

## SURFACE USE AGREEMENT

THIS SURFACE USE AGREEMENT (the "Agreement") is made and entered into this 10th day of October, 2011 by and between PERGAMOS, L.P., SLICK ROCK, L.P., HEP OIL COMPANY, LTD. and BARRACUDA INVESTMENTS, LLC, with an address of c/o Joint Resources Company, 5416 Birchman Avenue, Fort Worth, Texas 76107 (hereinafter, collectively, "Grantor"), and CARRIZO OIL & GAS, INC., a Texas corporation, with an address of 1000 Louisiana Street, Suite 1500, Houston, Texas 77002 (hereinafter "Grantee"). Joint Resources Company is also executing this Agreement for the purposes specified in Section 24 below.

### Recitals:

Grantor is the owner of the surface estate of the following described lands located in Weld County, Wyoming (the "Lands"):

#### Township 7 North, Range 60 West, 6<sup>th</sup> P.M.

Section 3:	N1/2, SW1/4, & SE1/4
Section 4:	E1/2
Section 7:	All
Section 8:	Less 160.43 acres in the SW1/4 and the SE1/4
Section 9:	All
Section 17:	All
Section 18:	All
Section 19:	All
Section 20:	W1/2
Section 29:	W1/2
Section 30:	All
Section 32:	E1/2
Section 35:	E1/2

Grantee, as the successor in interest to New Frontier Energy, Inc., has entered into those Oil & Gas Leases covering the Lands as described on Exhibit "A" hereto (the "Leases"). In the event of any conflict or inconsistency related to the use of the surface of the lands between or among any provisions in this Agreement and the Leases or any other oil and gas leases owned or hereinafter owned by Grantee or its affiliate covering any portion of the Lands (including any implied rights of Grantee under any of such oil and gas leases), the terms and provisions of this Agreement shall supersede, govern and control.

Grantor currently utilizes the Lands for agricultural, grazing, ranching, water collection and sales and other uses and such uses will continue during the term of this Agreement;

Grantee desires to prospect, drill and explore for oil and gas pursuant to the terms of the Leases; The purpose of this agreement is to agree as to reasonable compensation to be paid by Grantee to the Grantor for certain uses of the surface of the Lands for Grantee's operations under the Leases, and to assign certain responsibilities between Grantor and Grantee in regard to all activities associated with the capture, production and sale of oil or gas.

NOW THEREFORE, for and in consideration of the covenants and agreements herein contained, the parties agree as follows:

1. Grant of Surface Rights; Reservation of Rights. Grantor hereby conveys to Grantee temporary easements and rights-of-way together with the right, so long as same are used for the purposes herein granted, to enter upon the Lands to construct, maintain and use

new and existing access roads to the well site locations, and to construct well site locations, tank battery sites, pipeline rights-of-way and other related facilities or activities that impacts the surface of the Lands specifically agreed upon herein (all of the foregoing being sometimes hereinafter referred to as "Facilities"), which are necessary for Grantee to properly drill, equip, complete for production, produce, or plug and abandon oil and gas wells drilled and to be produced under the terms of the Leases. Grantor hereby reserves unto itself, and its successors and assigns, the right to use the Land for pasturage of livestock and related ranching purposes, and any and all other rights and uses which do not materially conflict with the rights granted hereunder to Grantee. Due consideration shall be given by Grantee to such reserved rights, interests and uses when locating and constructing all Facilities.

2. Location of Facilities: Reasonable and Prudent Grantee. Grantee shall consult with Grantor and obtain Grantor's written approval of the specific location of any Facilities, such approval not to be unreasonably withheld or delayed. Grantee shall not locate, install or construct any Facility on the Lands, or impact or impair the surface of the Lands for the purpose thereof, without the prior written approval of the Grantor, such approval not to be unreasonably withheld or delayed. Grantee shall only use the Lands consistent with the rights and obligations granted to Grantee hereunder and its rights and obligations under the Leases and applicable law, and as may be deemed reasonable and necessary by a reasonable and prudent Grantee under similar circumstances and as burdened by and subject to this Agreement.
3. Term. This Agreement shall remain in full force and effect from the date hereof and so long thereafter as any Lease or any part thereof remains valid, and so long as Grantee uses the Facilities or any particular Facility, subject to the default and termination provisions hereinafter set forth. When all wells are permanently plugged and abandoned as required by federal and/or state authorities, and the related rights-of-way and easements granted hereunder are not used by Grantee for a period of more than twelve (12) consecutive months, then this Agreement and all associated rights-of-way and easements shall terminate and all rights herein granted will automatically revert to Grantor, and Grantee shall have a period of six (6) months (weather permitting) from and after the date of terminations in which to remove at its sole cost, risk and expense all of its personal property and equipment located on the Lands, and Grantee shall thereafter timely and properly reclaim, recontour, restore and reseed all disturbed surfaces in accordance with the terms hereof. In the event all wells are not permanently plugged and abandoned in the manner herein required but are only temporarily abandoned for further evaluation or any other reason, then all the terms and conditions of this Agreement shall remain in full force and effect, so long as the payments required hereunder are timely made.
4. Non - exclusive Rights. The rights of Grantee to use the Lands as set forth herein are non-exclusive, and Grantor reserves the right to use all access roads and all surface and subsurface uses of the Lands, provided such uses do not interfere with the operations of Grantee. Grantor, further, reserves the right to grant successive easements on or across the Lands to other parties unrelated to Grantee, provided such uses do not substantially interfere with the operations of Grantee.
5. Compliance with Laws. Grantee agrees to comply with and conform to all applicable laws, rules and regulations in its use of the surface, including without limitation, the rules and regulations of the Bureau of Land Management, State of Colorado, the Colorado Oil and Gas Conservation Commission, and the Colorado Department of Public Health and Environment, or other such agencies having jurisdiction of the Lands.



