



Second Wave Petroleum Inc.

News Release

**For Immediate Release
Calgary, Alberta**

**TSX Venture Exchange: SCS
36,932,340 Common Shares**

Second Wave Petroleum Inc. Announces Discovery of Judy Creek Oil Resource Play

CALGARY, ALBERTA – May 19, 2009. Second Wave Petroleum Inc. ("Second Wave" or the "Company") is pleased to announce that it has successfully drilled its first two 100% working interest Pekisko oil wells within its Judy Creek core area in Northwest Alberta. Building on this drilling success the Company has expanded its undeveloped land position on the Pekisko play in Judy Creek to 46,500 net acres by purchasing an additional 14,000 net acres at recent Crown sales.

Q1 Judy Creek Drilling Program

During the first quarter of 2009, Second Wave utilized proprietary 3-D seismic data, shot in the fourth quarter of 2008, to drill two 100% working interest Pekisko oil wells in order to evaluate the resource potential of its Judy Creek lands as indicated by 3-D seismic data and previously existing well control.

The first well was drilled as a horizontal oil well in the Pekisko F pool at 10-28-063-09W5. The well was drilled and cased with the horizontal portion intersecting 300m of the Pekisko F formation. The horizontal section was barefoot completed and stimulated with a 20 m³ acid squeeze prior to being tested. Post stimulation the well produced 23 degree API oil at rates in excess of 300 boe/d (65% oil) over a 36 hour test period. The well was subsequently placed on production in April and has produced at an average rate of 120 boe/d (55% oil) over the first 30 days of production.

The second well was a vertical exploratory well drilled at 14-32-63-09W5, which delineated the Pekisko G pool in addition to intersecting two exploratory uphole targets previously identified by the Company's proprietary 3-D seismic data. The Pekisko G formation was stimulated with an acid squeeze after which it tested 23 degree API oil at initial rates that exceeded 100 boe/d (55% oil) over a 20 hour production test period. The Pekisko production test was shortened to ensure that the Company could complete an evaluation of the uphole formations and tie the discovery well into the Company's gathering system prior to spring break-up. Both uphole natural gas discoveries were successfully completed and flowed at an aggregate rate of 1.5 mmcf/d over a 24

hour test period. The Company has elected to initially produce these uphole natural gas formations with production commencing early in April. Production rates over the first 30 days averaged 400 mmcf/d. Based on the significance of this Pekisko flow test and the positive results from the 10-28 horizontal, the Company has moved ahead with a horizontal drilling program to develop the Pekisko G pool.

Future Judy Creek Resource Development

The Pekisko formation in Judy Creek is a carbonate reservoir which contains 23 degree API crude oil, associated solution gas and formation water. Historically this formation, which is slightly sour, has been tested and developed with vertical well bores resulting in limited commercial success. Initial production data from the 10-28 horizontal well indicates that these Pekisko pools can be economically developed within the current commodity price environment utilizing new horizontal well drilling technology.

In its Judy Creek core area, the Company controls all of the related infrastructure and facilities comprised of a wholly-owned oil battery and gas processing plant. Second Wave has been able to utilize this infrastructure to accommodate all incremental production from its first quarter drilling program and, as the result of minor upgrades, has the capability to process 4,000 boe/d of emulsion and 4 mmscf/d of gas. In the near term these facilities will be able to accommodate planned additional development volumes with minimal capital investment.

Based on the positive first quarter drilling results Second Wave has recently acquired an additional 14,000 net acres of undeveloped land, increasing its holdings on the Pekisko play in the area to 46,500 net acres. To date the Company has evaluated approximately 5,800 acres of these undeveloped lands using 3-D seismic technology.

The Company has commenced its horizontal development plans for both the Pekisko F and G oil pools and anticipates a follow up drilling program of 6 additional horizontal drilling locations, the first two of which are scheduled to be drilled in the fourth quarter of 2009. The Company has utilized its 3-D seismic data and existing well information (2 new drills and 4 existing well bores) to geologically map out the Pekisko F and G pools and believes that it has a potential drilling inventory exceeding 50 horizontal locations on its current 100% working interest lands.

Following is a summary of the Company's expectations regarding its Pekisko horizontal wells based on results to date:

- Initial 30 day production rates of 100 to 150 boe/d (55% oil)
- Expected 6 month production rates of 60 to 80 boe/d (65% oil)
- Recoverable Reserves of 120 mboe to 160 mboe (65% oil)
- Oil quality of 23 degree API with initial producing water ratios of 80%
- Average depth of 1,500m with 600m of horizontal leg
- Acid stimulation completed on horizontal leg
- Capital costs of \$1.1 million to drill, complete and tie-in

To view the Company's current Corporate Presentation, please visit the Second Wave website at www.secondwavepetroleum.com.

