

SECOND AMENDMENT TO DEVELOPMENT AGREEMENT

Reference is hereby made for all purposes to that certain Development Agreement (hereinafter called "the Development Agreement") dated March 31, 1989, but effective as of March 17, 1989, by and between McKenzie Methane Corporation (hereinafter called "McKenzie") and The Northwestern Mutual Life Insurance Company (hereinafter called "Participant"), as amended by that certain First Amendment to Development Agreement dated September 5, 1989, but effective for all purposes as of March 17, 1989, by and between McKenzie and Participant, whereby Participant acquired from McKenzie certain undivided interests in Coal Seam Gas Leases and the right to participate with McKenzie in the development of Coal Seam Gas reserves in accordance with and subject to the terms of the Development Agreement, as amended.

McKenzie and Participant consider it to be mutually desirable and advantageous that the Development Agreement, as heretofore amended, be further amended in the particulars hereinafter set forth.

NOW, THEREFORE, in consideration of the premises contained herein and the mutual benefits and obligations of McKenzie and Participant under the Development Agreement, as heretofore amended and as amended herein, McKenzie and Participant do hereby amend the Development Agreement, as heretofore amended, as follows:

1. Section 1.05 of the Development Agreement is hereby deleted from the Development Agreement in its entirety and the following paragraph is hereby inserted in lieu thereof, to-wit:

Section 1.05 "Cainwood Area" - that portion of the Program Area outlined in red on the map of the Black Warrior Basin of Alabama referred to in the definition of Program Area in Section 1.23 hereof and identified on that map as "Cainwood Plantation," together with such of those lands

described in the Rice Lease and the Smelley Lease that are situated outside such red-lined area.

2. Section 1.17 of the Development Agreement is hereby deleted from the Development Agreement in its entirety and the following paragraph is hereby inserted in lieu thereof, to-wit:

Section 1.17 "Narrows Area" - that portion of the Program Area outlined in red on the map of the Black Warrior Basin of Alabama referred to in the definition of Program Area in Section 1.23 hereof and identified on that map as "Narrows Project," insofar and only insofar as such portion of the Program Area comprises the fifty-two (52) Well Units which have been or will be designated by McKenzie for the fifty-two (52) Initial Wells drilled on such portion of the Program Area during the Initial Program.

3. Section 1.29 of the Development Agreement is hereby deleted from the Development Agreement in its entirety and the following paragraph is hereby inserted in lieu thereof, to-wit:

Section 1.29 "Subsequent Program" - that portion or those portions, not to exceed three portions in all, of the Program other than the Initial Program for which Participant undertakes a Drilling Commitment of \$9,000,000 pursuant to Section 9.01 hereof, the first of such portions having been implemented by McKenzie and Participant on November 1, 1989.

4. Those lands described as the East Half of Section 34, Township 33 North, Range 10 West, La Plata County, Colorado, and the North Half of Section 31, Township 34 North, Range 9 West, in said county, said lands being among the lands shaded in yellow on the map entitled "San Juan Basin, La Plata and Archuleta Counties, Colorado" (copies

of which have been signed for identification by and are in the possession of McKenzie and Participant), are hereby included as part of the Program Area covered by the Development Agreement, as heretofore and herein amended, and to effectuate the foregoing, McKenzie and Participant do hereby amend said maps entitled "San Juan Basin, La Plata and Archuleta Counties, Colorado" which have been signed for identification by them and are in their possession in such manner and to the same extent as if the above-described lands had never been shaded thereon in yellow.

5. Section 2.02 of the Development Agreement is hereby deleted from the Development Agreement in its entirety and the following paragraph is hereby inserted in lieu thereof, to-wit:

Section 2.02 McKenzie shall determine where each Initial Well will be drilled on the Coal Seam Gas Leases and shall designate the location and objective depth of each Initial Well it determines should be drilled in accordance with this Agreement. The Initial Program includes the drilling of 264 Initial Wells, 150 of which shall be drilled in the Cahaba Area, 40 of which shall be drilled in the Cainwood Area, 52 of which shall be drilled in the Narrows Area, and 22 of which shall be drilled in the San Juan Area.

6. The following paragraph shall be added to the Development Agreement as Section 2.05 thereof, to-wit:

Section 2.05 All operations and activities (including drilling operations) conducted after the termination of the third Subsequent Program (if a third Subsequent Program is implemented) in connection with the first well (hereafter called "First Well") drilled on well units in the Program Area (which constitutes the Contract Area covered by the Operating Agreement), on or