6. Compensation for Use of Surface. Grantee shall compensate the Grantor for use of the surface of the Lands pursuant to the following:

- a. Locations. Grantee agrees to pay Grantor the sum of ~~Three Thousand Five Hundred Dollars (\$3,500.00)~~ per acre used or partially used for each well site located on the Lands.
- b. Access Roads. Grantee agrees to pay Grantor the sum of ~~Twenty and No/100 Dollars (\$20.00)~~ per linear foot in advance for the right-of-way and surface damages for all Access Roads (defined below) used.
- c. Pipelines. For all pipelines up to 8 inches in diameter (including, without limitation, gas gathering lines and flow lines), Grantee agrees to pay Grantor the sum of ~~Sixty and No/100 Dollars (\$60.00)~~ per linear foot in advance for the easement and right-of-way and for surface damages for all such pipelines on the Lands. The easement and right-of-way granted under this section are for a single pipeline, and Grantee shall have no right to lay more than one pipeline in an easement and right-of-way without the prior written consent of Grantor. The take-up of any pipeline shall likewise be compensated at a rate of ~~Six and No/100 Dollars (\$6.00)~~ per linear foot. Rights-of-way and damages for pipelines in excess of 8 inches in diameter shall be covered by a separate easement agreement between the parties.
- d. Power Lines. Grantee will consult with Grantor and with the independent power company supplying power to Grantee with respect to the location of power lines prior to construction. Grantee shall obtain Grantor's written approval of the specific location of any Power Lines and route thereof prior to construction, such approval not to be unreasonably withheld or delayed. Power lines will be constructed so as to minimize interference with existing and future ranching operations. Grantee shall pay Grantor a one-time payment of ~~Twenty and No/100 Dollars (\$20.00)~~ per linear foot for overhead power lines. Grantee shall pay Grantor a one-time payment of ~~Two and No/100 Dollars (\$2.00)~~ per linear rod for underground power lines.
- e. Tank Batteries. For each "tank battery" site constructed in the event a well is completed as a producing well, Grantee shall pay Grantor the sum of ~~Two Thousand Dollars (\$2,000.00)~~ per acre or partial acre used for each tank battery site. The location for each such tank battery shall not exceed one (1) acres in size. Only one tank battery site will be permitted for each well site location.
- f. Other. Any buildings, structures or other facilities and items not specifically mentioned in this Agreement shall be negotiated under a separate written agreement.
- g. Timing of Payments. The appropriate payments shall be paid by Grantee before entering upon the Lands to construct the Facilities, and, with respect to all annual payments, on the anniversary date of such initial payment each and every year thereafter until the Lands have been reclaimed as provided herein. A schedule of the annual payments to be made hereunder, as amended from time to time, shall be attached hereto as Exhibit "A".
- h. Compensation for Extraordinary Loss or Damage to Property. In addition to the foregoing payments, which are acknowledged as sufficient and in full satisfaction for damages caused or created by the reasonable and customary entry, rights-of-

way and use the Lands for locations, roads, pipelines, power lines, or tank batteries, Grantee shall also compensate Grantor for all other damages suffered by Grantor, including without limitation damage to livestock, buildings or improvements or injuries to persons, damage or impairment to Grantor's water wells (as noted in Item 8h), creeks, reservoirs and springs, damages caused by the negligence of, or excessive use by, Grantee and its employees, agents and contractors, and damages caused by fires, spills, discharge, leaks, releases, pipeline breaks, and damages resulting from any other matter or event caused by, arising out of or in connection with Grantee's operations on the Lands. Provided, however, Grantee shall not be liable to Grantor for any, indirect, consequential, exemplary or punitive damages resulting from or arising out of this Agreement, including, without limitation, loss of profits or business interruptions, however the same may be caused save and except for gross negligence or wonton or willful misconduct. The waiver of damages contained in this provision shall survive the termination of this Agreement

- i. Overriding Royalty Interest. In lieu of the damage payments due to Grantor under sub-sections (a) through (e) above, Grantee may elect at any time to grant to Grantor an overriding royalty interest of one percent (1%) of 8/8ths of all oil, gas or other liquid or gaseous hydrocarbons produced from any well located on a well site on the Lands, determined and measured in the same manner as royalty on the oil, gas or other liquid or gaseous hydrocarbons produced, saved and sold from the Leases, or land pooled therewith. Grantee shall provide Grantor with written notice of its election under this Section 6(i), at which time all damages otherwise thereafter payable to Grantor under sub-sections (a) through (e) above will be replaced with the one percent (1%) of 8/8ths overriding royalty interest as provided in this sub-clause (i), for all production of all oil, gas or other liquid or gaseous hydrocarbons produced from any well located on a well site on the Lands, commencing with production from the first day of the calendar month that such notice is given by Grantee. Grantee shall provide Grantor with a recordable assignment of the (1%) overriding royalty interest for each applicable well and unit thereunder within sixty (60) days from (i) the date of Grantee's notice to Grantor under this Section 6(i) as to wells then producing or then being drilled or shut-in and (ii) the date of first production from each subsequent well thereafter drilled by Grantee.
7. Payments, Default and Termination. All payments required hereunder may be made by Grantee's company check, certified funds or cashier's check. Unless payments required hereunder are contested in good faith by Grantee, in the event of the failure by Grantee to timely make any payment required hereunder or to otherwise comply with all terms hereunder, then Grantor shall notify Grantee in writing of said failure. Grantee shall thereafter have thirty days (30) days to completely cure such default and /or make any required payment. The waiver of any default shall not be deemed to be a waiver of a subsequent default. In the event Grantee does not cure the uncontested default within the time specified, interest shall accrue from the due date at 10% computed on an annualized basis. Except for emergencies or safety precautions, Grantee's access to the Lands may be suspended by Grantor, including the right of ingress and egress, until such default has been cured, and Grantor shall not be liable for any loss or damage to Grantee occasioned by Grantor's enforcement of this provision. In the event that Grantee fails to cure a default within one hundred twenty (120) following notice thereof by Grantor, then in addition to any other remedy available at law or in equity, and without regard to election of remedies, Grantor may terminate this Agreement upon written notice to Grantee, whereupon this Agreement shall have no further force or effect, and Grantor shall not be liable for any loss or damage to Grantee occasioned by Grantor's enforcement of this



provision. Grantee may make any disputed payment under protest with reservation of all rights.

