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188

Department of Communications, Energy and Natural Resources
Roinn Cumarsáide, Fuinnimh agus Acmhainní Nádartha

15/02/2011

Dr Martin Keeley
Lough Allen Natural Gas Company Ltd
Nantenan Glebe
Askeaton
Co Limerick

Our Ref B12/195

**Re: Application from Lough Allen Natural Gas Company Ltd
for an Onshore Licensing Option in the North Western Carboniferous Basin**

Dear Dr. Keeley

I am directed by the Minister for Communications, Energy and Natural Resources to refer to your application received on 11 June 2010 concerning the above.

The Minister in exercise of the powers vested in him under Section 7 of the Petroleum and Other Minerals Development Act, 1960 has decided to reserve by way of Licensing Option (ON11/2) the area as set out in the Schedule to this letter (hereinafter referred to as "the Option area") for **Lough Allen Natural Gas Company Ltd** (hereinafter referred to as "the Company") from 1 March 2011 to 28 February 2013 subject to following conditions:-

1. The Company will, during the Option period, carry out a programme of work as specified in the attached Appendix I and prepare and present a report on the results of the work to Petroleum Affairs Division (PAD) of this Department by 30 November 2012 as outlined in Appendix II.
2. The Company shall be the holder of a Petroleum Prospecting Licence (PPL) during the full period of the Licensing Option
3. The Company Shall pay the annual rental fee applicable in respect of the Licensing Option area, an invoice in respect of first year's rental will issue on receipt of company's acceptance of this authorisation.
4. On or before 28 February 2013 the Company shall either relinquish this Licensing Option or shall have applied to have all or part of the area reserved by way of this Option exclusively licensed.

Petroleum Affairs Division
20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000


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- 5. If the Company applies, on or before the expiry date of this Licensing Option to licence all or part of the area reserved by way of this Option, the Minister will be prepared to consider the granting of a follow-up authorisation (an Exploration Licence) to the Company covering an area to be agreed with the Minister having regard to the work programme proposed by the Company.
- 6. The Company will retain the services of suitably qualified consultants/contractors for the duration of this Licensing Option.
- 7. This Licensing Option is subject to the provisions set out herein and to the provisions as set out in the Licensing Terms for Offshore Oil and Gas Exploration and Development, 2007 (hereinafter referred to as "the Licensing Terms") with particular reference to Licensing Option authorisations and the General Provisions respectively. A copy of the said Licensing Terms, authenticated under the official seal of the Minister is attached herewith. The said Licensing Terms are incorporated in and form part of this licensing option.

The Minister wishes me to draw to your attention at this time that in granting this Licensing Option he does not necessarily accept that the Company have the technical or financial resources for a follow-up authorisation and before such authorisation can be granted it will be necessary for the Company to demonstrate to the Minister's satisfaction that these are in place.

Please confirm the Company's acceptance of the above terms and conditions by executing a duplicate of this letter and returning it to me.

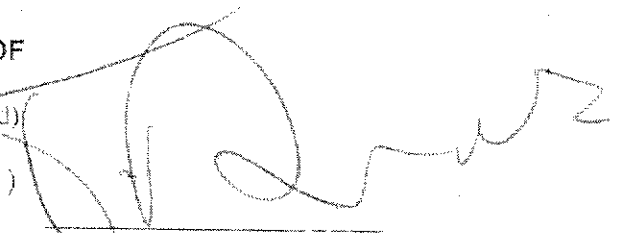
Yours sincerely

 Philip McMahon
 Higher Executive Officer
 Tel: 00353 1 6782693

IN ACCEPTANCE AND AGREEMENT HEREOF

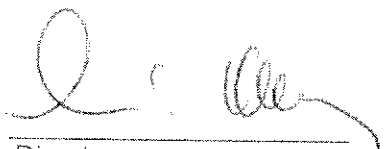
The Seal of Lough Allen Natural Gas Company Ltd)

was affixed hereto on the

4TH day of APRIL 2011
 2010


 Director

in the presence of


 Director

Appendix J

Lough Allen Natural Gas Company Ltd
Work Programme for Onshore Licensing Option in the North West
Carboniferous Basin

During the Option period, the Option holder will undertake the following programme:

1. Procure all available and relevant technical data, including well/borehole, seismic, gravity and magnetic data; and technical studies.
2. Evaluate existing data, re-interpreting and remapping where appropriate, to provide a reliable up-to-date assessments of previous exploration results, remaining exploration potential and any data/information gaps.
3. Carry out new geological/geophysical studies and data acquisition projects, as considered necessary, but specifically including those described below.
4. Process and interpret the latest airborne potential field data, including TELLUS, for fracture pattern determination.
5. Devise and execute a shallow coring programme comprising boreholes not exceeding 200m in depth to sample un-weathered shales within the Bundoran and Benbulbin Shales, with subsequent laboratory analysis of interstitial gas, grain size distribution, TOC, kerogen maturity and typing, fracture density and orientation and other mechanical properties (density, compressibility etc); the exact number, location, depth and evaluation programme for such boreholes to be agreed in advance with the Department.
6. Reprocess existing seismic data (subject to access to original field tapes in SEG-Y) with the emphasis on attributes and AVO analysis of amplitude anomalies at Top Dowra level.
7. Review feasibility and design parameters for small 3D survey areas over areas of greatest interest.
8. Delineate prospective areas and quantify their gas potential; identify potential drilling targets and optimal well design; prepare and submit generic well proposals.
9. Perform and submit scoping/feasibility studies for likely production scenarios, accompanied by thorough descriptions of appropriate analogues.
10. Conduct preliminary environmental baseline/ impact assessment studies and local consultations in preparation for any seismic surveying, drilling or pre-development activity to ensure that any issues of sensitivity or concerns of the relevant authorities [NPWS, DEHLG, EPA, County Councils etc.] have been taken account of in an appropriate manner.

185

11. Integrate the work above into a comprehensive assessment of the petroleum resource potential of the area together with strategies, scoping economics and costed plans for further exploration / exploitation, and submit to the Department in the form of a written report no later than three months prior to the expiry of the Option.