For further information please contact:

Colin B. Witwer

President and CEO
Second Wave Petroleum Inc.
1700, 520 - 5th Avenue S.W.
Calgary, AB T2P 3R7
Telephone: (403) 451-0176
Email: cwitwer@secondwavepetroleum.com

Randy Denecky

VP, Finance and CFO
Second Wave Petroleum Inc.
1700, 520 - 5th Avenue S.W.
Calgary, AB T2P 3R7
Telephone: (403) 451-0177
Email: rdenecky@secondwavepetroleum.com

Web: www.secondwavepetroleum.com

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Barrels of Oil Equivalent (BOEs). The term BOE refers to barrel of oil equivalent. BOEs may be misleading, particularly if used in isolation. A BOE conversion ratio of six mcf (six thousand cubic feet) to one bbl (one barrel) is based on an energy equivalency conversion method primarily applicable at the burner tip and does not represent a value equivalency at the wellhead.

Forward-Looking Statements. This news release contains forward-looking statements as to the Company's internal projections, expectations and beliefs relating to future events or circumstances. Forward-looking statements are typically (but not necessarily) identified by words such as "anticipate", "believe", "plan", "estimate", "expect", "plan", "intend", "potential", "may", "will", "should" or similar words suggesting future outcomes. Although the Company believes that these forward-looking statements are reasonable, undue reliance should not be placed on them as they are subject to known and unknown risks and uncertainties, many of which are beyond the Company's control. Forward-looking statements are not guarantees of future outcomes. There can be no assurance that the plans, intentions or expectations contained in the forward-looking statements or upon which they are based will in fact occur or be realized, and actual results may differ from those expressed or implied in the forward-looking statements. The difference may be material.

Second Wave is subject to the inherent risks associated with the exploration, development, exploitation and production of oil and gas. More particularly, material risk factors that could cause actual results to differ materially from those expressed or implied in the forward-looking statements contained in this news release include: adverse changes in commodity prices, interest rates or currency exchange rates; accessibility of capital when required and on acceptable terms; lower than expected production of crude oil and natural gas; production delays; lower than expected reserve volumes on the Company's properties; increased operating costs; ability to attract and retain qualified personnel or to secure drilling rigs and other services on acceptable terms; competition for labour, equipment and materials necessary to advance the Company's projects; unforeseen engineering, environmental or geological problems; ability to obtain all required regulatory approvals on a timely basis and on satisfactory terms; and changes in laws and governmental regulations (including with respect to taxes and royalties). This list is not exhaustive. Readers should also review the risk factors described in other documents filed by the Company from time to time with securities regulatory authorities in Canada, including its most recent annual information form, copies of which are available electronically at www.sedar.com and at www.secondwavepetroleum.com.

Specific forward-looking statements contained in this news release include statements regarding: the Company's ability to economically develop its Pekisko pools using new horizontal drilling technology; the scope and timing of a follow-up drilling program for the Pekisko F and G pools; future horizontal drilling locations; and expected production rates, product mix, oil quality, capital costs and other stated features for the Pekisko wells. Statements herein relating to "reserves" are also forward-looking statements, as they involve an implied assessment, based on certain estimates and assumptions, that the reserves described exist in the quantities predicted or estimated and can profitably be produced in the future. In making such forward-looking statements, Second Wave has made various assumptions regarding, among other things: the accuracy of geological and geophysical data and interpretations of that data; future oil and natural gas prices; future capital requirements; future exchange rates; the accessibility and cost of capital (including credit); the Company's ability to economically produce oil and gas

from its properties and the timing and cost to do so; and its ability to obtain qualified staff, equipment and supplies in a timely and cost-efficient manner.

The forward-looking statements included herein are made as of the date of this news release and Second Wave undertakes no obligation to publicly update or revise any forward-looking statements, whether as a result of new information, future events or otherwise, except as may be required by securities laws.

Reserves Disclosure. *The determination of oil and gas reserves involves the preparation of estimates that have an inherent degree of associated risk and uncertainty. The estimation and classification of reserves requires the application of professional judgment combined with geological and engineering knowledge to assess whether specific classification criteria have been satisfied. Second Wave's expectations with respect to reserves associated with the Pekisko horizontal wells as set forth in this news release are based on internal estimates of proved plus probable reserves by Company management, effective as at the date of this news release, which estimates have been prepared in accordance with National Instrument 51-101 and the COGE Handbook.*