8. Limitation of Rights: Covenants of Grantee.

- a. General. The parties acknowledge and agree that without the prior written consent of Grantor, Grantee may not use the Lands in connection with operations on other premises.
- b. Well Site Locations. Grantee agrees to utilize no more than ten (10) acres of land per each well site during the drilling phase of operations. Each well site shall be reduced to no more than a one and one 1/2 (1-1/2) acre production site once the completion phase of operations is completed on such well site, such drilling phase not to extend beyond three (3) years from the date the first well was commenced on such well site. At such time each well site is reduced to a production site of one and 1/2 (1-1/2) acre, Grantee shall restore and reclaim the residual unused portion of the well site according to Section 9 below. Thereafter, the reduced production sites may be increased to no more than five (5) acres as needed to conduct reworking operations, recompletion operations or other operations requiring a drilling rig or other heavy equipment, such increase in the size of the production site shall be limited to a period not to exceed one (1) year from the date that operations are commenced on the enlarged production site. At each instance that a production site is enlarged as provided for herein, Grantee shall pay Grantor ~~XXXXXX~~ per acre utilized by Grantee in excess of the existing one (1) acre production site. At each instance that Grantee ceases to use the enlarged production site as provided herein, Grantee shall reclaim and restore the residual unused portion of the enlarged production site according to Section 9 below. No well shall be drilled closer than 600 feet to any existing residence, windbreak, corral, barn, windmill, water well, or any other structure, unless with the prior written consent of Grantor. Grantee agrees to fence pits and other dangerous areas and to keep the well site and rights-of-way safe and in good order. All fences shall be constructed with woven livestock wire, and with posts not over 12 feet apart. No pits or trenches shall be left unsupervised or open during off-work hours unless they are temporarily fenced if livestock is in the pasture where such activities are occurring.
- c. Water Hauling and Frac Ponds. No water may be hauled or transported to the Lands for any purpose whatsoever without the prior written permission of Grantor, which consent and permission shall not be unreasonably withheld or delayed. Notwithstanding the foregoing, to accommodate fracture stimulation operations, Grantee may construct no more than two (2) frac or water retention ponds ("Frac Pond" in the singular and "Frac Ponds" in the plural) each of a size compromising no more than five (5) acres each, shall be allowed on the Lands described herein. Upon Grantees request in writing properly delivered to Grantor, Grantor shall consider but not be obligated to grant to Grantee no more than two (2) additional Frac Ponds, compromising no more than five (5) acres each. The location of all Frac Ponds located on the Lands to be used and constructed by Grantee for drilling and/or completion of well purposes only shall be approved in writing prior to construction by Grantor from time to time (after prior consultation with Grantor), which approval shall not be unreasonably withheld or delayed on the first two (2) of such Frac Ponds. Grantee shall solicit Grantor's approval of a particular location for any Frac Pond by requesting such approval in writing and including with such request a detailed map or plat identifying the proposed location of such frac or water retention pond and any temporary water transfer

lines to and from any such Frac Ponds. All Frac Ponds shall be constructed in a manner and quality whereby such Frac Ponds will be permanent and Grantor shall have the option within ninety (90) days notice prior to Grantee's reclamation of the same, to take over and own any such Frac Pond on an individual Frac Pond by Frac Pond basis. Upon Grantee's request in writing properly delivered to Grantor, and upon Grantor's approval, not to be unreasonably withheld or delayed, in a manner least offensive to Grantee's other operations on the Lands, Grantee may lay temporary water pipes across the Lands from its sources of water to the Well Location during Operations for a period not to exceed ninety (90) consecutive days. Grantee shall solicit Grantor's approval of location for any temporary water lines by requesting such approval in writing and including with such request a detailed map or plat identifying the proposed location and routes of such temporary water lines to and from any such water sources and the well location. The location of all such temporary water lines located on the Lands are to be used and constructed by Grantee for drilling and/or completion of well purposes only, and may be approved in writing prior to construction on an ongoing basis by Grantor from time to time (after prior consultation with Grantor), which approval shall not be unreasonably withheld or delayed as specified above. Grantee agrees to pay Grantor the sum of ~~One and No/100 Dollars (\$1.00)~~ per linear foot in advance for each temporary water line used. Grantee shall create a cross over where any such waterline crosses a roadway. Grantee may not use water from Grantor's tanks, wells, streams. Grantee may lay such temporary water lines across the Lands from its sources of water to the Well Location during Operations for a period not exceed ninety (90) consecutive days. Water may be produced at Grantee's expense and purchased from Grantor at a price of fifty cents (0.50) per barrel. Such purchased water shall be obtained from wells existing at the time this agreement is signed or from tanks specified by Grantor.

