or greater than 1100 BTU/SCF;
 - (B) 60% for Gas with a heating content or BTU value equal to or greater than 1070 BTU/SCF but less than 1100 BTU/SCF; and
 - (C) 50% for Gas with a heating content or BTU value less than 1070 BTU/SCF.
 - (2) The available liquid hydrocarbon volume, in gallons, of each NGL component used to calculate the value of the NGLs at the applicable POP% shall equal the product of (A) the Processing Plant inlet Gas volume, in MSCF, on a Dry Gas basis, times (B) the gallons per MSCF of each component calculated per the applicable standards, at 14.65 pounds per square inch absolute and 60° Fahrenheit, according to a test made by chromatographic analysis of the Gas, except ethane, where the theoretical gallons of ethane available in the Gas shall be reduced by the Processing Plant recovery efficiency of ethane then being specified in processing agreements negotiated at arm's length between the Lessee and the plant for each dedicated Processing Plant and each Processing Plant that may process the Gas in a series of plants.
 - (3) The available Residue Gas MMBtu amount used in the calculation of the royalty value in section 4(c)(2) shall equal the product of (A) the Processing Plant inlet Gas MMBtu amount less the sum total MMBtu of shrinkage calculated for the available liquid hydrocarbon volume in section 4(d)(2) for each NGL component, times (B) one (1.0) minus the lesser of (1) the plant fuel MMBtu percentage divided by 100%, or (2) 0.035.
- (e) OTHER PRODUCTS: As a royalty on carbon black, carbon dioxide, sulphur or any other products (including water) produced (excepting Oil, Gas, or NGLs, addressed separately above), Lessee agrees to pay a monetary royalty of _______percent (%) of the value of the Gross Production of such products, unless the Commissioner of the General Land Office of the State of Texas (the "Commissioner") or the owner of the soil, at the option of either, elects to receive its royalty in kind pursuant to section 4(l). The value of the Gross Production shall be calculated at the point the other products are Ready for Sale and Use and without deduction for expenses, as described in section (4)(k), such value to be based on the higher of:
 - (1) the highest market price of each product, during the same month in which such product is produced; or
 - (2) the average gross sale price of each product for the same month in which such products are produced.
- (f) KEEP WHOLE: Notwithstanding any other provision of this lease to the contrary, Lessee may not pay a royalty hereunder for Processed Gas that is less than the royalty that would have been due under section 4(b) for the total energy content of the Processing Plant inlet Gas if it had not been processed.
- (g) NON-SALES DISPOSITIONS: As a royalty on non-sales dispositions of Gas, including but not limited to vented Gas, flared Gas, flash Gas and lease fuel Gas, Lessee agrees to pay a royalty based on the royalty provisions for Non-Processed Gas described in section 4(b) of this Lease (but without requirement of merchantability or marketability) if the Gas produced from the Leased Premises is not processed; otherwise, the royalty on non-sales dispositions of Gas shall be based on the royalty provisions for Processed Gas described in section 4(c) for Residue Gas. If, for whatever reason, there are no Gas sales dispositions, then Lessee agrees to pay royalty on one fourth (1/4) part of the total energy content of the Gas, in MMBtu determined on a Dry Gas basis, based on the posted market price of natural Gas at the nearest applicable Gas market hub in \$/MMBtu.
- (h) PLANT FUEL AND RECYCLED GAS: No royalty shall be payable on any Gas as may represent this lease's proportionate share of any fuel used to process Gas produced hereunder in any third party Gas processing plant pursuant to section 4(c); provided, however, that this lease's proportionate share of any such fuel used to process Gas shall be the lesser of (1) the plant fuel MMBtu percentage of the total plant inlet MMBtu amount (as determined by contract or, if none, by actual MMBtu amounts), or (2) 3.5%, and royalty shall be payable on any Gas in excess of that lesser amount. Subject to the consent in writing of the GLO, Lessee may inject Gas for secondary or enhanced recovery operations or for Gas lift purposes into any Oil- or Gas-producing formation in the Leased Premises after the liquid hydrocarbons contained in the Gas have been removed, and no royalty shall be payable on the Gas so injected until such time as the same may thereafter be produced and sold or used.
- (i) CONSERVATION: Lessee shall use all reasonable means to prevent the underground or above ground waste of Oil or Gas and to avoid the physical waste, flaring or venting of Gas produced from the Leased Premises.
- (j) DUTY TO MARKET: Lessee shall exercise due diligence and use all reasonable efforts in marketing any and all production from the Leased Premises, at no cost to owner of the soil, to obtain the best price reasonably available for the Oil and Gas.
- (k) NO DEDUCTIONS: Except for fees or deductions that may be permitted pursuant to section 4(c), Lessee shall pay or cause to be paid royalty due under this lease without deduction for the cost of producing, gathering, storing, separating, treating, dehydrating, conditioning, compressing, processing, transporting and otherwise making the Oil, Non-Processed Gas, Processed Gas, and other products hereunder Ready For Sale and Use, whether borne by Lessee or by third-party purchasers and whether stated as a deduction from the price or an adjustment to the price based on location or condition. If any contract by which Lessee or an Affiliate of Lessee sells Oil or Gas produced hereunder makes deductions or adjustments to the price to account for costs of producing, gathering, storing, separating, treating, dehydrating, conditioning, compressing, processing, or transporting of Oil or Gas produced from the Leased Premises, then such deductions shall be added back to the price received for purposes of computing the Gross Production upon which royalties are to be paid. The owner of the soil, the GLO, and Lessee agree that the foregoing provision is to be given full effect and is not to be construed as "surplusage" under Heritage Resources, Inc. v. Nationsbank, 939 S.W.2d 118 (Tex. 1996).
- (I) ROYALTY IN KIND: Lessee shall pay monetary royalties based on the value of the Gross Production from the Leased Premises, unless the GLO or the owner of the soil, at the option of either, elects to receive its royalty in kind. Lessee shall pay Oil or Gas royalty, or both, in kind without deduction for expenses, as described in section (4)(k), necessary to make the Oil, Gas and any other products Ready for Sale and Use. The owner of the soil or the GLO may change its election to take royalty in kind or monetary form at any time or from time to time by giving Lessee notice of such election not less than sixty (60) days in advance. If the owner of the soil or the GLO elects to take its royalty production in kind, it may elect to have the royalty production of the Oil, Gas, and any other products

that are in a Ready for Sale and Use condition delivered in kind at the location Lessee sells its production, or at another location mutually acceptable to owner of the soil or the GLO and Lessee. Lessee shall bear all costs to the point of delivery. If the GLO or the owner of the soil elects to take its royalty in kind, the parties agree to execute either the State's form of Gas Balancing Agreement or any other agreement that is acceptable to owner of the soil or the GLO and Lessee.

- (m) SEPARATION: Lessee agrees that before any hydrocarbons in liquid form and any Gas produced from the Leased Premises is sold, transferred, surface commingled with the production from any other lease tract and/or pooled unit, or is used or processed in a plant, it will be run free of cost to owner of the soil and the GLO through a gravity-based Oil and Gas separator of conventional type and of adequate size and efficiency such that all liquid hydrocarbons recoverable from the Gas by such means shall be recovered. Upon written consent of the GLO, Lessee may apply other forms of separation equipment that are at least as efficient as a gravity-based separator upon such terms and conditions as prescribed by the GLO. Upon written consent of the GLO, the requirement that such Gas and liquid hydrocarbons be run through a separator or other equipment may be waived upon such terms and conditions as prescribed by the GLO. Lessee must request and obtain a waiver in writing from the GLO before the installation and/or use of any full well stream/wet Gas/multiphase flow meters that measure any production on or from the Leased Premises.
- (n) COMMINGLING: Lessee must obtain prior written permission from the GLO per 31 TAC §9.35(a)(3) before surface commingling Oil and/or Gas production from a state lease or pooled unit with the production from any other private or state lease and/or unit into (i) a common manifold and/or separator, (ii) common storage, (iii) a common gathering system or pipeline, or (iv) to utilize an off-lease Gas supply to inject Gas for lift purposes into any Oil- or Gas-producing formation in the Leased Premises. These requirements are in addition to, and apart from, the requirements of any other state and/or federal agency.
- (o) METERING: Lessee agrees that any hydrocarbons in liquid form and any Gas produced from the Leased Premises shall be measured separately before the liquid hydrocarbons and/or Gas leave the Leased Premises. Lessee agrees to comply with all applicable American Gas Association (AGA) Standards, as well as the American Petroleum Institute (API) Manual of Petroleum Measurement Standards (MPMS) for any measurement device or tank that covers the standards, practices, guidelines, recommendations and procedures which include, but are not limited to, the design, installation, calibration, testing and handling of samples and operation of a metering system used for the measurement of hydrocarbons in liquid form or Gas at any meter location on the Leased Premises, at a point of lease custody transfer, for the purpose of lease allocation in the event of surface commingling, or for the reporting and allocation of lease fuel, flared Gas volumes, vented volumes or any other lease use.
- (p) ROYALTY ON CONTRACT SETTLEMENTS: Lessee shall pay to the owner of the soil and the GLO royalty at the applicable royalty rate on any monetary settlement received by Lessee from any breach of contract by Lessee's purchaser relating to the marketing, pricing or taking of Oil or Gas production from the Leased Premises.

