AMENDMENT NO. 1  
  
 This AMENDMENT NO. 1 (this "AMENDMENT NO. 1") is made as of  
April 9, 2001 between GeoLease Partners, L.P., a Delaware limited partnership  
(the "PARTNERSHIP"), and Geokinetics Inc., a Delaware corporation (the  
"COMPANY"). This Amendment No. 1 is made with reference to that certain Lease  
Agreement dated as of October 1, 1999 (the "LEASE AGREEMENT") between the  
Company and Input/Output, Inc., a Delaware corporation ("I/O"). All capitalized  
terms used herein and not otherwise defined shall have the meanings assigned to  
such terms in the Lease Agreement.  
  
 WHEREAS, concurrently with the execution hereof, the  
  
Partnership is purchasing the Equipment from I/O, and I/O is assigning its  
rights under the Lease Agreement to the Partnership;  
  
 WHEREAS, the Company desires to defer Basic Rent under the  
Lease Agreement;  
  
 WHEREAS, the Company, the Partnership and the holders of the  
Company's 13 1/2% Senior Secured Notes outstanding on the date hereof (the  
"NOTEHOLDERS") have entered into that certain Subordination and Amendment  
Agreement on the date hereof (the "SUBORDINATION AGREEMENT");  
  
 WHEREAS, as consideration for the Noteholders to enter into  
the Subordination Agreement, the Lease Agreement, as amended by this Amendment  
No. 1, shall be subject to certain of the provisions contained in the  
Subordination Agreement;  
  
 WHEREAS, as consideration for the Partnership purchasing the  
Equipment from I/O, for becoming the Lessor under the Lease Agreement, for  
providing the Company with the option to defer the payment of Basic Rent and for  
other good and valuable consideration contained herein, the Company has agreed  
to pay the Partnership Deferred Rent (as defined in Section 1.5 below); and  
  
 WHEREAS, the Company and the Partnership desire to amend  
certain provisions of the Lease Agreement;  
  
 NOW, THEREFORE, for good and valuable consideration, the  
receipt and sufficiency of which are hereby acknowledged, the parties hereto  
agree as follows:  
  
  
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 SECTION 1. AMENDMENT  
  
 1.1 Section 6.2 of the Lease Agreement (BASIC RENT) is hereby  
amended by replacing the second sentence of Section 6.2 with the following:  
  
 "Each monthly payment is due on the first day of each month;  
 PROVIDED, that payments of Basic Rent may, at the option of Lessee, be  
 deferred until the earlier of the Basic Term Expiration Date or upon  
 the occurrence of a Lease Event of Default which shall not have been  
 cured or waived; PROVIDED, FURTHER, that for the purposes of Section  
 6.3, all amounts of Basic Rent that are deferred pursuant to this  
 Section 6.2 or are unpaid on the effective date of Amendment No. 1 to  
 this Lease shall be deemed to be installments of Basic Rent not paid  
 when due."  
  
 1.2 Section 6.3 of the Lease Agreement (SUPPLEMENTAL RENT) is  
hereby amended by replacing the second sentence of Section 6.3 with the  
following:  
  
 "Lessee will also pay, as Supplemental Rent, but without  
 duplication, to the extent permitted by applicable law, an amount equal  
 to interest at the Late Rate on (x) any part of any installment of  
 Basic Rent not paid when due for any period for which the same shall be  
 overdue on the earlier of the Basic Term Expiration Date or upon the  
 occurrence of a Lease Event of Default which shall not have been cured  
 or waived, and (y) any other payment of Supplemental Rent not paid when  
 due or ten days after demanded, as the case may be, for the period from  
 such date or ten days after demanded, as the case may be, until the  
 same shall be paid, on demand. For the avoidance of doubt, amounts of  
 Basic Rent which are unpaid on the effective date of Amendment No. 1 to  
 this Lease shall accrue interest at the Late Rate."  
  
 1.3 Section 6.4 of the Lease Agreement (MANNER OF PAYMENTS) is  
hereby amended by inserting the following sentence at the end of Section 6.4:  
  
 "Lessee shall give notice of its intent to make payments of  
 Rent in cash five (5) Business Days prior to such date of payment and  
 shall make such payment by wire transfer from its account in the State  
 of Delaware into Lessor's account in the State of Delaware upon the  
 receipt of wire instructions from Lessor."  
  
 1.4 Section 6.5 of the Lease Agreement (SALES TAX) is hereby  
amended by replacing Section 6.5 in its entirety with the following:  
  
  
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 "Whether or not Lessee pays Basic Rent in cash, Lessee shall  
 remit to Lessor, in the manner set forth in Section 6.4 above in the  
 lawful currency of the United States of America, all sales and other  
 similar taxes applicable to any Rent payments hereunder pursuant to  
 Texas Tax Code Section 151.051 and Section 151.052."  
  