- d. Roads. All roads other than Grantor's existing roads shall be constructed by Grantee at its sole cost and expense. The location of all roads and other access routes located on the Lands ("Access Routes") to be used and constructed by Grantee for ingress and egress to the Facilities shall be approved in writing prior to construction by Grantor from time to time (after prior consultation with Grantor), which approval shall not be unreasonably withheld or delayed. Access Roads shall not exceed twenty feet (20') in width. Grantee shall solicit Grantor's approval of a particular location for Access Routes by requesting such approval in writing and including with such request a detailed map or plat identifying the proposed location of such Access Routes. The location of the Access Routes may be changed from time to time by Grantor at Grantor's sole cost and expense, however, Grantor will solicit and obtain Grantee's consent for a particular changed location of the Access Road by requesting such approval in writing and including with such request a map or plat identifying the proposed location of such changed location, Grantee's consent not to be unreasonably withheld or delayed. All ingress and egress by Grantee (and its contractors, etc.) over the leased roads or to and from the Facilities shall occur only on the approved Access Routes. Any road constructed by Grantee on any Access Route shall be crushed limestone, crushed granite, or caliche. All roads constructed by Grantee on the Lands shall be maintained by Grantee at Grantee's sole cost and expense. Grantor reserves the right for Grantor, and the successors and assigns and invitees of Grantor, to use the Access Routes as a means of access to and from the Lands and otherwise as long as such use does not substantially interfere with Grantee's use of the Access Road. At those locations the Access Routes cross creeks on the Lands, Grantee shall construct low water crossings or install culverts and Grantee shall reinforce the creek banks at such crossing to prevent erosion.



- e. Pipelines. Grantee agrees that all pipelines, flowlines, saltwater disposal lines (in each case, not to exceed 8 inches in diameter), or utility lines relating to the Leases or Grantee's operations on the Lands (collectively "Pipelines") shall be buried by Grantee below plow depth minimum three feet (3'). The right-of-way or easement for the Pipeline shall not exceed thirty feet (30') feet in width during construction and shall be reduced to no more than ten feet (10') in width upon completion. In addition, Grantee agrees that all of the Pipelines shall be buried and cased, at Grantee's expense, to the extent required to comply with all applicable laws and all rules and regulations or governmental authorities having or asserting jurisdiction. Any ditches dug during installation of the Pipelines shall be "double ditched" unless said requirement shall be waived in writing by Grantor; that is, in excavating, the topsoil shall be placed on one side of the ditch and the subsoil on the other side, and in back filling, the subsoil shall be replaced first, followed by the topsoil, and same shall be filled and tamped until the original contour is restored as is reasonably practicable under the circumstances. Pipelines shall only be constructed at locations approved in writing by Grantor which consent shall not be unreasonably withheld, with the intent that Pipelines will be located, to the extent practicable, along property lines and fence lines. After installation of a Pipeline, Grantee shall restore the surface of the Lands that was disturbed or impacted by construction of the Pipeline to as near its original condition as is reasonably practicable under the circumstances.
- f. Minimize Impact. Grantee shall at all times use reasonable efforts to minimize the impact of its operations on the Lands. Whenever possible and if reasonably appropriate for its operations, Grantee shall consolidate its Facilities for as many wells as practical, locating in-coming power at a central point, constructing underground power lines whenever possible, and placing all roads, pipelines and power lines in the same corridor. To minimize the visual impact on the landscape of the Lands, Grantee shall keep buildings and structures as small and few as reasonably possible, and shall paint such buildings and structures using earth tones on the exterior thereof. Grantee shall at all times keep well locations, road rights-of-way and other areas used by Grantee safe and in good order, free of litter and debris caused by Grantee. Under no circumstances will Grantee bury any trash, debris, or foreign material of any nature on any of the Lands. No salt water, drilling mud, produced fluids or other waste substance shall be disposed of or injected on or under the Lands. Grantee shall not purposefully discharge (or bury) any oil, condensate, saltwater, or any substance used in drilling or production onto the Lands under any circumstances. Prior to commencing production from any well on the Lands, the tanks and other storage vessels shall be enclosed by an earthen berm or man-made structure of sufficient height to reasonably contain any discharge which might occur. In the event that there is a discharge, Grantee shall restore the affected area to its original condition insofar as reasonably practicable. Grantee agrees that such restoration shall include correction of any erosion damage and removal of any contaminated soil, and replacement with uncontaminated soil, insofar as reasonably practicable.
- g. Erosion Prevention; Dust Suppression. Grantee agrees to use reasonable means to prevent washes, erosion, run-off problems, ruts or other property damage insofar as caused by Grantee's activities, and in doing so, Grantee shall monitor and promptly correct any erosion caused by Grantee's activities. Grantee shall install water bars in disturbed areas a minimum of a) 5% through 15% grade or slope, every 300 feet; b) 16% through 30% grade or slope, every 200 feet; and c) greater

than 30% grade or slope, every 100 feet. All reasonable measures must be taken to prevent erosion loss of the topsoil insofar as caused by Grantee's activities.