attributable to which no Initial Well was drilled during the Initial Program or any Subsequent Program, shall be conducted in accordance with the terms of the Operating Agreement. The term "well unit" as used in this Section 2.05 shall have the same meaning as such term has in the Operating Agreement. After the termination of the third Subsequent Program, Participant shall pay to McKenzie its Participation Percentage of the cost incurred by McKenzie to acquire Coal Seam Gas Leases and renewals or extensions of Coal Seam Gas Leases, interests therein or parts or portions thereof (including bonus payments, brokerage fees, commissions and filing fees) to the extent such costs are allocated to the well unit on which a First Well is drilled after the termination of the third Subsequent Program. Such costs shall consist of those costs specified above that have been incurred to date which are allocable to any such well unit, together with any such costs specified above that are hereafter incurred which are allocable to any such well unit. In the event all or any portion of a well unit consists of acreage covered by a Coal Seam Gas Lease covering lands in addition to those lands included in such well unit, such costs shall be allocated to the well unit on an acreage basis by dividing the number of acres covered by the Coal Seam Gas Lease which are included in the well unit by the total number of acres covered by the Coal Seam Gas Lease and multiplying the quotient by the total cost incurred in connection with the acquisition of the Coal Seam Gas Lease. McKenzie shall invoice Participant at the time a First Well is proposed for the lease acquisition

costs allocable to the well unit for which such well shall be the First Well and shall provide Participant with appropriate documentation to support such costs. If Participant is the party to the Operating Agreement proposing a First Well or if Participant consents to participate in a First Well proposed by another party thereto, Participant shall pay such costs within the time period provided for in the Operating Agreement. If Participant does not consent to participate in a First Well proposed by another party to the Operating Agreement, Participant shall return such invoice unpaid to McKenzie. On or before the commencement of the actual drilling of any such First Well, McKenzie shall assign to Participant by recordable instrument the Participation Percentage of Participant in and to the Coal Seam Gas Lease or Coal Seam Gas Leases covering the well unit for which such well shall be the First Well insofar and only insofar as such lease or leases cover the lands comprising such well unit.

7. The third sentence in Section 3.01 of the Development Agreement is hereby deleted in its entirety and the following sentence is hereby inserted in lieu thereof, to-wit:

Participant shall also bear its Participation Percentage of (a) the actual costs incurred by McKenzie in the acquisition and installation of gas and water gathering lines (consisting of 2-inch and 3-inch polyethylene pipe) in excess of 1,320 feet in length as to any Initial Well in Alabama for which the length of any such line exceeds 1,320 feet, such costs to be calculated by dividing the length of the line in excess of 1,320 feet by the total length of the line and multiplying the quotient by the total actual

costs to acquire and install such line, (b) the actual costs incurred by McKenzie in the acquisition and installation of gas and water gathering lines (consisting of 2-inch and 3-inch steel pipe) in excess of 2,640 feet in length as to any Initial Well in Colorado for which the length of any such line exceeds 2,640 feet, such costs to be calculated by dividing the length of the line in excess of 2,640 feet by the total length of the line and multiplying the quotient by the total actual costs to acquire and install such line, (c) the actual costs incurred by McKenzie in the acquisition and installation of compression and related dehydration facilities, metering or receiving stations, hot taps, and gathering lines beyond the compression facilities to the pipe line of the purchaser of such production; provided, Participant shall be credited with its Participation Percentage of an amount equal to the cost which would have been incurred had McKenzie laid a 6-inch low pressure polyethylene gathering line originally contemplated by McKenzie, such credit to be applied towards the actual cost incurred by McKenzie in connection with the laying of a 12-inch high pressure pipe line ("the McKenzie Gathering Line") which has been or is being constructed by McKenzie for the joint account in Shelby County, Alabama from a point in Section 15, Township 21 South, Range 4 West to a point on the Southern Natural Gas pipe line in Section 29, Township 20 South, Range 3 West in said county, (d) the actual costs incurred by McKenzie in the drilling and equipping of any water disposal well or evaporation ponds constructed in lieu of a water disposal well

required for the disposition of water produced from any Initial Well; provided, Participant shall not be required to pay the portion of the cost of any such water disposal well which has previously been paid by Participant if such well is an abandoned Initial Well relating to which Participant paid its Participation Percentage of the Turnkey Costs in drilling, and (e) all costs incurred under the Operating Agreement.

8. The fourth through the ninth sentences in Section 3.01 of the Development Agreement are hereby deleted in their entirety and the following sentences are hereby inserted in lieu thereof, to-wit:

Turnkey Costs for the Initial Program consist of those amounts indicated with respect to wells drilled to the depths specified and completed into the infield gathering system or plugged and abandoned as a dry hole after a completion attempt has been made thereon in the areas as follows:

<u>Area</u>	<u>Depth</u>	<u>Amount</u>
Cahaba Area	From the surface to approximately 3,800 feet subsurface	\$275,000
Cainwood Area	From the surface to a depth sufficient to test the Black Creek Coal Seam expected to be encountered at a depth of approximately 3,800 feet subsurface	\$275,000
Narrows Area	From the surface to a depth sufficient to test the Black Creek Coal Seam expected to be encountered at a depth of approximately 1,300 feet subsurface	\$165,000
San Juan Area	From the surface to a depth sufficient to test the Fruitland formation expected to be encountered at a depth of approximately 3,000 feet subsurface	\$550,000