5. PAYMENTS, SUBMISSIONS AND NOTICES TO LESSOR:

- (a) MONETARY ROYALTY PAYMENTS: All royalty owed to the GLO hereunder and not paid in kind at the election of the GLO shall be paid to the GLO at Austin, Texas, in the following manner: payment of royalty on production of Oil and Gas shall be as provided in the Rules. The Rules currently provide that royalty on Oil is due and must be received in the GLO on or before the fifth (5th) day of the second (2nd) month succeeding the month of production or such later date as may be prescribed in the Rules. Royalty on Gas is due and must be received in the GLO on or before the fifteenth (15th) day of the second (2nd) month succeeding the month of production or such later date as may be prescribed in the Rules. All royalty payments must be accompanied by the affidavit of the owner, manager or other authorized agent, completed in the form and manner prescribed by the GLO and showing the gross amount and disposition of all Oil and Gas produced and the market value of the Oil and Gas. Lessee must maintain, and make available to the GLO upon request, copies of all documents, records or reports confirming the Gross Production, disposition and market value including Gas meter readings, pipeline receipts, Gas line receipts and other checks or memoranda of the amount produced and put into pipelines, tanks, or pools and Gas lines or Gas storage, and any other reports or records which the GLO may require to verify the Gross Production, disposition and market value. In all cases the authority of a manager or agent to act for the Lessee herein must be filed in the GLO. Each royalty payment shall be accompanied by a check stub, schedule, summary or other remittance advice showing, by the assigned GLO lease number, the amount of royalty being paid on each lease.
- (b) MANNER AND TIMELINESS OF PAYMENTS: A monetary royalty payment that is not submitted electronically shall be considered timely paid if delivered to the GLO on or before the applicable due date or if deposited in a postpaid, properly addressed wrapper with a post office or official depository under the care and custody of, and postmarked by, the United States Postal Service at least one (1) day before the applicable due date. A payment that is submitted electronically shall be considered timely paid if such payment is successfully transmitted to the proper account with the Comptroller of the State of Texas on or before the due date.
- (c) PENALTIES AND INTEREST: Lessee shall pay penalties and interest due on late royalty payments and other sums due, and for failure to provide documents, (whether physical documents or information in electronic form), as provided by law or the Rules. The right to collect penalties and interest is in addition to, and shall not in any way limit or restrict, the rights of the GLO to pursue other remedies at law or in equity, including without limitation forfeiture of this lease. If Lessee pays royalty on or before thirty (30) days after the royalty payment was due, then Lessee owes a penalty of five percent (5%) on the royalty or twenty-five dollars (\$25.00), whichever is greater. A royalty payment which is over thirty (30) days late shall accrue a penalty of ten percent (10%) of the royalty due or twenty-five dollars (\$25.00), whichever is greater. In addition to a penalty, royalties shall accrue interest when the royalty is sixty (60) days overdue. Affidavits and supporting documents which are not filed when due shall incur a penalty in an amount set by the Rules that were in effect on the date when the affidavits or supporting documents were due. The Lessee shall bear all responsibility for paying or causing royalties to be paid as prescribed by the due date provided herein. Payment of the delinquency penalty shall in no way operate to prohibit the State's right of forfeiture as provided by law nor act to postpone the date on which royalties were originally due. The above penalty provisions shall not apply in cases of title dispute as to the State's portion of the royalty or to that portion of the royalty in dispute as to fair market value.
- (d) PAYMENTS, NOTICES, AND CORRESPONDENCE TO LESSOR: Lessee shall assure that all royalty payments, shut-in royalty payments, delay rentals, and all other payments due under this lease, as well as documents, reports, notices, and other information, unless expressly provided herein that such payment or information be directed to another office, are directed to the following address:

If to the owner of the soil, to the address first listed above.

If to the GLO: Texas General Land Office P.O. Box 12873 Austin, Texas 78711-2873 or

Texas General Land Office 1700 N. Congress Avenue Austin, Texas 78701

or such other address as may then be specified in the Rules. Any payments submitted electronically shall be delivered by electronic funds transfer to the proper account with the Comptroller.

(e) NOTICES AND CORRESPONDENCE TO LESSEE: Notices and correspondence to Lessee shall be sent to the address shown above or such other address as Lessee shall provide in writing to the owner of the soil and the GLO. Any such notice of change of address must specifically reference this Lease.