- h. No Stacking of Rigs and Equipment. Neither Grantee, nor its agents or contractors, shall have the rights to stack or store rigs or other equipment, pipe, supplies or parts on the Lands, except during drilling, reworking or construction operations.
- i. No Offices or Living Quarters. Grantee shall not cause to be constructed any living quarters on the well site or on any of the Lands with the exception of necessary personnel, namely geologists, drilling and chemical experts, during actual drilling operations.
- j. Drilling Water. Before drilling any water wells on said Lands, Grantee shall first obtain written approval, which approval shall be at Grantor's sole discretion. Upon written approval of Grantor for a water well, on a well by well basis, Grantee may at Grantee's sole expense drill one or more so approved water wells drilled and equipped by Grantee to Grantor's written and reasonable specifications at mutually agreeable locations on the Leased Premises, and use the water from such Wells for Grantee's Operations with no obligation to compensate Grantor for the use of such water from such wells. Such new water well or wells, including all downhole equipment, pumping and related facilities, infrastructure and equipment, wiring and surface controls and electric meter loops, but excluding any portable generator, shall become the property of Grantor upon the expiration of the operations for which such water well is used. During Grantee's use of any water well(s), Grantee shall pay all expenses including, but not limited to electricity use, repair, maintenance and replacing all downhole equipment, pumping and related facilities or infrastructure, and equipment associated with producing the water. During the duration of the operations for which such water well or wells are use, Grantee shall have the non-exclusive use of such water well(s) drilled by Grantee for any and all of Grantee's Operations on the Lands, including, but not limited to drilling, fracing, redrilling, re-fracing and reworking oil and/or gas wells, free any payments to Grantor. Upon the expiration of the operations for which Grantee's water well or wells are used, Grantee's rights in any such water well(s) shall terminate, Grantee shall have no rights in any water well(s) and Grantee shall have no ownership interest, nor claim any interest, in any water resources or water well(s) on the Leased Premises, and ownership of said water well(s) shall at the option and election of Grantor in writing, vest in Grantor. As to any Grantor approved water wells, Grantee at its sole cost and expense, may measure or test (as the case may be) the static water level (for water wells), productive capacity (for springs) and water quality of the water wells properly permitted with the Colorado Division of Water Resources and springs located on the lands within one-half (1/2) mile of any proposed oil and gas well. Only non-invasive means of testing shall be used. Grantee shall not be required to pull pumps or move windmills in order to conduct productive capacity tests. This measure or test shall serve as the pre-well measure or test. If Grantor has reason to believe that either during or after drilling operations, that said operations have caused a water quality issue with said water well, then Grantor may measure or test the same well(s) in the same manner noted above, at Grantor's sole cost and expense. This measure or test shall serve as a post-well measure or test. If the post-well test supplied by the Grantor to the Grantee shows a decline in the water quality whereby it is unfit for its intended and customary use, Grantor must notify the Grantee of such a decline in the water quality. Within thirty (30) days from the receipt of the notice of the water well's



quality decline, and upon the written request of the Grantor, Grantee at its sole cost and expense, will cause to be commenced a hydrologic analysis by a mutually acceptable hydrologist of the cause of the decline in water quality and provide that analysis to the Grantor. If the hydrologic analysis discloses that Grantee's operations caused the decline in water quality, Grantee will remedy the decline in water quality at its expense by restoring Grantor's access to water of sufficient quantity and quality and in reasonable proximity to the impaired water well. If the hydrologic analysis discloses that Grantee's operations were not the cause of the decline in water quality, Grantor shall reimburse Grantee for the cost of the hydrologic analysis. If either party disputes the hydrologic analysis, then the issue of the water quality dispute shall be resolved by arbitration in accordance with the Colorado Uniform Arbitration Act. If the arbitration determines that Grantee's operations caused the decline in the water quality, then Grantee will remedy the decline in water quality as set forth above. If the arbitration determines that Grantee's operations did not cause the decline in water quality, Grantor shall reimburse the Grantee for the full costs of the hydrologic analysis and arbitration. If Grantee reconfigures or redrills a well or drills a new well, Grantee will obtain, except in case of emergency or when Grantor is not reasonably available, Grantor's approval of the water well contractor, well design and well location before commencing operations such consent not to be unreasonably withheld. If the operational costs of the reconfigured, redrilled or new well exceed the operational costs of the adversely affected well, Grantee shall reimburse Grantor for these costs as they are incurred. If Grantee undertakes activities to restore any impaired water wells capacity or to restore Grantor's access to water and if such activities require permits from regulatory agencies, Grantor shall cooperate with Grantee in obtaining the permits and permission necessary to conduct such operations. All costs, including without limitation fees for obtaining permits and permission, shall be paid by Grantee.

- k. Third Party Contractor Approval: Grantor shall approve in writing any third party contractors which Grantee may contract or engage for water hauling, water transfer, water purchasing, laying temporary water lines, pipeline right of way, building/maintaining roads, building and removing drillsite locations and Frac Ponds, such approval not to be unreasonably withheld or delayed.

Salt Water and Drilling Mud Disposal. No salt water, drilling mud, produced fluids or other waste substance shall be disposed of on or under the leased premises. However, drilling mud that does not contain Hazardous Materials may be spread across the leased premises (i.e., land-farmed) upon prior written consent from Grantor.

9. Reclamation. As soon as reasonably practicable, and in any event within twelve (12) months (weather permitting) following the plugging and abandonment of a well, or the termination of any other operation or use of the Lands which resulted in the disturbance of the surface of the Lands, including but not limited to drilling, completion, reworking, recompletion operations, frac ponds, temporary water lines, or as otherwise prescribed in this Agreement, Grantee shall recontour, reseed and restore, as near as reasonably possible, all areas so disturbed to the condition which they were prior to the execution of this agreement, as near as practicable, as well as remove all above ground facilities and either render all pipelines and power lines environmentally safe and fit for abandonment in place and provide Grantor with evidence thereof, or remove all such pipelines, all in accordance with applicable laws, rules and regulations; provided however, that Grantor, in its sole discretion, may choose to either allow access roads to remain or may require the Grantee to reclaim them. Topsoil shall be restored to the surface and reseedling shall

be done in accordance with BLM standards and shall be consistent with the type of grass prior to Grantee's activities. In addition to the foregoing, upon the conclusion of drilling operations by Grantee, regardless of whether the well is plugged and abandoned or completes as a producing well, Grantee shall dispose of any trash and debris, insofar as caused by Grantee's activities, and will fill and level the mud pits and return the Land to its original condition as nearly as is practicable within a reasonable and customary period of time, not to exceed twelve (12) months from the conclusion of drilling operations. During reclamation, Grantee shall be allowed to let water in said mud pit evaporate and further, Grantee shall be allowed to use the entire drilling pad in its operation to reclaim said pits.