PROVIDED THAT if any Initial Well is drilled to the depth specified and tested, and McKenzie determines such well to be a dry hole without attempting a completion thereon, McKenzie will plug and abandon such well and the Turnkey Costs for such well will consist of the amount indicated with respect to an Initial Well drilled as a dry hole to the depth specified in the areas as follows:

<u>Area</u>	<u>Depth</u>	<u>Amount</u>
Cahaba Area	From the surface to approximately 3,800 feet subsurface	\$122,000
Cainwood Area	From the surface to a depth sufficient to test the Black Creek Coal Seam expected to be encountered at a depth of approximately 3,800 feet subsurface	\$122,000
Narrows Area	From the surface to a depth sufficient to test the Black Creek Coal Seam expected to be encountered at a depth of approximately 1,300 feet subsurface	\$ 82,000
San Juan Area	From the surface to a depth sufficient to test the Fruitland formation expected to be encountered at a depth of approximately 3,000 feet subsurface	\$236,000

Turnkey Costs for the first Subsequent Program consist of those amounts indicated with respect to wells drilled to the depths specified and completed into the infield gathering system or plugged and abandoned as a dry hole after a completion attempt has been made thereon in the areas as follows:

<u>Area</u>	<u>Depth</u>	<u>Amount</u>
Cahaba Area	From the surface to approximately 3,800 feet subsurface	\$375,000 (Dual Frac Well) \$335,000 (Single Frac Well)
Cainwood Area (less and except the Rice Lease and the Smelley Lease)	From the surface to a depth sufficient to test the Black Creek Coal Seam expected to be encountered at a depth of approximately 3,800 feet subsurface	\$375,000 (Dual Frac Well) \$335,000 (Single Frac Well)
San Juan Area	From the surface to a depth sufficient to test the Fruitland formation	\$550,000

Turnkey Costs for the second and third Subsequent Programs, if implemented, consist of those amounts indicated with respect to wells drilled to the depths specified and completed into the infield gathering system or plugged and abandoned as a dry hole after a completion attempt has been made thereon in the areas as follows:

<u>Area</u>	<u>Depth</u>	<u>Amount</u>
Cahaba Area (except as specified below)	From the surface to approximately 3,800 feet subsurface	\$375,000 (Dual Frac Well) \$335,000 (Single Frac Well)
Cahaba Area (the KCC/SEGCO Lease, the KCC Lease, the Alabama Property Company Lease and the SEGCO Lease)	From the surface to approximately 3,800 feet subsurface	\$379,000 (Dual Frac Well) \$339,000 (Single Frac Well)
Cainwood Area (less and except the Rice Lease and the Smelley Lease)	From the surface to a depth sufficient to test the Black Creek Coal Seam expected to be encountered at a depth of approximately 3,800 feet subsurface	\$375,000 (Dual Frac Well) \$335,000 (Single Frac Well)

San Juan Area	From the surface to a depth sufficient to test the Fruitland formation	\$550,000
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PROVIDED THAT if any Initial Well in any Subsequent Program is drilled to the depth specified and tested, and McKenzie determines such well to be a dry hole without attempting a completion thereon, McKenzie will plug and abandon such well and the Turnkey Costs for such well will consist of the amount indicated with respect to an Initial Well drilled as a dry hole to the depth specified in the areas as follows:

<u>Area</u>	<u>Depth</u>	<u>Amount</u>
Cahaba Area (all leases)	From the surface to approximately 3,800 feet subsurface	\$135,000
Cainwood Area	From the surface to a depth sufficient to test the Black Creek Coal Seam expected to be encountered at a depth of 3,800 feet subsurface	\$135,000
San Juan Area	From the surface to a depth sufficient to test the Fruitland formation	\$236,000

With respect to any Initial Well to be drilled on a Well Unit in an area to a depth greater or less than the depth indicated above for a well in such area, the Turnkey Costs for such deeper or shallower well will be agreed upon by McKenzie and Participant in writing prior to the date operations are commenced for the drilling of such well. If McKenzie and Participant cannot agree as to the Turnkey Costs for such deeper or shallower well but McKenzie and the Additional Participants who own a majority of the interest then owned by all of the Additional Participants reach

agreement therefor, the amount agreed upon by McKenzie and such Additional Participants shall control and be applicable. With respect to Turnkey Costs for Initial Wells to be drilled on the Rice Lease and the Smelley Lease during a Subsequent Program, such Turnkey Costs shall be agreed upon by McKenzie and Participant in writing prior to December 7, 1989. If McKenzie and Participant cannot so agree by said date, the Rice Lease, the Smelley Lease and the lands covered thereby shall be deemed to be deleted from the Program Area and Participants shall forfeit any rights to the Rice Lease, the Smelley Lease and the lands covered thereby, and McKenzie and Participants shall promptly execute an appropriate instrument evidencing the foregoing.