6. RECORDS:

- (a) RESERVES, CONTRACTS AND OTHER RECORDS: Upon written request by the GLO, Lessee shall annually furnish the GLO with its best possible estimate of Oil and Gas reserves underlying this lease or allocable to this lease and shall furnish the GLO with copies of all contracts under which Gas is sold or processed and all subsequent agreements and amendments to such contracts within thirty (30) days after entering into or making such contracts, agreements or amendments. Such contracts and agreements when received by the GLO shall be held in confidence by the GLO unless otherwise authorized by Lessee. All other contracts and records pertaining to the production, transportation, sale and marketing of the Oil and Gas produced from these Leased Premises, including the books and accounts, receipts and discharges of all wells, tanks, pools, meters, and pipelines shall at all times be subject to audit, inspection, and examination by the GLO, the Attorney General, the Governor, or the representative of any of them.
- (b) PERMITS, DRILLING RECORDS AND REQUIRED FILINGS: Written notice of all operations on this lease shall be submitted to the GLO by Lessee or operator five (5) days before spud date, workover, re-entry, temporary abandonment or plug and abandonment of any well or wells. Such written notice to the GLO shall include copies of Railroad Commission forms for application to drill. Copies of well tests, completion reports and plugging reports shall be supplied to the GLO at the time they are filed with the Texas Railroad Commission. All applications, permits, reports or other filings that reference this lease or any specific well on the Leased Premises and that are submitted to the Texas Railroad Commission or any other governmental agency must have the word "State" as the first word in the title. Additionally, in accordance with Railroad Commission rules, any signage on the Leased Premises for the purpose of identifying wells, tank batteries or other associated improvements to the land must also include the word "State." Division orders must be submitted to the GLO within thirty (30) days of first production. GLO shall not be required to sign any division orders. Lessee shall supply the GLO with any records, memoranda, accounts, reports, cuttings and cores, or other information relative to the operation of the above-described Leased Premises, which may be requested by the GLO, in addition to those herein expressly provided for. Lessee shall have a basic electrical log as defined by the Railroad Commission made on the bore-hole section, from the base of the surface casing to the total depth of well, of all wells drilled on the above described Leased Premises or such other log or logs as a reasonable and prudent operator would run and shall transmit a complete suite of such logs on each well to the GLO within fifteen (15) days after the making of said logs.
- (c) PENALTIES: Lessee shall incur a penalty whenever reports, documents or other materials are not filed in the GLO when due. The penalty for late filing shall be set by the GLO administrative rule which is effective on the date when the materials were due to the GLO.
- 7. RETAINED ACREAGE: Notwithstanding any provision of this lease to the contrary, after a well producing or capable of producing Oil or Gas has been completed on the Leased Premises, Lessee shall exercise the diligence of a reasonably prudent operator in drilling such additional well or wells as may be reasonably necessary for the proper development of the Leased Premises and in marketing the production thereon.
- (a) VERTICAL: In the event this lease is in force and effect in whole or in part, two (2) years after the expiration date of the primary term it shall then terminate as to all of the Leased Premises, EXCEPT as to the following acreage amounts for wells drilled under this lease capable of producing in paying quantities (including a shutin Oil or Gas well as provided in section 11 hereof), or a well that has been spud and upon which Lessee is then engaged in continuous drilling or reworking operations: (1) the lesser of 40 acres or the amount of acreage assigned to a Oil well for proration purposes under special field rules; (2) the lesser of 80 acres or the amount of acreage assigned to a Gas well for proration purposes under special field rules; (3) for horizontal drainhole wells the amount of acreage retained shall be the greater of 40 acres or the amount of acreage determined by the following formula: 0.032 x L = A, where L = the length (in feet) of the horizontal lateral component of the well from the first takepoint to the last takepoint and A = the area retained (in acres) provided that, if A is not divisible by the number 20, A will be rounded up to the next number divisible by 20, i.e. (0.032 x 4500 feet = 144 acres, which rounds up to 160 acres); (4) if more acreage is required than is provided for in (1), (2) or (3) above in order to obtain the maximum allowable under special field rules for the permitted or producing interval or intervals, upon written approval from the GLO, such number of acres that are required to obtain the maximum allowable as required by the special field rules as approved by the Railroad Commission of Texas, or any successor agency, or other governmental authority having jurisdiction; or (5) the number of acres held in a pooled unit pursuant to Natural Resources Code Sections 52.151-52.154. After termination pursuant to this subsection, each tract retained shall be considered a separate lease and must be maintained independently. Lessee shall retain the right of ingress and egre
- (b) HORIZONTAL: Two (2) years after the expiration date of the primary term this lease shall further terminate as to those depths stipulated as follows for each tract retained in section 7 (a) above: for vertical wells, 100 feet true vertical depth below the deepest then producing perforations; for horizontal wells, 300 feet true vertical depth below the deepest depth reached by the horizontal lateral between the first takepoint and the last takepoint, and for acreage retained that is pooled or unitized, all depths above and below the pooled or unitized interval. If a well has been spud and is being drilled over this termination date, the acreage retained by said well under section 7 (a) shall be held as to all depths for so long as such operations continue diligently in a workmanlike manner without interruptions totaling more than sixty (60) days in the aggregate (or such longer period of interruptions as may be approved by the Commissioner's authorized designee) until completion of a well capable of producing in paying quantities. Upon completion of a well as described in the preceding sentence (with "completion" defined as the earliest of (1) fourteen days after the release of a drilling rig capable of drilling to the target location, (2) forty-eight hours after the release of a finishing rig, or (3) upon filing of a completion report at the Texas Railroad Commission), or if no such well capable of producing in paying quantities is completed within the stated period, the acreage retained shall then terminate as to those depths as provided in this section.
- (c) IDENTIFICATION AND FILING: The surface acreage retained hereunder as to each well shall, as nearly as practical, be in the form of a square for vertical wells or a rectangle for horizontal wells, with the well located in the center thereof, or such other shape as may be approved by the GLO. Within thirty (30) days after partial termination of this lease as provided herein, Lessee must execute and record a release or releases containing a satisfactory legal description of the acreage and/or depths not retained hereunder. The recorded release, or a certified copy of same, shall be filed in the GLO, within thirty (30) days of recording accompanied by the filing fee prescribed by the GLO rules in effect on the date the release is filed. If Lessee fails or refuses to execute and record such release or releases then the GLO, in its sole discretion, may designate, by written instrument, the acreage and/or depths that have terminated hereunder, and record such instrument at Lessee's expense in the county or counties where

the lease is located and in the official records of the GLO, and such designation shall be binding upon Lessee for all purposes. If at any time after the effective date of the partial termination provisions hereof, the applicable field rules are changed or the well or wells located thereon are reclassified so that less acreage is thereafter allocated to said well or wells for production purposes, this lease shall thereupon terminate as to all acreage not thereafter allocated to said well or wells for production purposes, and Lessee shall file a release or releases in the same manner as provided above.

- (d) FIELD RULES AND EXCEPTIONS: If Lessee seeks to amend existing field rules to establish field rules applicable to the Leased Premises, and if Lessee requests a hearing for the amendment or establishment of field rules, or if Lessee requests the consolidation of existing field rules or an exemption from field rules or statewide rules, or if Lessee seeks to adopt field rules different from those in use in the immediate area, Lessee shall notify owner of the soil and the GLO of such request prior to any Railroad Commission hearing and provide all exhibits to the owner of the soil and the GLO relative to such hearing. Any attempt by Lessee to establish, amend, consolidate, or exempt such field rules without owner of the soil's and the GLO's prior consent shall not be applicable to the Leased Premises unless and until such consent is given.
- 8. OFFSET WELLS: If Oil and/or Gas should be produced in commercial quantities from a well located within the applicable statutory offset distance from the area included herein, or which well is draining the area covered by this lease, the Lessee shall, within one hundred (100) days after such initial production from the draining well or the well located within the applicable statutory offset distance from the area covered by this lease, begin in good faith and prosecute diligently the drilling of an offset well on the area covered by this lease, and such offset well shall be drilled to such depth as may be necessary to prevent the undue drainage of the area covered by this lease, and the Lessee shall use all means necessary in a good faith effort to make such offset well produce Oil and/or Gas in commercial quantities. Only upon the determination of the GLO with its written approval, may the payment of a compensatory royalty satisfy the obligation to drill an offset well or wells required under this section.

9. DRY HOLE/CESSATION, DRILLING, AND REWORKING:

- (a) If, during the primary term hereof, within sixty (60) days of a lease anniversary date, (i) Lessee should complete a well as a dry hole, or (ii) production should cease, then the lease is maintained over the anniversary date without the payment of a delay rental. If a dry hole is completed or production or drilling operations cease more than sixty (60) days before a lease anniversary date, a delay rental must be paid on or before such anniversary date to maintain the lease and upon failure to make such payment the lease shall terminate unless otherwise held over the anniversary date by additional drilling operations or re-establishment of production during the sixty (60) days prior to the anniversary date. If, during the last year of the primary term, the production of Oil or Gas should cease, Lessee's rights shall remain in full force and effect without further operations until the expiration of the primary term; and if Lessee has not resumed production in paying quantities at the expiration of the primary term, Lessee may maintain this lease by conducting additional drilling or reworking operations pursuant to section 9(b), using the expiration of the primary term as the date of completed as a shut-in Oil or Gas well within the primary term hereof, Lessee may resume payment of the annual rental in the same manner as provided herein on or before the rental paying date following the expiration of sixty (60) days from the date of completion of such shut-in Oil or Gas well and upon the failure to make such payment, this lease shall automatically terminate. If, at the expiration of the primary term or any time thereafter, a shut-in Oil or Gas well is located on the Leased Premises, payments may be made in accordance with the shut-in provisions hereof.
- (b) If, at the expiration of the primary term, neither Oil nor Gas is being produced from the Leased Premises, but Lessee is then engaged in drilling or reworking operations thereon, this lease shall remain in force so long as operations on said well or for drilling or reworking of any additional wells are prosecuted in good faith and in workmanlike manner without interruptions totaling more than sixty (60) days during any one such operation, and if such operations result in the production of Oil and/or Gas, so long thereafter as Oil and/or Gas is produced in paying quantities from the Leased Premises, or payment of shut-in Oil or Gas well royalties or compensatory royalties is made as provided in this lease.
- (c) If, after the expiration of the primary term, production of Oil or Gas from the Leased Premises, after once obtained, should cease for any cause, this lease shall not terminate if Lessee restores production in paying quantities within sixty (60) days after such cessation or commences additional drilling or reworking operations within sixty (60) days after such cessation, and this lease shall remain in full force and effect for so long as such operations continue in good faith and in workmanlike manner without interruptions totaling more than sixty (60) days. If such drilling or reworking operations result in the production of Oil or Gas, the lease shall remain in full force and effect for so long as Oil or Gas is produced from the Leased Premises in paying quantities or payment of shut-in Oil or Gas well royalties or payment of compensatory royalties is made as provided herein or as provided by law. If the drilling or reworking operations result in the completion of a well as a dry hole, the lease will not terminate if the Lessee commences additional drilling or reworking operations within sixty (60) days after the completion of the well as a dry hole, and this lease shall remain in effect so long as Lessee continues drilling or reworking operations in good faith and in a workmanlike manner without interruptions totaling more than sixty (60) days. Lessee shall give written notice to the GLO within thirty (30) days of any cessation of production.
- 10. POOLING; ALLOCATION: (a) Lessee is hereby expressly prohibited from pooling or unitizing the Leased Premises or any interests therein with any other leasehold or mineral interest for the exploration, development and production of Oil or Gas or either of them without the express consent of the School Land Board and the Commissioner. A well, whether or not classified as an allocation well, that traverses multiple leases or units including the Leased Premises hereunder, one or more of which leases or units contains Oil and Gas owned by the state, and which well is not associated with an agreement approved by the GLO and owner of the soil specifying the allocation of the production of state-owned Oil and Gas, is hereby expressly not permitted and may not operate on or under this lease or a unit containing state-owned Oil and Gas without the prior written consent of the Commissioner's authorized designee, which consent may be granted or withheld in the Commissioner's sole discretion.
- (b) Lessee is hereby granted the right to pool or unitize the royalty interest of the owner of the soil under this lease with any other leasehold or mineral interest for the exploration, development and production of Oil or Gas or either of them upon the same terms as shall be approved by the School Land Board and the Commissioner for the pooling or unitizing of the interest of the State under this lease pursuant to Texas Natural Resources Code §\$52.151-52.154. The owner of the soil agrees that the inclusion of this provision in this lease satisfies the execution requirements set out in Texas Natural Resources Code §52.152.
- 11. SHUT-IN ROYALTIES: For purposes of this section, "well" means any well that has been assigned a well number by the governmental agency having jurisdiction over the production of Oil and Gas. If at any time after the expiration of the primary term of a lease that, until being shut in, was being maintained in force and effect, a well capable of producing Oil or Gas in paying quantities is located on the Leased Premises, but Oil or Gas is not being produced for lack of suitable production facilities (lack of suitable production facilities are owned and /or operated by Lessee, and the cause is due to Lessee's improper maintenance or neglect) or lack of a suitable market, then Lessee may pay as a shut-in Oil or Gas royalty an amount equal to double the annual rental provided in the lease, but not less than \$1,200 a year for each well capable of producing Oil or Gas in paying quantities. If section 3 of this lease does not specify a delay rental amount, then for the purposes of this section, the delay rental amount shall be one dollar (\$1.00) per acre. To be effective, each initial shut-in Oil or Gas royalty payment, accompanied by the GLO Shut-In Affidavit, must be paid on or before: (1) the expiration of the primary term, (2) Sixty (60) days after the Lessee ceases to produce Oil or Gas from the Leased Premises, or (3) Sixty (60) days after Lessee completes a drilling or reworking operation in accordance with the lease provisions; whichever date is the latest. Such payment shall be made one-half (1/2) to the Commissioner, and one-half (1/2) to owner of the soil. If the shut-in Oil or Gas royalty is paid, accompanied by the GLO Shut-In Affidavit, the lease shall be considered to be a producing lease and the payment shall extend the term of the lease for a period of one (1) year from the end of the primary term, or from the first (1st) day of the month following the month in which production ceased, and, after that, if after a