10. Control of Noxious Weeds. Grantee, at its sole cost and expense, shall undertake all reasonable efforts necessary to control the germination, growth and spread of noxious weeds, insofar as caused by Grantee's activities, (as designated by the Colorado Noxious Weed Act), and other nuisance weeds including without limitation cattails and fox grasses, in areas of Operators activities only, on the Lands. Grantor and Grantee shall discuss applicable methods of control and times for application. This provision shall be applicable during the term of this Agreement.
11. Fences and Gates. After consultation with Grantor, Grantee may make fence openings upon the Lands to provide reasonable, uninterrupted entry and departure as may be necessary for operations; and, Grantee shall install cattle guards or gates of size and quality for the type of traffic used in such operations as defined below. All gates used by Grantee shall be kept shut and locked. Grantee shall reasonably repair and/or replace and all damage done to any fences or gates, or any other improvements of Grantor which result from Grantee's operations as defined below. Grantee shall be responsible for all reasonable costs associated with gathering, herding and recapturing livestock that may escape through fences which are damaged or which escape through openings in fences or opened gates due to the actions of Grantee's employees or agents. All cattle guards in place for three (3) years or more shall become property of Grantor. Grantee shall build, install, and maintain, to Grantor's written specifications, which specifications shall be reasonable in light of the use intended, gates in and through all fences cut by Grantee on land covered by the Leased Premises. No heavy equipment will be taken over Grantor's cattleguards without the prior written consent of Grantor. Gates adjacent to cattleguards will be used in moving any equipment heavier than a pickup truck. No cutting of any fence by Grantee shall occur without the specific permission of Grantor not to be unreasonably withheld or delayed. If such fence cutting is allowed Grantee shall adequately brace it on either side of the proposed gate by H braces constructed of four inch (4") pipe cemented in the ground, where same is to be cut prior to cutting and after such cutting install either a run-over with cattle guard or a steel gate in such opening at the option of Grantor all to the satisfaction of Grantor not to be unreasonably withheld or delayed. All gates shall be left closed except during actual entry or exit through said gates. Gates shall be of galvanized steel, not less than sixteen feet (16') wide. Cattleguards, if ever permitted by Grantor, shall be of welded construction using steel pipe, railroad rail or similar structural metals, for full roadway width, capable of supporting vehicles or equipment that will be used by Grantee for Operations. Grantee will build, install and maintain cattleguards and gates through all interior fences as reasonably requested by Grantor along the agreed upon routes of Grantee. NO OUTSIDE FENCE OF ANY OF THE LEASED PREMISES SHALL EVER BE CUT OR BREECHED WITHOUT THE EXPRESS WRITTEN CONSENT OF THE GRANTOR.

12. Alcohol, Guns, Dogs and Hunting Prohibited. Grantee shall not permit its agents or employees to possess or be under the influence of alcohol or controlled substances, or to



possess firearms, crossbows, or other weapons, or to hunt while on the Lands. No recreational use, including but not limited, camping, hunting, fishing, foot traffic, or similar activities are allowed at any time by Grantee or Grantee's representatives while on the Lands. No dogs shall be allowed on the Lands, including any animal confined to a vehicle in any manner. The failure of any representative of Grantee to comply with the foregoing shall entitle Grantor to treat the person as a trespasser.

13. Groundwater.

- a. Grantor and Grantee recognize that groundwater may be produced and discharged during Grantee's operations to facilitate production of gas and desire to put such groundwater to its maximum beneficial use when it is discharged. Grantor and Grantee shall mutually agree as to the method and location of surface discharge of produced water with the intent that such discharge shall not adversely affect the quality of the water in reservoirs or water courses on the surface of the Lands.
- b. If Grantee proposes to plug and abandon any well located on the Lands (including but not limited to oil, gas, water and other wells), Grantor may elect for a period of thirty (30) days following written notice by Grantee (provided, that when a rig is on location, Grantor must make its election within twenty- four hours following written notice by Grantee), to have Grantee plug back said well and reclaim the well site in accordance with all applicable State and Federal requirements and the provisions of this Agreement, but leave the cased hole open and allow Grantor to take possession and attempt to complete, at Grantor's sole cost, risk and expense, a water well for Grantor's personal use. In such event, Grantor shall notify Grantee to plug back the well to the base of the potable water zone of interest to Grantor, and Grantor shall thereafter sign a letter indemnifying and holding Grantee harmless, and assuming any and all further liability for the well bore after placement of the last cement plug at the base of the applicable potable water zone, thereby relieving Grantee of any and all liability with regard to Grantor's completion of the well as a water well, and/or any further liability relating to the plugging and abandonment of said well. Grantor also agrees to provide any permit, bond or surety required by the governmental agency having jurisdiction over the well.

14. Recording. This Agreement shall not be placed of record without the prior written consent of Grantor. However, the parties agree to execute and deliver a memorandum of this Agreement in recordable form which may be recorded by either party and which shall contain only a general reference to this Agreement and the rights and obligations contained herein.

15. Indemnity. Grantee shall indemnify, release and hold harmless the Grantor, his heirs, personal representatives, successors and assigns, from and against any and all liability, loss, damage, claims, demands, costs and expenses of whatsoever nature, including court costs and attorneys fees, which may result from injury to or death of any persons whomsoever, or damage to or loss or destruction of any property whatsoever (including but not limited to damage, loss or destruction caused by a failure to comply with requirements or orders of federal, state or local authorities with respect to Environmental Laws), however caused, which is due to or arises from Grantee's presence on, occupation of or use of the Lands. For purposes of this indemnity, the term "Environmental Laws" means any and all regulations, relating to or imposing liability or standards of conduct concerning protection of human health, safety or the environment or to emissions, discharges, releases or threatened releases of pollutants, contaminants, chemicals, or

industrial, toxic or hazardous substances or wastes into the environment including ambient air, surface water, ground water, or land, or otherwise relating to the manufacture, processing, distribution, use, treatment, storage, disposal, transport, or handling or pollutants, contaminants, chemicals, or industrial, toxic or hazardous substances or wastes, as now or may at any time hereafter be in effect.