9. The first sentence in subsection (c) of Section 3.02 of the Development Agreement is hereby deleted in its entirety and the following sentence is hereby inserted in lieu thereof, to-wit:

(c) If at least 90% of the funds paid by Participant pursuant to any such advance are not expended by a date which is 30 days after the end of the 30-day period for which they were advanced, then the portion of such payments not so expended shall bear interest from such date at the rate of one percent (1%) above the per annum prime borrowing rate quoted by Citibank, N.A., or the maximum rate permitted by the applicable usury laws of Texas, whichever is the lesser, with such interest accrued thereon to be credited to and applied against Participant's share of future Turnkey Costs.

10. Subsection (a) of Section 3.03 of the Development Agreement is hereby deleted in its entirety and the following subsection (a) is hereby inserted in lieu thereof, to-wit:

(a) the cost of acquisition of Coal Seam Gas Leases and renewals or extensions of existing Coal Seam Gas Leases, interests therein or parts or portions thereof (including bonus payments, brokerage fees, commissions and filing fees); provided, however, such costs shall be limited to \$2,000.00 for any Well Unit in the Cainwood Area for which the Initial Well is drilled after the end of the Initial Program and for which the acquisition costs allocated thereto (using the same cost allocation formula set forth in Section 2.05 hereof) exceed \$2,000.00, and McKenzie hereby represents and warrants to Participant that such costs for those Coal Seam Gas Leases identified on pages 2 through 5 on Exhibit A attached hereto as Items 1. and Items 1.a. through 1.k. under the heading "CAINWOOD AREA" do not exceed \$25.00 per net mineral acre covered by such Coal Seam Gas Leases;

11. Subsection (f) of Section 3.03 of the Development Agreement is hereby deleted in its entirety and the following subsection (f) is hereby inserted in lieu thereof, to-wit:

(f) the cost of preparing well locations and construction of roads to well locations to the extent hereafter specified:

(1) well identification signs to the extent required by applicable state law;

- (2) clear cutting and removal of timber from road rights-of-way and well pads, including removal and burial or burning of stumpage;
- (3) construction of up to 1,320 feet of single access road per well site in Alabama and construction of up to 2,640 feet of single access road per wellsite in Colorado;
- (4) installation of bar ditches and culverts, and crowning of road surfaces;
- (5) blade work as necessary to prepare a level surface of approximately 0.7 acres in area per wellsite for drilling operations, and construction of one pit per wellsite suitable for drilling operations;
- (6) with respect to wellsites in Alabama, initial application of seed mix and fertilizer along road rights-of-way and well pad borders, and initial placement of all Non-Point Source Pollution mitigation measures to prevent silt runoff as required by the Alabama Department of Environmental Management; provided, however, any additional measures made along road rights-of-way or at the well pad borders as required by such state governmental agency will be charged as a lease operating and maintenance expense under the Operating Agreement;
- (7) treatment and testing of drilling fluids prior to disposal via ground

- application, backfilling and reclamation of drilling pits, initial application of seed mix and fertilizer to drilling pit areas, and initial installation of silt-retaining measures;
- (8) the construction of one pit per well-site prior to well completion to contain flowback of completion and fracturing fluids;
 - (9) treatment and testing of completion fluids prior to disposal via ground application, backfilling and reclamation of completion pits, initial application of seed mix and fertilizer to completion pit areas, and initial installation of silt-retaining measures; and
 - (10) laying of gravel or black "washer" rock on road right-of-way surfaces and well pad surfaces after well completion; provided, however, repairs to both road right-of-way surfaces and well pad surfaces for gravel or black "washer" rock washed or worn away shall be charged as a lease operating and maintenance expense under the Operating Agreement;

12. Subsection (g) of Section 3.03 of the Development Agreement is hereby deleted from the Development Agreement in its entirety and the following subsection (g) is hereby inserted in lieu thereof, to-wit:

- (g) the cost of acquiring and installing tankage, separators, wellhead dehydrators, 2-inch and 3-inch polyethylene water and gas gathering lines not to exceed 1,320 feet each in length per well in Alabama, 2-inch

and 3-inch steel pipe water and gas gathering lines not to exceed 2,640 feet each in length per well in Colorado, power lines, pumping units (temporary or permanent), and other lease equipment and facilities necessary up to the point of the hook up to the infield gathering system, and the cost of all permits and licenses relating to the drilling of wells, and bonds (other than state plugging bonds required to be posted or other financial security required to be furnished by applicable governmental authorities as a result of which the amounts of any cash bonds or other cash security which are posted as state plugging bonds, together with any refunded interest thereon, shall be credited to the joint account under the Operating Agreement when and if refunded) and other similar costs related to such activities;

13. Subsection (h) of Section 3.03 of the Development Agreement is hereby deleted from the Development Agreement in its entirety and the following subsection (h) is hereby inserted in lieu thereof, to-wit:

(h) the cost of acquiring, constructing and installing (but not maintaining) the McKenzie Gathering Line to the extent such acquisition, construction and installation cost equals the cost which would have been incurred had McKenzie laid a 6-inch low pressure polyethylene gathering line originally contemplated by McKenzie;

14. Schedule I attached hereto and made a part hereof is hereby added to the Development Agreement as Exhibit C thereto and made a part thereof for all purposes.