diligent effort, that being those of a reasonable and prudent operator to obtain or repair the production facilities or to obtain a market, no suitable production facilities or suitable market for the Oil or Gas exists, Lessee may, upon written approval of the GLO, extend the lease for four (4) more successive periods of one (1) year by paying the same amount each year on or before the expiration of each shut-in year.

- 12. COMPENSATORY ROYALTIES: If, during the period the lease is kept in effect by payment of the shut-in Oil or Gas royalty, Oil or Gas is sold and delivered in paying quantities from a well located within the applicable statutory offset distance from the Leased Premises and completed in the same producing reservoir, or in any case in which drainage is occurring, the right to continue to maintain the lease by paying the shut-in Oil or Gas royalty shall cease, but the lease shall remain effective for the remainder of the year for which the royalty has been paid. Upon written approval from the GLO, the Lessee may maintain the lease for four (4) more successive years by Lessee paying compensatory royalty at the royalty rate provided in the lease of the market value of production from the well causing the drainage or which is completed in the same producing reservoir and within the applicable statutory offset distance from the Leased Premises. The compensatory royalty is to be paid monthly one-half (1/2) to the Commissioner, and one-half (1/2) to owner of the soil, beginning on or before the last day of the month following the month in which the Oil or Gas is produced from the well causing the drainage or that is completed in the same producing reservoir and located within the applicable statutory offset distance from the Leased Premises; if the compensatory royalty paid in any twelve (12) month period is in an amount less than the annual shut-in Oil or Gas royalty, Lessee shall pay an amount equal to the difference within thirty (30) days from the end of the twelve (12) month period; and none of these provisions will relieve Lessee of the obligation of reasonable development nor the obligation to drill offset wells as provided in N.R.C. Section 52.034; however, at the determination of the GLO, and with the GLO's written approval, the payment of compensatory royalties shall satisfy the obligation to drill offset wells. Compensatory royalty payments which are not timely paid will accrue penalty and interest in accord
- 13. AUTHORIZED DAMAGES. Lessee shall pay the owner of the soil for damages caused by its operations to all personal property, improvements, livestock and crops on the Leased Premises.
- 14. USE OF WATER; SURFACE: Lessee shall have the right to use water produced on said land necessary for drilling operations hereunder and solely upon the Leased Premises; provided, however, Lessee shall not use potable water or water suitable for livestock or irrigation purposes for water flood, hydraulic fracturing, or completion operations, whether such water is from stock tanks, surface reservoirs, existing water wells, or streams on the Leased Premises, without the prior written consent of owner of the soil. Lessee shall have the right to use so much of the surface of the land that may be reasonably necessary for drilling and operating Oil and Gas wells and transporting and marketing the production therefrom, such use to be conducted under conditions of least injury to the surface of the land.
- 15. POLLUTION: In developing the Leased Premises, Lessee shall use the highest degree of care and all proper safeguards to prevent pollution. Without limiting the foregoing, pollution of coastal wetlands, natural waterways, rivers and impounded water shall be prevented by the use of containment facilities sufficient to prevent spillage, seepage or ground water contamination. In the event of pollution, Lessee shall use all means at its disposal to recapture all escaped hydrocarbons or other pollutants and shall be responsible for all damage to public and private properties. Failure to comply with the requirements of this provision may result in the maximum penalty allowed by law including forfeiture of the lease. Lessee shall be liable for the damages caused by such failure and any costs and expenses incurred in cleaning areas affected by the discharged waste.
- 16. IDENTIFICATION MARKERS: Lessee shall erect, at a distance not to exceed twenty-five (25) feet from each well on the premises covered by this lease, a legible sign on which shall be stated the name of the operator, the lease designation and the well number. Where two or more wells on the same lease or where wells on two or more leases are connected to the same tank battery, whether by individual flow line connections direct to the tank or tanks or by use of a multiple header system, each line between each well and such tank or header shall be legibly identified at all times, either by a firmly attached tag or plate or an identification properly painted on such line at a distance not to exceed three feet (3') from such tank or header connection. Said signs, tags, plates or other identification markers shall be maintained in a legible condition throughout the term of this lease.
- 17. ASSIGNMENTS: (a) Subject to the right of the GLO to require a demonstration by the transferee of its financial responsibility, this lease may be transferred at any time; provided, however, that the liability of the transferor to properly discharge its obligation under the lease, including properly plugging abandoned wells, removing platforms or pipelines or remediation of contamination at drill sites shall only pass to the transferee upon the prior written consent of the GLO. The GLO may require the transferee to demonstrate financial responsibility and may require a bond or other security. All transfers must reference the lease by the file number and must be recorded in the county where the area is located, and the recorded transfer or a copy certified to by the County Clerk of the county where the transfer is recorded must be filed in the GLO within ninety (90) days of the execution date, as provided by N.R.C. Section 52.026, accompanied by the filing fee prescribed by the GLO rules in effect on the date of receipt by the GLO of such transfer or certified copy thereof. Without limiting the liability of the original lessee or any prior transferee for that entity's debts owed to the GLO hereunder, every transferee shall succeed to all rights and be subject to all obligations, liabilities, and penalties owed to the State by the original lessee or any prior transferee of the lease, including any liabilities to the State for unpaid royalties.
- (b) Notwithstanding any provision in subsection 17(a), if the owner of the soil acquires this lease in whole or in part by assignment without the prior written approval of the Commissioner, this lease is void as of the time of assignment and the agency power of the owner may be forfeited by the Commissioner. An assignment will be treated as if it were made to the owner of the soil if the assignee is:
 - (1) a nominee of the owner of the soil;
 - (2) a corporation or subsidiary in which the owner of the soil is a principal stockholder or is an employee of such a corporation or subsidiary;
 - (3) a partnership in which the owner of the soil is a partner or is an employee of such a partnership;
 - (4) a principal stockholder or employee of the corporation which is the owner of the soil;
 - (5) a partner or employee in a partnership which is the owner of the soil;
 - (6) a fiduciary for the owner of the soil; including but not limited to a guardian, trustee, executor, administrator, receiver, or conservator for the owner of the soil; or
 - (7) a family member of the owner of the soil or related to the owner of the soil by marriage, blood, or adoption.
- 18. RELEASES: Lessee may relinquish the rights granted hereunder to the State at any time by recording the relinquishment in the county where this area is situated and filing the recorded relinquishment or certified copy of same in the GLO within ninety (90) days after its execution accompanied by the filing fee prescribed by the GLO rules in effect on the date of receipt by the GLO of such relinquishment or certified copy thereof. Such relinquishment will not have the effect of releasing Lessee from any liability theretofore accrued in favor of the State.
- 19. WARRANTY CLAUSE. The owner of the soil warrants and agrees to defend title to the Leased Premises. If the owner of the soil defaults in payments owed on the Leased Premises, then Lessee may redeem the rights of the owner of the soil in the Leased Premises by paying any mortgage, taxes or other liens on the Leased Premises. If Lessee makes payments on behalf of the owner of the soil under this section, Lessee may recover the cost of these payments from the rental and royalties due the owner of the soil.