 1.5 The following shall be added as Section 6.6 (DEFERRED  
RENT) to the Lease Agreement:  
  
 "SECTION 6.6. DEFERRED RENT. The Company shall pay the  
 Partnership the sum of $1.9 million as deferred rent ("DEFERRED RENT")  
 on the Note Maturity Date by 12:00 noon (Houston, Texas time) in the  
 lawful currency of the United States of America. Any portion of  
 Deferred Rent not paid in cash shall accrue interest at the Late Rate  
 from the Note Maturity Date through such date all obligations in  
 respect of Deferred Rent are paid in full."  
  
 1.6 Section 16 of the Lease Agreement (LEASE EVENTS OF  
DEFAULT) is hereby amended as follows:  
  
 (i) clause (a) thereof is hereby amended by replacing it in  
 its entirety with "[Intentionally Omitted]";  
  
 (ii) clause (b) thereof is hereby amended by replacing it in  
 its entirety with the following:  
  
 "Lessee shall fail to (i) make any payment of Supplemental  
 Rent (other than Supplemental Rent owing in respect of Basic Rent as  
 provided in Section 6.3) to be paid by Lessee pursuant to this Lease  
 after the same shall have become due and such failure shall continue  
 unremedied for ten days after receipt by Lessee of the original demand  
 from Lessor, or (ii) pay all outstanding Rent (other than Deferred  
 Rent), including Supplemental Rent owing in respect of Basic Rent as  
 provided in Section 6.3, upon the earlier of the Basic Term Expiration  
 Date or upon the occurrence of another Lease Event of Default which  
 shall not have been cured or waived; or";  
  
 (iii)clause (j) thereof is amended by replacing the period at  
 the end of clause (j) with "; or"; and  
  
 (iv) the following shall be added as clause (k):  
  
  
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 "(k) Deferred Rent is not paid on the Note Maturity Date by  
 12:00 noon (Houston, Texas time) or there is an acceleration of any of  
 the indebtedness represented by the 13 1/2% Senior Secured Notes of  
 Geokinetics Inc."  
  
 1.7 Section 23 of the Lease Agreement (NOTICES) is hereby  
amended by replacing the notice addresses set forth in Section 23 in their  
entirety with the following:  
  
 "If to the Lessor:  
  
 GeoLease Partners, L.P.  
 c/o DLJ Merchant Banking Partners II, Inc.  
 000 Xxxx Xxxxxx  
 Xxx Xxxx, Xxx Xxxx 00000  
 Attention: General Counsel  
 Telecopy: (000) 000-0000  
  
 with a copy to:  
  
 Xxxxxx Xxxxxx & Xxxxxxx  
 00 Xxxx Xxxxxx  
 Xxx Xxxx, Xxx Xxxx 00000  
 Attention: Xxxx Xxxxxxxx, Esq.  
 Telecopy: (000) 000-0000"  
  
 If to the Geokinetics Entities:  
  
 Geokinetics Inc.  
 0000 Xxxxxxxxxx, Xxxxx 000  
 Xxxxxxx, Xxxxx 00000  
 Attention: Chief Financial Officer  
 Telecopy: (000) 000-0000  
  
 with a copy to:  
  
 Chamberlain, Hrdlicka, White, Xxxxxxxx & Xxxxxx  
 0000 Xxxxx Xxxxxx, Xxxxx 0000  
 Xxxxxxx, Xxxxx 00000-0000  
 Attention: Xxxxx X. Spring III, Esq.  
 Telecopy: (000) 000-0000."  
  
 1.8 Section 25.3 of the Lease Agreement (GOVERNING LAW,  
SEVERABILITY) is hereby amended by replacing the first sentence of Section 25.3  
with the following:  
  
  
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 "This Lease and any extensions, amendments, modifications,  
 renewals or supplements hereto or thereto shall be governed by and  
 construed in accordance with the internal laws and decisions of the  
 State of Delaware."  
  
 1.9 APPENDIX A to the Lease Agreement--Definitions--Defined  
Terms, is hereby amended by replacing the following definitions in their  
entirety as follows:  
  
 "`CHANGE OF CONTROL' shall mean any Person or two or more  
 Persons (other than holders of the Lessee's 13 1/2% Senior Secured  
 Notes) acting in concert, acquires beneficial ownership (within the  
 meaning of Rule 13d-3 of the Securities Exchange Act of 1934, as  
 amended), directly or indirectly, of securities of Lessee (or other  
 securities convertible into such securities) representing forty percent  
 (40%) or more of the combined voting power of all outstanding  
 securities of the Lessee entitled to vote in the election of  
 directors."  
  