15. Subsection (i) of Section 3.03 of the Development Agreement is hereby deleted in its entirety and the following subsection (i) is hereby inserted in lieu thereof, to-wit:

(i) the cost of completing an Initial Well in accordance with the procedure outlined in Exhibit C attached hereto and made a part hereof, together with the cost to equip an Initial Well into the infield gathering system if the attempted completion is successful and the cost of insurance coverage relating to such completion and equipping operations, said completion costs with respect to an Initial Well drilled in the Cahaba Area and the Cainwood Area being further dependent upon whether the completion attempt thereon is a single frac attempt or a dual frac attempt; and

16. Section 3.04 of the Development Agreement is hereby deleted in its entirety and the following paragraph is hereby inserted in lieu thereof, to-wit:

Section 3.04 There are specifically excluded from Drilling Expenditures all costs related to acquiring and installing the following:

- (a) compression equipment and facilities;
- (b) dehydration equipment installed at or near the compressor sites;
- (c) meter or receiving stations;
- (d) water disposal wells and facilities or evaporation ponds and facilities constructed in lieu thereof, and permit and bonding fees required to own and operate such facilities;
- (e) hot taps;

- (f) gathering lines and facilities beyond the compressor stations or facilities which are necessary to transport Coal Seam Gas to a third party pipe line purchaser;
- (g) water gathering lines in Alabama consisting of 2-inch and 3-inch polyethylene pipe which are necessary to transport water to a disposal site to the extent such lines in Alabama are in excess of 1,320 feet in length, provided all costs related to acquiring and installing 1,320 feet of such lines shall be included as Drilling Expenditures, and water gathering lines in Colorado consisting of 2-inch and 3-inch steel pipe which are necessary to transport water to a disposal site to the extent such lines are in excess of 2,640 feet in length, provided all costs related to acquiring and installing 2,640 feet of such lines in Colorado shall be included as Drilling Expenditures;
- (h) gas gathering lines in Alabama consisting of 2-inch and 3-inch polyethylene pipe which are in excess of 1,320 feet in length, provided all costs related to acquiring and installing 1,320 feet of such lines in Alabama shall be included as Drilling Expenditures, and gas gathering lines in Colorado consisting of 2-inch and 3-inch steel pipe which are in excess of 2,640 feet in length, provided all

costs related to acquiring and installing 2,640 feet of such lines in Colorado shall be included as Drilling Expenditures;

- (i) any county zoning or inspection fees or permits;
- (j) with respect to the Cainwood Area only, bonus payments, brokerage fees, commissions and filing fees incurred in connection with the acquisition of Coal Seam Gas Leases and renewals or extensions of existing Coal Seam Gas Leases, interests therein or parts or portions thereof (using the same cost allocation formula set forth in Section 2.05 hereof) to the extent the same exceed \$2,000 per Well Unit; and
- (k) the McKenzie Gathering Line to the extent such costs (including construction costs) exceed the costs which would have been incurred had McKenzie laid a 6-inch low pressure polyethylene gathering line originally contemplated by McKenzie.

17. The first sentence in Section 3.05 of the Development Agreement is hereby deleted in its entirety and the following sentence is hereby inserted in lieu thereof, to-wit:

In consideration of the payment by Participant of its Participation Percentage share of Turnkey Costs, McKenzie agrees to drill to the depth specified therefor, and (if advisable in the sole discretion of McKenzie) complete in accordance with the procedure set forth on Exhibit C attached hereto (recognizing that the completion

procedure to be followed is dependent upon whether the completion attempt is a single frac attempt or a dual frac attempt in the case of an Initial Well drilled in the Cahaba Area or the Cainwood Area) with new down-hole pipe and equip, each Initial Well, all as a prudent operator in accordance with sound oilfield practices for Coal Seam Gas wells, and to discharge all costs incurred in connection therewith.

18. The following sentence is hereby inserted immediately following the second sentence set forth in Section 4.06 of the Development Agreement, to-wit:

During the terms of the second and third Subsequent Programs, if implemented, the combined interests of McKenzie and such Related Third Parties shall in no event ever be less than 25% during the Commitment Period for any such Subsequent Program.

19. The following paragraph is hereby added to the Development Agreement as Section 6.06 thereof, to-wit:

Section 6.06 In the event Participant elects not to participate in any portion of the Program, McKenzie shall have a perpetual right and easement to use all gathering lines, flow lines and other facilities of McKenzie and the Program, and all such other easements and servitudes of Participant or in which Participant has an interest as are reasonably requested by McKenzie, so as to enable McKenzie to gather and transport the production of McKenzie to the purchaser thereof; provided, however, McKenzie's rights to use such gathering lines, flow lines and other facilities are and shall be subject to availability of line and facility capacity to gather and transport production of McKenzie and

its successors and assigns to the purchaser thereof and are and shall be subservient to the priority rights of Participant to gather and transport Participant's own production to the purchaser thereof in accordance with Section 6.05 hereof. Such use by McKenzie shall be without any user charge, gathering or transportation fee or tariff, but shall bear a pro rata part of applicable maintenance, operating and overhead charges.