- (a) PROPORTIONATE REDUCTION CLAUSE: If the owner of the soil owns less than the entire undivided surface estate in the above described land, whether or not Lessee's interest is specified herein, then the royalties herein provided to be paid to the owner of the soil shall be paid to him in the proportion which his interest bears to the entire undivided surface estate and the royalties herein provided to be paid to the GLO shall be likewise proportionately reduced. However, before Lessee adjusts the royalty due to the GLO, Lessee or his authorized representative must submit to the GLO a written statement which explains the discrepancy between the interest purportedly leased under this lease and the actual interest owned by the owner of the soil. If an undivided interest remains unleased on the land covered by this lease on the date of first production from the Leased Premises, the GLO shall be paid a royalty of twenty-five percent (25%) of the value of the Gross Production allocable to said unleased undivided interest payable on the same terms and conditions as are provided in this lease for the payment of royalty to the GLO, until such time as the Lessee has recouped its drilling and completion costs ("payout") and upon payout the Lessee will give notice to the GLO and beginning on the first day of the month after payout the GLO shall be paid the value of 100% of the Gross Production allocable to said unleased undivided interest less the proportionate operating costs. Upon written request from the GLO, the Lessee will provide the GLO with a title opinion verifying the percentage of unleased undivided interest on the Leased Premises.
- **(b) REDUCTION OF PAYMENTS:** If, during the primary term, a portion of the land covered by this lease is included within the boundaries of a pooled unit that has been approved by the School Land Board and the owner of the soil in accordance with Natural Resources Code Sections 52.151-52.154, or if, at any time after the expiration of the primary term, this lease covers a lesser number of acres than the total amount described herein, payments that are made on a per acre basis hereunder shall be reduced according to the number of acres pooled, released, surrendered, or otherwise severed, so that payments determined on a per acre basis under the terms of this lease during the primary term shall be calculated based upon the number of acres outside the boundaries of a pooled unit, or, if after the expiration of the primary term, the number of acres actually retained and covered by this lease.
- 21. LIEN: In accordance with N.R.C. Section 52.136, the State shall have a first lien upon all Oil and Gas produced from the area covered by this lease to secure payment of all unpaid royalty and other sums of money that may become due under this lease. By acceptance of this lease, Lessee grants the State, in addition to the lien provided by N.R.C. Section 52.136 and any other applicable statutory lien, an express contractual lien on and security interest in all leased minerals in and extracted from the Leased Premises, all proceeds which may accrue to Lessee from the sale of such leased minerals, whether such proceeds are held by Lessee or by a third party, and all fixtures on and improvements to the Leased Premises used in connection with the production or processing of such leased minerals in order to secure the payment of all royalties or other amounts due or to become due under this lease and to secure payment of any damages or loss that owner of the soil may suffer by reason of Lessee's breach of any covenant or condition of this lease, whether express or implied. This lease, when filed in the real property records where the Leased Premises are located, and for purposes of perfecting owner of the soil's lien on and security interest in all proceeds, shall constitute a financing statement under the Texas Uniform Commercial Code. This lien and security interest may be foreclosed with or without court proceedings in the manner provided in Title 1, Chapter 9 of the Texas Business and Commerce Code. Lessee agrees that the GLO may require Lessee to execute and record such instruments as may be reasonably necessary to acknowledge, attach or perfect this lien. Lessee hereby represents that there are no prior or superior liens arising from and relating to Lessee's activities upon the above-described property or from Lessee's acquisition of this lease. Should the GLO at any time determine that this representation is not true, then the GLO may declare this lease forfeited as provided herein.
- 22. FORFEITURE: If Lessee shall fail or refuse to make the payment of any sum within thirty (30) days after it becomes due, or if Lessee or an authorized agent should knowingly make any false return or false report concerning production or drilling, or if Lessee shall fail or refuse to drill any offset well or wells in good faith as required by law and the rules and regulations adopted by the GLO, or if Lessee should fail to file reports in the manner required by law or fail to comply with rules and regulations promulgated by the GLO, the SLB or the Railroad Commission, or refuse the proper authority access to the records pertaining to operations, or if Lessee or an authorized agent should knowingly fail or refuse to give correct information to the proper authority, or knowingly fail or refuse to furnish the GLO a correct log of any well, or if Lessee shall knowingly violate any of the provisions of this lease, or if this lease is assigned and the assignment is not filed in the GLO as required by law, or if Lessee shall fail or refuse to execute and file a release as required under this lease and by GLO rules, the rights acquired under the entirety of this lease shall be subject to forfeiture by the GLO, and it shall forfeit same when sufficiently informed of the facts which authorize a forfeiture, and when forfeited the area shall again be subject to lease. However, nothing herein shall be construed as waiving the automatic termination of this lease by operation of law or by reason of any special limitation arising hereunder. Forfeitures may be set aside and this lease and all rights thereunder reinstated before the rights of another intervene upon satisfactory evidence to the GLO of future compliance with the provisions of the law and of this lease and the rules and regulations that may be adopted relative hereto. Neither termination nor forfeiture of this lease shall have the effect of releasing Lessee from any liability theretofore accrued in favor of the State.
- 23. APPLICABLE LAWS AND DRILLING RESTRICTIONS: This lease shall be subject to all rules and regulations, and amendments thereto, promulgated by the Railroad Commission and the GLO governing drilling and producing operations on State land (specifically including any rules promulgated that relate to payment of royalties and auditing procedures), and shall be subject to all other valid statutes, rules, regulations, orders and ordinances that may affect operations under the provisions of this lease. Without limiting the generality of the foregoing, Lessee hereby agrees, by the acceptance of this lease, to be bound by and subject to all statutory and regulatory provisions relating to the GLO's audit billing notice and audit hearings procedures. Said statutes are currently found at N.R.C. Sections 52.135 and 52.137 through 52.140.
- 24. REMOVAL OF EQUIPMENT: Subject to limitations in this section, Lessee shall have the right to remove machinery and fixtures placed by Lessee on the Leased Premises, including the right to draw and remove casing, during or within six (6) months after the expiration or the termination of this lease. However, Lessee may not remove casing from any well capable of producing Oil and Gas in paying quantities. Additionally, Lessee may not draw and remove casing until after thirty (30) days written notice to the GLO and to the owner of the soil. If Lessee fails to remove such machinery and fixtures within the allotted time, then such machinery and fixtures shall, at the election of the owner of the soil, either become the property of the owner of the soil or the owner of the soil may have such machinery and fixtures removed at the sole expense of Lessee. Notwithstanding the foregoing, if this lease is forfeited or terminated for any reason, Lessee shall not remove the casing or any equipment from the Leased Premises until wells have been plugged to the satisfaction of the Railroad Commission, all pits have been properly filled and all debris has been removed from the Leased Premises, and owner of the soil has provided written approval of all restoration.
- 25. FORCE MAJEURE: If, in the last year of the primary term or thereafter, Lessee is prevented from complying with any express or implied covenant of this lease, from conducting drilling operations thereon, or from producing Oil and/or Gas therefrom, after effort made in good faith, by reason of war, rebellion, riots, strikes, fires, acts of God or any order, rule or regulation of governmental authority, then while so prevented, Lessee's obligation to comply with such covenant shall be suspended upon proper and satisfactory proof presented to the GLO (the GLO should be notified within fifteen (15) days of any force majeure event) and accepted by the GLO in support of Lessee's contention and Lessee shall not be liable for damages for failure to comply therewith; and this lease shall be extended while and so long as Lessee is prevented, by any such cause, from drilling, reworking operations or producing Oil and/or Gas from the Leased Premises. Lessee agrees to immediately notify the GLO when the reason for force majeure has ceased. Notwithstanding anything contained herein to the contrary, a well being shut-in as a result of pipeline disruptions that are subject to section 11 of this lease does not constitute an event of force majeure, and Lessee's obligations under this lease are not, for that reason, excused pursuant to this section 25.
- 26. LEASE SECURITY: Lessee shall take the highest degree of care and all proper safeguards to protect said Leased Premises and to prevent theft of Oil, Gas, and other hydrocarbons produced from said lease. This includes, but is not limited to, the installation of all necessary equipment, seals, locks, or other appropriate protective devices on or at all access points at the lease's production, gathering, and storage systems where theft of hydrocarbons can occur. Lessee shall be liable for the loss of any hydrocarbons resulting from theft and shall pay the GLO royalties thereon as provided herein on all Oil, Gas or other hydrocarbons lost by reason of theft.