16. Release. To the maximum extent permitted by law, Grantee releases, waives and discharges Grantor, and if applicable, his heirs, personal representatives, successors and assigns, from any and all liabilities for personal injury, death, property damage or otherwise arising out of Grantor's activities on the Lands. The parties acknowledge that Grantee comes onto the Lands assuming the risk of loss with regard to the operations being conducted thereon by Grantor.
17. Representations of Grantee. As a material inducement and as part of the consideration for Grantor entering into this Agreement, it is relying on the following representations of Grantee: that Grantee is a valid corporation; that it is in good standing; that it is authorized to do business in the State of Colorado; that it is, at the time of execution of this Agreement, solvent; that there are no judgments against Grantee which if satisfied would render Grantee insolvent; that Grantee has sufficient unencumbered assets to satisfy all of its obligations hereunder, including all obligations relating to the plugging and abandonment of its wells and the reclamation of the Lands; and that bonds in the required amounts are in place with the State of Colorado and Bureau of Land Management to comply with all applicable laws, rules and regulations.
18. Assignment. This Agreement may be assigned by Grantee with written notice to Grantor within 30 business days of the public filing of said assignment. Such Assignment shall only become valid upon written approval of Grantor not to be unreasonably withheld or delayed. This agreement is binding and inuring and all terms, conditions contained herein shall constitute a covenant running with the land and shall be on and for the benefit of Grantee, Grantor and their respective successors and assigns.
19. .
20. Construction: Jurisdiction and Venue. This Agreement shall be construed in accordance with the laws of the State of Colorado. In the event of a dispute hereunder, the parties stipulate and agree to the personal jurisdiction of, and that sole venue will lie in, the federal or state courts in the State of Colorado.
21. Notices. Any notice or communication permitted or required hereunder shall be given promptly, orally if possible, or by electronic mail, and then, in either case, in writing via certified mail/return receipt requested. Notices shall be deemed given three days after mailing, or on the same day if delivered personally or by telefacsimile transmission, confirmed by email, when addressed as follows:

Grantor:  
c/o Joint Resources Company  
Attention: Mark Kalpakis  
5416 Birchman Avenue  
Fort Worth, Texas 76107  
Phone: 817-289-1414  
Email: [mark@jointresources.com](mailto:mark@jointresources.com)



Grantee:  
Carrizo Oil & Gas, Inc.  
1000 Louisiana Street, Suite 1500  
Houston, Texas 77002  
Attn: Craig Wiest  
Telephone: 713-328-1000  
Email: craig.wiest@crzo.net

Any party may amend the foregoing addresses and information by written notice to the other party.

22. Time. Time is of the essence in this Agreement.
23. Covenants Running with the Lands. The terms and provisions hereof shall constitute covenants and conditions running with the Lands and shall inure the benefit of and be binding upon Grantor and Grantee and their respective heirs, executors, administrators, legal representatives, and permitted successors and assigns.
24. Grantor's Representative. Each party comprising Grantor hereby agrees that Joint Resources Company ("JRC") shall serve as Grantor's representative for purposes of: (i) administering and supervising the performance and conduct of Grantee under the terms of this Agreement; (ii) receiving notices and correspondence from Grantee; (iii) providing notices and correspondence to Grantee on behalf of Grantor; (iii) determining whether Grantee has performed in compliance with the terms of this Agreement; (iv) granting approvals or consents by Grantor as required or contemplated by this Agreement; (v) receiving payment of all damages required to be paid by Grantee to Grantor under this Agreement; and (vi) taking any and all other actions and doing any and all other things provided in or contemplated by this Agreement to be performed by JRC on behalf of Grantor. As the representative of Grantor, JRC shall act as the agent for Grantor, shall have authority to bind Grantor in accordance with this Agreement, and Grantee may rely on such appointment and authority.
25. Entire Agreement. This is the entire Agreement between the parties with respect to the transactions contemplated herein and shall supersede all previous oral and written negotiations, commitments, and understandings. For clarification, this Agreement amends, restates and supersedes (i) that certain Agreement for Right-of-Way, Pipeline Easement and Surface Access dated October 3, 2007 between Paul R. Weitzel, Sr. and Marilyn K. Barber, Trustees of the Ida A. Weitzel Family Trust and New Frontier Energy, Inc., recorded in the Weld County Recorder's Office at Reception No. 3509345 and (ii) that certain Agreement for Right-of-Way, Pipeline Easement and Surface Access dated June 25, 2008 between Paul R. Weitzel, Sr. and Marilyn K. Barber, Trustees of the Ida A. Weitzel Family Trust and New Frontier Energy, Inc., recorded in the Weld County Recorder's Office at Reception No. 3567254.

IN WITNESS WHEREOF, the parties have executed this Agreement as of the day and year first above written.

GRANTOR:

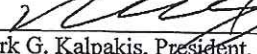
GRANTEE:

PERGAMOS, L.P.

CARRIZO OIL & GAS, INC.

By: Desert Dunes, L.L.C.,  
its General Partner

By: 


By:   
Mark G. Kalpakis, President,  
Member and Manager

Name: **Richard H. Smith**  
**Vice President-Land**

Title: \_\_\_\_\_

SLICK ROCK, L.P.

By: Rock Canyon, L.L.C.,  
its General Partner

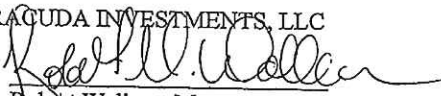
By:   
R. Dean Williams, President,  
Manager and Member

HEP OIL COMPANY, LTD.

By: HEP Oil GP, LLC,  
its General Partner


By:   
John D. Schmitz, President

BARRACUDA INVESTMENTS, LLC

By:   
Robert Wallace, Manager

GRANTOR'S REPRESENTATIVE:

JOINT RESOURCES COMPANY

By:   
Mark G. Kalpakis, President



# ACKNOWLEDGEMENTS

STATE OF TEXAS §  
COUNTY OF TARRANT §

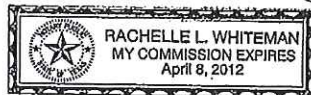
This instrument was acknowledged before me on this 11th day of OCTOBER, 2011, by Mark G. Kalpakis, President, Member and Manager of Desert Dunes, L.L.C., a Texas limited liability company, general partner of Pergamos, L.P., a Texas limited partnership, on behalf of said limited partnership in such capacity.