20. The second to last sentence set forth in Section 9.02 of the Development Agreement is hereby deleted in its entirety and the following sentences are hereby inserted immediately preceding the last sentence set forth in Section 9.02 of the Development Agreement, to-wit:

If the Termination Option is not exercised at that time, McKenzie shall notify Participant by telephone and immediately confirm in writing in the same manner when \$6,000,000 has been so expended out of each \$9,000,000 of the Drilling Commitment of Participant thereafter, and at any time prior to the expenditure of such \$9,000,000 or within 30 days after the receipt of such notification, whichever is the later date, Participant may give written notice of the exercise of the Termination Option, the effective date of which shall be when such \$9,000,000 has been so expended. In the event Participant exercises the Termination Option prior to the commencement of the second Subsequent Program, Participant shall pay McKenzie as liquidated damages its Participation Percentage of \$10,776 per Initial Well drilled by McKenzie during the first Subsequent Program. Such liquidated damages shall be tendered to McKenzie at the same time Participant delivers to McKenzie written notice of its exercise

of the Termination Option. Such liquidated damages shall be in addition to the Drilling Commitment of Participant for which Participant is obligated during the first Subsequent Program. In the event there is a second Subsequent Program in which Participant elects to participate and Participant exercises its Termination Option prior to the termination of the second Subsequent Program, no liquidated damages shall be payable by Participant to McKenzie for exercising such Termination Option.

21. The following three paragraphs are hereby inserted in Article I. of the Operating Agreement between Paragraph H. thereof and the last non-lettered paragraph thereof, to-wit:

I. The term "well unit" shall mean (1) the portion of the Contract Area to be designated by Operator as soon as practicable before or after the drilling of a First Well, to consist in each instance of the lesser of (a) the maximum number of acres to be earned pursuant to oil and gas leases subject hereto by the drilling of a First Well thereon, or (b) two contiguous spacing units, or (2) the portion of the Contract Area designated or to be designated by Operator pursuant to the provisions of the Development Agreement as a Well Unit (as such term is defined in said Development Agreement).

J. The term "First Well" shall mean the first well drilled under the terms of this Operating Agreement on a well unit on which no other well has theretofore been drilled by Operator and Non-Operator pursuant hereto or to any other agreement between Operator and Non-Operator.

K. The term "Development Agreement" shall mean the Development Agreement to which this Operating Agreement is attached as Exhibit B, as may be amended from time to time.

22. The following sentences are hereby inserted at the end of Paragraph A. of Article XV. of the Operating Agreement, to-wit:

It is further provided, however, that if during any calendar year beginning on January 1, commencing with the 1991 calendar year, Non-Operator should elect not to participate (consent) in the drilling of at least twenty-five percent (25%) of all First Wells proposed to be drilled hereunder during such calendar year and on which actual drilling is commenced during such calendar year, Non-Operator shall forfeit and relinquish to Operator effective as of January 1 of the year following such calendar year all of its right, title and interest in and to the oil and gas leases and lands subject to this Operating Agreement insofar and only insofar as such leases and lands are not included or are not to be included in well units established for wells drilled, or the actual drilling of which commenced, prior to the end of such calendar year and in which Non-Operator participated in the drilling thereof. If during any such calendar year, Operator should elect not to participate (consent) in the drilling of at least twenty-five percent (25%) of all First Wells proposed to be drilled hereunder during such calendar year and on which actual drilling is commenced during such calendar year, Non-Operator shall have the same right, on the same terms and subject to the same conditions, to acquire from Operator oil and gas leases in the

Contract Area as is conferred upon Non-Operator under Section 9.04 of the Development Agreement; provided, such right shall be limited to acquiring all of the oil and gas leases in the Contract Area insofar as the same cover lands not included or not to be included in well units established for wells drilled, or the actual drilling of which commenced, prior to the end of such calendar year and in which Operator participated in the drilling thereof. For purposes of this paragraph, a well on which actual drilling is commenced during the calendar year following the calendar year it is proposed shall be deemed to have been proposed and drilled during the calendar year that actual drilling thereon commenced.

23. Paragraph C. of Article XV. of the Operating Agreement is hereby deleted in its entirety and the following paragraph is hereby inserted in Article XV. of the Operating Agreement in lieu thereof, to-wit:

C. It is agreed that without the mutual consent of a majority of all parties owning a leasehold participation interest in a well at the time reworking or other operations are proposed to be conducted thereon under the provisions of Article VI. hereof, no such operations shall be conducted thereon so long as the well with respect to which such proposal is made is producing or capable of producing oil and/or gas in paying quantities.