- 27. SUCCESSORS AND ASSIGNS: The covenants, conditions and agreements contained herein shall extend to and be binding upon the heirs, executors, administrators, successors or assigns of Lessee herein.
- 28. VENUE: The owner of the soil and Lessee, including Lessee's successors and assigns, hereby agree that venue for any dispute involving the GLO and arising out of a provision of this lease, whether express or implied, regarding interpretation of this lease, or relating in any way to this lease or to applicable case law, statutes, or administrative rules, shall be in a court of competent jurisdiction either in Travis County, Texas, or in the county where the Leased Premises are located, at the option of the GLO.

29. LAND PROTECTIONS:

Lessee agrees to provide at least seven (7) days' prior notice to owner of the soil before commencing any surface operations on the Leased Premises, such notice to include location of operations and work to be performed.

- (a) Upon written request of owner of the soil, Lessee shall construct a fence around any drill site during drilling operations, and if production is obtained, Lessee shall construct a fence around all production facilities capable of turning cattle and/or livestock. Lessee agrees to install gates at all fence crossings used by Lessee in connection with operations hereunder. Should a cattle guard or guards be placed on the Leased Premises by Lessee, then such cattle guard(s) shall be left in place and become the property of owner of the soil after the expiration of this lease.
- (b) Lessee shall not cut any exterior or boundary fence nor open any locked exterior or boundary gates of the Leased Premises without owner of the soil's prior written permission, which shall not be unreasonably withheld.
- (c) No employee, representative, contractor or any other person allowed by Lessee to come upon the Leased Premises shall be permitted to hunt, fish, trap, or camp on the Leased Premises, nor shall any such persons be permitted to bring alcoholic beverages or illegal drugs on to the Leased Premises at any time.
- (d) All pits used by or on behalf of Lessee during drilling operations on the Leased Premises shall be lined with an impervious material so that no fluids may escape such pits. Lessee and its assigns shall not let any salt water or any other deleterious substance run on or over the Leased Premises, or let such substances run into owner of the soil's stock tanks or any creek, stream, river or other body of water, and absent owner of the soil's prior written consent to the contrary, Lessee shall not use any wells on the Leased Premises for salt water disposal purposes. If owner of the soil elects to consent to the use of wells located on the Leased Premises for salt water disposal purposes, the parties shall enter into a separate agreement covering such disposal.
- (e) Upon completion or abandonment of any well or wells, Lessee shall fill and level all slush pits and cellars and completely clean up the drilling site of all rubbish thereon and restore the surface to as near its original condition and contours as is practicable. Lessee shall, while conducting operations on the Leased Premises, keep said premises free of all rubbish, cans, bottles, paper cups or garbage. Lessee shall maintain trash containers at all work sites during construction on the Leased premises, such trash containers to be located at entrances and exits on each side of the road and near places of high activity. Tanks and equipment will be kept painted and presentable.
 - (f) When requested by the owner of the soil, Lessee shall bury its pipelines below plow depth.
- (g) No drill site locations, storage tanks, or treatment facilities shall be established within three hundred feet (300') of any residence or barn now situated on the Leased Premises without owner of the soil's prior written consent. Lessee shall conduct all drilling and production operations entirely within each drill site. The owner of the soil shall have the right to participate in the selection of the location of roadways to and from any drill site on the Leased Premises and that prior to beginning operations hereunder, Lessee shall contact the owner of the soil for consent as to the location of such roadways, which consent will not be unreasonably withheld.

30. DEFINITIONS:

- a. "BTU" means British thermal unit, which is the quantity of heat required to raise the temperature of one-pound avoirdupois of pure water from 58.5 degrees Fahrenheit ("o F") to 59.5° F. An MMBtu is one million (1,000,000) British thermal units.
- b. "Dry Gas" means a Gas that contains less than or equal to seven (7) lbs of water per million standard cubic feet. The volume of Gas, on a Dry Gas basis, shall be determined by mathematically removing the water vapor from Gas that is partially or fully saturated with water vapor at measurement conditions of flowing pressure and temperature. The total energy content of Gas shall be the product of multiplying the volume of Gas, on a Dry Gas basis, times the heating value per unit volume, in Btu/SCF, on a Dry Gas basis, at the same base temperature and base pressure.
- c. "Gas" means methane and other Gaseous hydrocarbons, including Gaseous combustible, noncombustible, and inert elements, compounds, components or mixtures thereof, and liquefiable hydrocarbons in the vapor stream. Gas volumes shall be calculated and reported, at the option of the GLO, in standard cubic feet (SCF), one thousand (1,000) standard cubic feet of Gas (MSCF), or one million (1,000,000) standard cubic feet of Gas (MMSCF).
- d. "Gross Heating Value or BTU Content" means the energy per unit volume represented by the number of BTUs produced by the complete combustion of one standard cubic foot of Gas (excluding hydrogen sulfide) at a temperature base of sixty degrees (60° F) Fahrenheit and pressure base of 14.65 pounds per square inch absolute.
- e. "Gross Production" means all Gas and fluids brought from underground up to and through the well head, and includes: (i) all hydrocarbons produced in liquid form as Oil or condensate at the well head and also all condensate, distillate, and any other liquid hydrocarbons recovered from Oil, condensate, or Gas run through a separator or other equipment; (ii) all hydrocarbons and Gaseous substances not in liquid form produced from any well; and (iii) natural Gasoline or liquid hydrocarbons, carbon dioxide, carbon black, sulfur or any other products produced or manufactured from any Gas or liquid. The Gross Production volumes of Oil, condensate, and Gas includes all sales, custody transfer dispositions, and/or stored volumes and all non-sales disposition volumes, including but not limited to, lease use, fuel, vent, flare, spills, uncontrolled releases, theft, and any other loss. The Gross Production of Gaseous hydrocarbons shall be adjusted and reported in MMBTUs.
- f. "Market Value" means the greatest of (i) the highest posted price, plus premium, if any, offered or paid for Oil, Gas, condensate, distillate, other hydrocarbons, or any Other Products produced or manufactured from the Oil or Gas, of similar characteristics and type in the general area, (ii) the prevailing market price thereof in the general area, (iii) the proceeds of the sale thereof, or (iv) the highest value reasonably available to Lessee. The proceeds of sale shall include the total value accruing to the Lessee from the sale or use of the production, including proceeds and any other thing of value received by Lessee or the operator.