 "`FAIR MARKET VALUE' or `FAIR MARKET SALES VALUE' with respect  
 to any Unit of Equipment shall mean the cash rent or cash price,  
 respectively, obtainable for such Unit in an arm's length lease or  
 sale, respectively, between an informed and willing lessee or  
 purchaser, respectively, under no compulsion to lease or purchase, as  
 the case may be, and an informed and willing lessor or seller, under no  
 compulsion to lease or sell, as the case may be, as the same shall be  
 (i) determined by The X. X. Xxxxx Companies Inc. or another nationally  
 or industry-wide (with respect to the oil and gas exploration industry)  
 recognized independent appraisal firm in the practice of regularly  
 appraising equipment similar to the Equipment selected by Lessor and  
 reasonably acceptable to a majority in interest of the Non-Affiliated  
 Noteholders or (ii) as otherwise agreed with the approval of a majority  
 in interest of the Non-Affiliated Noteholders."  
  
 1.10 APPENDIX A to the Lease Agreement--Definitions--Defined  
Terms, is hereby amended by adding the following definitions:  
  
 "`DEFERRED RENT' shall have the meaning set forth in Section  
 6.6 of this Lease."  
  
 "`NON-AFFILIATED NOTEHOLDER' shall mean any holder of 13 1/2%  
 Senior Secured Notes due 2002 of Geokinetics Inc. who (i) is not an  
 Affiliate of the Lessor or the Lessee and (ii) owns at least $300,000  
 of such notes; PROVIDED, that each of DLJ Investment Partners, L.P.,  
 DLJ Investment Funding, Inc. and DLJ ESC II L.P. or any of their  
 respective Affili-  
  
  
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 ates, so long as it shall be a holder of at least $300,000 of the 13  
 1/2% Senior Secured Notes due 2002 of Geokinetics Inc., shall be deemed  
 to be an Affiliate of the Lessor."  
  
 "`NOTE MATURITY DATE' shall mean one Business Day after the  
 later of (x) September 15, 2003 and (y) the date that the 13 1/2%  
 Senior Secured Notes due 2002 of Geokinetics Inc. are paid in full. For  
 the purposes of calculating interest accruing at the Late Rate pursuant  
 to Section 6.6 of this Lease (DEFERRED RENT), the Note Maturity Date  
 shall be deemed to be the Business Day after September 15, 2003."  
  
 SECTION 2. RATIFICATION OF the lease AGREEMENT  
  
 To induce the Partnership to enter into this Amendment No. 1,  
the Company represents and warrants that, after giving effect to this Amendment  
No. 1, no violation of the terms of the Lease Agreement exists and all  
representations and warranties contained in the Lease Agreement are true,  
correct and complete in all material respects on and as of the date hereof  
except to the extent such representations and warranties specifically relate to  
an earlier date in which case they were true, correct and complete in all  
material respects on and as of such earlier date.  
  
 SECTION 3. COUNTERPARTS; EFFECTIVENESS  
  
 This Amendment No. 1 may be executed in any number of  
counterparts, and all such counterparts taken together shall be deemed to  
constitute one and the same instrument. Signature pages may be detached from  
counterpart documents and reassembled to form duplicate executed originals. This  
Amendment No. 1 shall become effective as of the date hereof upon the execution  
of the counterparts hereof by the Company and the Partnership.  
  
 SECTION 4. GOVERNING LAW  
  
 THIS AMENDMENT NO. 1 SHALL BE GOVERNED BY, AND SHALL BE CONSTRUED  
AND ENFORCED IN ACCORDANCE WITH, THE LAWS OF THE STATE OF DELAWARE WITHOUT  
REGARD TO THE PRINCIPLES OF CONFLICTS OF LAW.  
  
  
  
  
  
  
 SIGNATURES  
  
 IN WITNESS WHEREOF, the parties hereto have caused this  
Amendment No. 1 to the Lease Agreement to be duly executed, all as of the date  
first written above.  
  
 Company:  
  
 GEOKINETICS INC.  
  
  
  
 By: /s/ Xxxxxx X. Xxxxxxxxx  
 ----------------------------  
 Name: Xxxxxx X. Xxxxxxxxx  
 Title: Vice President  
  
  
 Partnership:  
  
 GEOLEASE PARTNERS, L.P.  
  
 By: GEOLEASE GP, INC.,  
 its general partner  
  
  
  
 By: /s/ Xxxxxxx Xxxx Xxxxxx  
 ----------------------------  
 Name: Xxxxxxx Xxxx Xxxxxx  
 Title: President