24. With respect only to those First Wells (as such term is defined in Paragraph 6 hereinabove) on which actual drilling commences prior to December 31, 1990 or any subsequent date to which the fuel tax credit provided for in Section 29(a) of the Internal Revenue Code of 1986, as amended, may be extended with respect to the production of

Coal Seam Gas from such First Wells, the provisions concerning overhead set forth in Section III of Exhibit C attached to the Operating Agreement are hereby amended by adding the phrase ", except as set forth below." to the last line of subsection 1.ii. of said Section III and to the last line of subsection 1.iii. of said Section III, and by increasing the Drilling Well Rate set forth in subsection 1.A.(1) of said Section III from \$10,000 per well to \$20,000 per well which latter figure shall include the salaries, wages and Personal Expenses of Technical Employees and/or costs of professional consultant services and contract services of technical personnel either temporarily or permanently assigned to and directly employed in the operation of the Joint Property (with such capitalized terms having the same meanings as such terms have in said Exhibit C). With respect to all other wells drilled under the terms of the Operating Agreement, the Drilling Well Rate as originally set forth in the Operating Agreement shall apply.

25. Exhibit A attached to the Development Agreement is hereby amended so as to add thereto those certain Coal Seam Gas Leases which were acquired by McKenzie and/or the contractual rights to receive an assignment of which were acquired by McKenzie subsequent to February 16, 1989, such Coal Seam Gas Leases being more particularly described as follows:

- a. Oil, Gas and Mineral Lease dated January 26, 1988, from Joseph S. Rice, Jr. and wife, Wilda C. Rice, to Mario Carnevale, et al., recorded in Book 965, Page 424 of the Deed Records of Tuscaloosa County, Alabama, covering 2,118.00 acres, more or less, in the Cainwood Area, being more particularly described therein (herein called "the Rice Lease");
- b. Oil, Gas and Mineral Lease dated July 24, 1989, from Clema J. Smelley, et al., to McKenzie Methane Corporation, a memorandum of which is recorded in Book 1018,

Page 445 of the Deed Records of Tuscaloosa County, Alabama, covering 1,150 acres, more or less, in the Cainwood Area, being more particularly described therein (herein called "the Smelley Lease");

- c. Coalbed Methane Gas Lease dated June 1, 1989, from Kimberly-Clark Corporation, et al., to McKenzie Methane Corporation, a memorandum of which is recorded in Book 254, Page 568 of the records of Shelby County, Alabama, and another memorandum of which is recorded in Book 128, Page 106 of the records of Bibb County, Alabama, covering 23,415 acres, more or less, in the Cahaba Area, being more particularly described therein (herein called "the KCC/SESCO Lease");
- d. Coalbed Methane Gas Lease dated June 1, 1989, from Southern Electric Generating Company to McKenzie Methane Corporation, a memorandum of which is recorded in Book 254, Page 559 of the records of Shelby County, Alabama, and another memorandum of which is recorded in Book 128, Page 116 of the records of Bibb County, Alabama, covering 16,137 acres, more or less, in the Cahaba Area, being more particularly described therein (herein called "the SESCO Lease");
- e. Coalbed Methane Gas Lease dated June 1, 1989, from Alabama Property Company to McKenzie Methane Corporation, a memorandum of which is recorded in Book 128, Page 130 of the records of Bibb County, Alabama, covering 120 acres, more or less, in the Cahaba Area, being more particularly described therein (herein called "the Alabama Property Company Lease"); and
- f. Coalbed Methane Gas Lease dated June 1, 1989, from Kimberly-Clark Corporation to McKenzie Methane Corporation, a memorandum of which is recorded in Book 254, Page 554 of the records of Shelby County, Alabama, and another memorandum of which is recorded in Book 128, Page 125 of the records of Bibb County,

Alabama, covering 666 acres, more or less, in the Cahaba Area, being more particularly described therein (herein called "the KCC Lease").

For the same consideration recited above and without waiving any rights or claims that McKenzie or Participant may have against the other, McKenzie and Participant hereby adopt, ratify and confirm the Development Agreement, as heretofore and herein amended, and agree and declare that the Development Agreement is presently in full force and effect with respect to the Program Area in accordance with its terms, as heretofore and herein amended. Terms defined in the Development Agreement and not otherwise defined herein shall have the same meanings herein as such terms have in the Development Agreement. The terms and provisions of this instrument shall extend to, be binding upon and inure to the use and benefit of the respective successors, legal representatives and assigns of McKenzie and Participant.

Dated this 2nd day of November, 1989, but effective for all purposes as of March 17, 1989, except with respect to those Coal Seam Gas Leases acquired by or the contractual rights to receive an assignment of which were acquired by McKenzie subsequent to March 17, 1989, the effective date hereof shall be the date McKenzie acquired such Coal Seam Gas Leases or such contractual rights with respect thereto.