- g. "Marketable" means that sufficient infrastructure is in-place or installed to allow for the sale or delivery of merchantable Oil and/or Gas into the custody of an authorized carrier, receiving agency, or party.
- h. "Merchantable" means (i) with respect to Gas, a Gas that is commercially free of dust, sand, dirt, gum-forming constituents, natural Gasoline, liquid hydrocarbons, water, inerts, and any other substances that may become separated from the Gas during handling thereof and may be injurious to utility facilities, industrial, commercial, and/or residential users that would cause the Gas to be unmarketable or require additional treating and/or processing to be ready for use and consumption (sale and use), and (ii) with respect to Oil, a crude Oil, condensate, and other liquid hydrocarbons recovered in liquid form from any hydrocarbon production (oil or Gas) produced on or from the Leased Premises that is suitable for normal refinery processing, sufficiently free of foreign contaminants or chemicals, and meets the appropriate pipeline or truck haul specifications for sediment and water.
- i. "Natural Gas Liquids (NGLs)" means those hydrocarbons liquefied, removed, recovered, or condensed from natural Gas at the surface in field production facilities as Oil or condensate or in natural Gas processing plants as Oil or stabilized condensate and as raw mix liquids prior to separation down to their base components. Natural Gas liquids that are not recovered or removed as condensate in plant systems located on or off the Leased Premises or in a Processing Plant consist of either: (i) Raw Mix, or (ii) component plant products consisting of merchantable and marketable commercial grades and/or blends of each of the individual components, after fractionation, of ethane, propane, iso-butane, normal butane, and natural Gasoline that include pentanes plus (iso-pentane, normal pentane and hydrocarbon components of higher molecular weight).
- j. "Non-Processed Gas" means all hydrocarbons and Gaseous substances not defined as Oil, that are not processed in plant systems located on or off the Leased Premises or in a Processing Plant to remove or extract Natural Gas Liquids to produce a Pipeline-Quality Natural Gas or Residue Gas (although the term includes such substances that have been removed from the Gas that include, but are not limited to, carbon dioxide, sulphur, water, or any other constituent or component necessary to produce a Pipeline-Quality Natural Gas).
- k. "Oil" means all hydrocarbons produced in a liquid form at the mouth of the well and also all condensate, distillate and other liquid hydrocarbons recovered in liquid form from any hydrocarbon production (oil or Gas) produced on or from the Leased Premises when run through a separator or other equipment that is stored at pressures less than or equal to 15 pounds per square inch gauge, and that is not extracted in the form of Raw Mix in plant systems located on or off the Leased Premises or in a Processing Plant prior to fractionation. All Oil volumes shall be corrected from the measurement condition to report the produced volume of Oil in Stock Tank Barrels at Stock Tank Conditions per the applicable API MPMS standards.
- 1. "Pipeline-Quality Natural Gas" means a natural Gas that is merchantable and marketable that meets an interstate or intrastate transmission company's minimum specifications with respect to (i) delivery pressure, (ii) delivery temperature, (iii) BTU content, (iv) mercaptan sulfur, (v) total sulfur, (vi) moisture and/or water content, (vii) carbon dioxide, (viii) oxygen, (ix) total inerts (the total combined carbon dioxide, helium, nitrogen, oxygen, and any other inert compound percentage by volume), (x) hydrocarbon dew point limits, (xi) merchantability, (xii) content of any liquids at or immediately downstream of the delivery point into a pipeline, and (xiii) interchangeability with the typical composition of the Gas in the pipeline with respect to the following indices: Wobbe Number, Lifting Index, Flashback Index, and Yellow Tip Index per AGA Bulletin No. 36.
- m. "Processed Gas" means natural Gas processed in a Processing Plant(s) located on or off the Leased Premises where Gas is processed to remove or extract liquefiable hydrocarbons or Raw Mix from the natural Gas stream to produce a Pipeline-Quality Natural Gas or Residue Gas, NGLs, and other products, and as used herein includes the Residue Gas, the Raw Mix (and resulting NGLs), and other products.
- n. "Processing Plant" means plant systems, located on or off the Leased Premises, that include a Gas processing plant, natural Gasoline plant, Gasoline plant, or other plant where raw unprocessed natural Gas is processed to remove or extract Raw Mix from the natural Gas stream to produce a Pipeline-Quality Natural Gas or Residue Gas and other products, and the Raw Mix is then either (i) separated by fractionation down to its base components prior to storage and/or transport that meets or conforms to all applicable Gas Processors Association (GPA) Standards and/or Specifications for the commercial sale of each liquefiable hydrocarbon product, or (ii) transported to another plant for separation down to its base components by fractionation prior to storage and/or transport for the commercial sale of each liquefiable hydrocarbon product. Any deductions, costs, or processing fees associated with the removal or recovery of Natural Gas Liquids is strictly limited to only that part of any Processing Plant or facility where Raw Mix is recovered, and if applicable at that plant, also fractionated to their component parts.
- o. "Produced in Paying Quantities" means that the receipts from the sale or other authorized commercial use of the substances(s) covered exceed out of pocket operational expenses for the six months last past.
- p. "Raw Mix" means a mixture of Natural Gas Liquids (NGLs) that has a true vapor pressure greater than fifteen (15) pounds per square inch gauge at 100 degrees Fahrenheit (°F) prior to separation down to its base components by fractionation, typically consisting of a mixture of liquefiable hydrocarbons, including but not limited to, the natural Gas liquids ethane, propane, iso-butane, normal butane, and natural Gasoline that include pentanes plus (iso-pentane, normal pentane and hydrocarbon components of higher molecular weight).
- q. "Ready for Sale and Use" means the following:
 - i. For Oil: Oil that is merchantable and marketable and otherwise in a condition such that the Oil is suitable for transfer of ownership and will be accepted by a purchaser under a sales contract typical for the field or area.
 - ii. For Non-Processed Gas: A Pipeline-Quality Natural Gas that is merchantable and marketable and otherwise in a condition suitable for transfer of ownership such that the natural Gas or other Gas product will be interchangeable with and accepted by a purchaser under an interstate and/or intrastate Gas sales contract typical for the field or area for use by an industrial, commercial, and/or residential user.
 - iii. For Residue Gas: A Pipeline-Quality Natural Gas at the tailgate of the only or last stage of Gas processing to remove Natural Gas Liquids that is merchantable and marketable and otherwise in a condition suitable for transfer of ownership such that the natural Gas or other Gas product will be interchangeable with and accepted by a purchaser under an interstate and/or intrastate Gas sales contract typical for the field or area for use by an industrial, commercial, and/or residential user.
 - iv. For Natural Gas Liquids: (A) merchantable and marketable Raw Mix at the point sold as such to a third party at arms' length, or (B) merchantable and marketable Natural Gas Liquids at the tailgate of a Processing Plant after fractionation that are suitable

for transfer of ownership that will be interchangeable with and accepted by a purchaser for sale or use by an industrial and/or commercial user.