*Rachelle L. Whiteman*  
Notary Public, State of TEXAS  
Printed Name: RACHELLE L. WHITEMAN  
My Commission Expires: 04/08/2012

STATE OF TEXAS §  
COUNTY OF TARRANT §

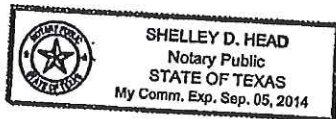
This instrument was acknowledged before me on this 11th day of OCTOBER, 2011, by R. Dean Williams, President, Member and Manager of Rock Canyon, L.L.C., a Texas limited liability company, general partner of Slick Rock, L.P., a Texas limited partnership, on behalf of said limited partnership in such capacity.



*Rachelle L. Whiteman*  
Notary Public, State of TEXAS  
Printed Name: RACHELLE L. WHITEMAN  
My Commission Expires: 04/08/2012

STATE OF TEXAS §  
COUNTY OF COOKE §

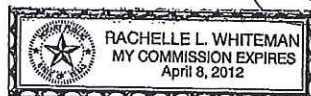
This instrument was acknowledged before me on this 12th day of October, 2011, by John D. Schmitz, President of HEP Oil GP, LLC, a Texas limited liability company, general partner of HEP Oil Company, Ltd., a Texas limited partnership, on behalf of said limited partnership in such capacity.



*Shelley D. Head*  
Notary Public, State of TEXAS  
Printed Name: Shelley D. Head  
My Commission Expires: 09/05/2014

STATE OF TEXAS §  
COUNTY OF TARRANT §

This instrument was acknowledged before me on this 11th day of OCTOBER, 2011, by Robert Wallace, Manager of Barracuda Investments, LLC, a Texas limited liability company, on behalf of said limited liability company.



*Rachelle L. Whiteman*  
Notary Public, State of TEXAS  
Printed Name: RACHELLE L. WHITEMAN  
My Commission Expires: 04/08/2012

STATE OF TEXAS §  
COUNTY OF TARRANT §

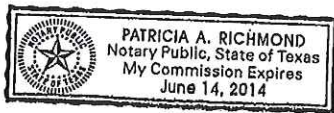
This instrument was acknowledged before me on this 11<sup>th</sup> day of OCTOBER, 2011, by Mark G. Kalpakis, President of Joint Resources Company, a Texas corporation, on behalf of said corporation.



Rachelle L. Whiteman  
Notary Public, State of TEXAS  
Printed Name: RACHELLE L. WHITEMAN  
My Commission Expires: 04/08/2012

STATE OF Texas §  
COUNTY OF Harris §

This instrument was acknowledged before me on this 10<sup>th</sup> day of October, 2011, by Richard H. Smith, Vice President Land of Carrizo Oil & Gas, Inc., a Texas corporation, on behalf of said corporation.



Patricia A. Richmond  
Notary Public, State of Texas  
Printed Name: Patricia A. Richmond  
My Commission Expires: \_\_\_\_\_

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## EXHIBIT "A"

ATTACHED TO THAT CERTAIN SURFACE USE AGREEMENT DATED OCTOBER \_\_\_\_\_ 2011, BETWEEN PERGAMOS, L.P., SLICK ROCK, L.P., HEP OIL COMPANY, LTD. AND BARRACUDA INVESTMENTS, LLC, AS LESSOR, AND CARRIZO OIL & GAS, INC., AS LESSEE.

### Lease 1

Lessor: Paul R. Weitzel, Sr. and Marilyn K. Barber, Trustees of the Ida Weitzel Family Trust  
Lessee: New Frontier Energy  
Date: October 3, 2007  
Recording: 3509346  
Description: All of Section 19; W/2 of Section 29; W/2 of Section 30; all in T-7N, R-60 W, Weld County, Colorado

### Lease 2

Lessor: Paul R. Weitzel, Sr. and Marilyn K. Barber, Trustees of the Ida Weitzel Family Trust  
Lessee: New Frontier Energy  
Date: October 3, 2007  
Recording: 3509347  
Description: W/2, W/2E/2 of Section 18; T-7N, R-60W, Weld County, Colorado

### Lease 3

Lessor: Paul R. Weitzel, Sr. and Marilyn K. Barber, Trustees of the Ida Weitzel Family Trust  
Lessee: New Frontier Energy  
Date: October 3, 2007  
Recording: 3509348  
Description: All of Section 17; T-7N, R-60W, Weld County, Colorado

### Lease 4

Lessor: Paul R. Weitzel, Sr. and Marilyn K. Barber, Trustees of the Ida Weitzel Family Trust  
Lessee: New Frontier Energy  
Date: June 25, 2008  
Recording: 3567250  
Description: N/2, SW/4, SE/4 of Section 3; E/2 of Section 4; all in T-7N, R-60W, Weld County, Colorado

### Lease 5

Lessor: Paul R. Weitzel, Sr. and Marilyn K. Barber, Trustees of the Ida Weitzel Family Trust  
Lessee: New Frontier Energy  
Date: June 25, 2008  
Recording: 3567251  
Description: All of Section 7; T-7N, R-60W, Weld County, Colorado

### Lease 6

Lessor: Paul R. Weitzel, Sr. and Marilyn K. Barber, Trustees of the Ida Weitzel Family Trust  
Lessee: New Frontier Energy  
Date: June 25, 2008  
Recording: 3567252  
Description: All of Section 8 except for 160.43 acres out of the SW/4 and SE/4; All of Section 9; E/2 of Section 32; T-7N, R-60W, Weld County, Colorado