Witnesses:

Laura M. Spaid

A. Nathan Lopez

Patricia A. Shuy

Chris Lipp

MCKENZIE METHANE CORPORATION

By: [Signature]
Michael McKenzie, President

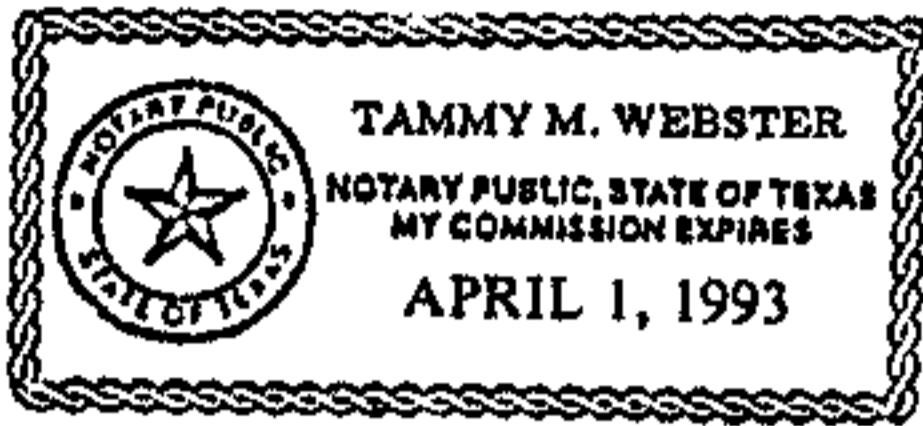
THE NORTHWESTERN MUTUAL LIFE
INSURANCE COMPANY

By: [Signature]
Name: Willard L. Dennison
Title: Vice President

633627

THE STATE OF TEXAS §
COUNTY OF HARRIS §

This instrument was acknowledged before me on November 15th, 1989, by MICHAEL MCKENZIE, President of MCKENZIE METHANE CORPORATION, a Texas corporation, on behalf of said corporation.



Tammy M. Webster
Tammy M. Webster
(Print Name)
Notary Public in and for
the State of T E X A S

(S E A L)

My Commission Expires:

THE STATE OF WISCONSIN §
COUNTY OF MILWAUKEE §

This instrument was acknowledged before me on November 16, 1989, by Willard L. Dennison, Vice President of THE NORTHWESTERN MUTUAL LIFE INSURANCE COMPANY, a Wisconsin corporation, on behalf of said corporation.



Joyce Malzhan
Joyce Malzhan
(Print Name)
Notary Public in and for
the State of WISCONSIN

SCHEDULE I

Attached to and made a part of the Second Amendment to
Development Agreement dated November 2, 1989

Exhibit C

Attached to and made a part of the Development Agreement
 Dated Effective as of March 17, 1989
 Dual Frac Procedure

Items with an asterisk (*) are not usually conducted in a single zone completion. McKenzie will attempt to perform both fracture stimulations on the same day to avoid additional setup pump charges.

- 1) Run gauge ring to be certain of a full diameter hole.
- 2) Run cement bond/gamma ray/neutron/casing collar locator log combo to determine quality and top of cement as well as to tie casing collars to openhole measured depth.
- 3) Swab well dry, spot 15% or 28% HCL acid across interval.
- 4) Perforate the initial target coal intervals (typically the lowermost coal interval).
- 5) Breakdown perforations by displacing the acid in the casing. Prepare to frac.
- 6)* Move sufficient tanks on location to frac both coal completion intervals. Install rented stripping head and full opening frac valve on well.
- 7) Frac the initial target interval.
- 8)* With pressure still on the formation, install the wireline lubricator and prepare to set the frac plug between the target intervals.
- 9)* Spot 15% or 28% HCL acid across the next perforated interval. Drop the stainless steel ball that is designed to seal off in the frac plug.
- 10)* Perforate the next target horizon.
- 11)* Breakdown this next set of perforations by displacing the acid in the casing. Establish an injection rate. Reperforate or reacidize as required.
- 12)* Fracture stimulate the second interval. Shut-in the well overnight to allow the fractures to close.
- 13) Slowly flowback and try to recover as much load fluid after the frac as possible.
- 14)* As the pressures subside, use the stripping head and trip in with a bit and wash out proppant and drill out the frac plug. Rent a pump, tank, and haul water to circulate the well clean.
- 15) Once the frac plug is drilled out, wash down and circulate the wellbore clean as in the normal single stage completion.

Seven out of the fifteen steps identified above with an asterisk are required in a dual completion strategy. Higher stimulation costs are incurred if the second frac must be postponed to the following day.

Inst # 1992-21657

WHEN RECORDED, RETURN TO
 MICHAEL W. MORGAN
 FULLBRIGHT & JAWORSKI
 51st FLOOR
 1301 MCKINNEY
 HOUSTON, TEXAS 77010
 09/29/1992-21657
 03:52 PM CERTIFIED
 SHELBY COUNTY JUDGE OF PROBATE
 028 MJS 74.00

Inst # 1992-21657