- v. **For Other Products:** Products that are in a condition that will be accepted by a purchaser under a sales contract typical for the field or area for use by an industrial or commercial user.
- r. "Residue Gas" means (i) the material that remains after a separation, treatment, or Gas conditioning process, and (ii) that Gas remaining after the recovery of Natural Gas Liquids to produce a Pipeline-Quality Natural Gas. If the Gas is processed to remove liquefiable hydrocarbons in a series of Processing Plants, then the Residue Gas is that Gas remaining after the recovery of Natural Gas Liquids to produce a Pipeline-Quality Natural Gas at the last Processing Plant in the series.
- s. "Stock Tank Barrel" means the volume of liquid hydrocarbons that is equivalent to the volume of forty-two (42) U.S. gallons at atmospheric pressure and 60 °F.
- t. "Stock Tank Conditions" means a stock tank meeting all applicable API specifications and requirements at atmospheric pressure and 60°F.
- 31. DISCLOSURE CLAUSE. All provisions pertaining to the lease of the Leased Premises have been included in this instrument, including the statement of the true consideration to be paid for the execution of this lease and the rights and duties of the parties. Any collateral agreements concerning the development of Oil and Gas from the Leased Premises which are not contained in this lease are invalid.
- 32. FIDUCIARY DUTY. The owner of the soil owes the State a fiduciary duty and must fully disclose any facts affecting the State's interest in the Leased Premises. When the interests of the owner of the soil conflict with those of the State, the owner of the soil is obligated to put the State's interests before his personal interests.
- 33. INDEMNITY. Lessee hereby releases and discharges the State of Texas and the owner of the soil, their officers, employees, partners, agents, contractors, subcontractors, guests, invitees, and their respective successors and assigns, of and from all and any actions and causes of action of every nature, or other harm, including environmental harm, for which recovery of damages is sought, including, but not limited to, all losses and expenses which are caused by the activities of Lessee, its officers, employees, and agents arising out of, incidental to, or resulting from, the operations of or for Lessee on the Leased Premises hereunder, or that may arise out of or be occasioned by Lessee's breach of any of the terms or provisions of this lease, or by any other negligent or strictly liable act or omission of Lessee. Further, Lessee hereby agrees to be liable for, exonerate, indemnify, defend and hold harmless the State of Texas and the owner of the soil, their officers, employees and agents, their successors or assigns, against any and all claims, liabilities, losses, damages, actions, personal injury (including death), costs and expenses, or other harm for which recovery of damages is sought, under any theory including tort, contract, or strict liability, including attorneys' fees and other legal expenses, including those related to environmental hazards, on the Leased Premises or in any way related to Lessee's failure to comply with any and all environmental laws; those arising from or in any way related to Lessee's operations or any other of Lessee's activities on the Leased Premises; those arising from Lessee's use of the surface of the Leased Premises; and those that may arise out of or be occasioned by Lessee's breach of any of the terms or provisions of this lease or any other act or omission of Lessee, its directors, officers, employees, partners, agents, contractors, subcontractors, guests, invitees, and their respective successors and assigns. Each assignee of this lease, or an interest therein, agrees to be liable for, exonerate, indemnify, defend and hold harmless the State of Texas and the owner of the soil, their officers, employees, and agents in the same manner provided above in connection with the activities of Lessee, its officers, employees, and agents as described above. EXCEPT AS OTHERWISE EXPRESSLY LIMITED HEREIN, ALL OF THE INDEMNITY OBLIGATIONS AND/OR LIABILITIES ASSUMED UNDER THE TERMS OF THIS AGREEMENT SHALL BE WITHOUT LIMITS AND WITHOUT REGARD TO THE CAUSE OR CAUSES THEREOF (EXCLUDING PRE-EXISTING CONDITIONS), STRICT LIABILITY, OR THE NEGLIGENCE OF ANY PARTY OR PARTIES (INCLUDING THE NEGLIGENCE OF THE INDEMNIFIED PARTY), WHETHER SUCH NEGLIGENCE BE SOLE, JOINT, CONCURRENT, ACTIVE, OR PASSIVE.
- 34. ENVIRONMENTAL HAZARDS. Lessee shall use the highest degree of care and all reasonable safeguards to prevent contamination or pollution of any environmental medium, including soil, surface waters, groundwater, sediments, and surface or subsurface strata, ambient air or any other environmental medium in, on, or under, the Leased Premises, by any waste, pollutant, or contaminant. Lessee shall not bring or permit to remain on the Leased Premises any asbestos containing materials, explosives, toxic materials, or substances regulated as hazardous wastes, hazardous materials, hazardous substances (as the term "Hazardous Substance" is defined in the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), 42 U.S.C. Sections 9601, et seq.), or toxic substances under any federal, state, or local law or regulation ("Hazardous Materials"), except ordinary products commonly used in connection with Oil and Gas exploration and development operations and stored in the usual manner and quantities. LESSEE'S VIOLATION OF THE FOREGOING PROHIBITION SHALL CONSTITUTE A MATERIAL BREACH AND DEFAULT HEREUNDER AND LESSEE SHALL INDEMNIFY, HOLD HARMLESS AND DEFEND THE STATE OF TEXAS AND THE OWNER OF THE SOIL FROM AND AGAINST ANY CLAIMS, DAMAGES, JUDGMENTS, PENALTIES, LIABILITIES, AND COSTS (INCLUDING REASONABLE ATTORNEYS' FEES AND COURT COSTS) CAUSED BY OR ARISING OUT OF (1) A VIOLATION OF THE FOREGOING PROHIBITION OR (2) THE PRESENCE, RELEASE, OR DISPOSAL OF ANY HAZARDOUS MATERIALS ON, UNDER, OR ABOUT THE LEASED PREMISES DURING LESSEE'S OCCUPANCY OR CONTROL OF THE LEASED PREMISES. LESSEE SHALL CLEAN UP, REMOVE, REMEDY AND REPAIR ANY SOIL OR GROUND WATER CONTAMINATION AND DAMAGE CAUSED BY THE PRESENCE OR RELEASE OF ANY HAZARDOUS MATERIALS IN, ON, UNDER, OR ABOUT THE LEASED PREMISES DURING LESSEE'S OCCUPANCY OF THE LEASED PREMISES IN CONFORMANCE WITH THE REQUIREMENTS OF APPLICABLE LAW. THIS INDEMNIFICATION AND ASSUMPTION SHALL APPLY, BUT IS NOT LIMITED TO, LIABILITY FOR RESPONSE ACTIONS UNDERTAKEN PURSUANT TO CERCLA OR ANY OTHER ENVIRONMENTAL LAW OR REGULATION, LESSEE SHALL IMMEDIATELY GIVE THE STATE OF TEXAS AND THE OWNER OF THE SOIL WRITTEN NOTICE OF ANY BREACH OR SUSPECTED BREACH OF THIS PARAGRAPH, UPON LEARNING OF THE PRESENCE OF ANY HAZARDOUS MATERIALS, OR UPON RECEIVING A NOTICE FROM ANY GOVERNMENTAL AGENCY PERTAINING TO HAZARDOUS MATERIALS WHICH MAY AFFECT THE LEASED PREMISES, THE OBLIGATIONS OF LESSEE HEREUNDER SHALL SURVIVE THE EXPIRATION OR EARLIER TERMINATION, FOR ANY REASON, OF THIS LEASE.
 - 35. EXECUTION: This lease must be signed and acknowledged by the Lessee before it is filed of record in the county records and in the GLO.
- 36. LEASE FILING: Pursuant to Chapter 9 of the Tex. Bus. & Com. Code, this lease must be filed of record in the office of the County Clerk in any county in which all or any part of the Leased Premises is located, and certified copies thereof must be filed in the GLO. This lease is not effective until a certified copy of this lease (that is made and certified by the County Clerk from his records) is filed in the GLO in accordance with Texas Natural Resources Code Sec. 52.183. Additionally, this lease shall not be binding upon the State unless it recites the actual and true consideration paid or promised for execution of this lease. The bonus due the GLO and the prescribed filing fee shall accompany the certified copies sent to the GLO.

LESSEE	
BY:	_
TITLE:	
DATE:	-
OWNER OF THE SOIL	OWNER OF THE SOIL
Individually and as agent for the State of Texas	Individually and as agent for the State of Texas
BY:	BY:
TITLE:	TITLE:
DATE:	DATE:
OWNER OF THE SOIL	OWNER OF THE SOIL
Individually and as agent for the State of Texas	Individually and as agent for the State of Texas
BY:	BY:
TITLE:	TITLE:
DATE:	DATE:

STATE OF	(CORPORATION ACKNOWLEDGMENT)
COUNTY OF	
BEFORE ME, the undersigned authority, on this day personally appeared	
known to me to be the person whose name is subscribed to the foregoing instruments as	
of	
she executed the same for the purposes and consideration therein expressed, in the capac	ity stated, and as the act and deed of said corporation.
Given under my hand and seal of office this the day of	
	Notary Public in and for
STATE OF	(CORPORATION ACKNOWLEDGMENT)
COUNTY OF	
BEFORE ME, the undersigned authority, on this day personally appeared	
known to me to be the person whose name is subscribed to the foregoing instruments as	
of	and acknowledged to me that he o
she executed the same for the purposes and consideration therein expressed, in the capac	ity stated, and as the act and deed of said corporation.
Given under my hand and seal of office this the day of	, 20
	Notary Public in and for

STATE OF	(INDIVIDUAL ACKNOWLEDGMENT)
COUNTY OF	
BEFORE ME, the undersigned authority, on this day personally appeared	
known to me to be the persons whose names are subscribed to the foregoing instrument, consideration therein expressed.	and acknowledged to me that they executed the same for the purposes and
Given under my hand and seal of office this the day of	20
	Notary Public in and for
STATE OF	(INDIVIDUAL ACKNOWLEDGMENT)
COUNTY OF	
BEFORE ME, the undersigned authority, on this day personally appeared	
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Given under my hand and seal of office this the day of	
	Notary Public in and for

STATE OF		(INDIVIDUAL ACKNOWLEDGMENT)		
COUNTY OF				
BEFORE ME, the undersigned authority, on this day personally appeared				
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consideration therein expressed.				
Given under my hand and seal of office this the	day of			
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	No	stary Public in and for		