



CANADA

DEPARTMENT OF INDIAN AFFAIRS AND NORTHERN DEVELOPMENT
OIL AND MINERAL DIVISION

Application for a Drilling Authority

This notice of intention to begin drilling operations, in triplicate, and where required a plan of survey approved by the Surveyor General showing the target area or the site of the well must be submitted and approved before commencing operations.

In compliance with the "Canada Oil and Gas Land Regulations", application is hereby made for approval to drill:-

Name and number of well COLUMBIA ET AL KOTANEELEE YT I-48

Location: Unit 1 Section 48 Grid 60° 10' - 124° 00'
 Latitude 60° 07' 35.917" Longitude 124° 07' 36.45"
 Unique Well Identifier 3001486010124000
 Universal Well Location Reference Lat. 60.12664 Long. 124.12679

Elevation: Ground 851.7 m K.B. 859.3 m feet above sea-level.
 Well is expected to produce from Nahanni formation at a depth
 of about 3907 m feet. Expected total final depth 4420 m
 Area assigned to well
 (for District Conservation Engineer's use only)

Permit No. Lease No. 411-68 Acreage 11958
 Permittee, licensee, or lessee Dome Petroleum Limited
 Exploratory Licence No. Dome 2608 Columbia Gas 2599
 Surface owned by Crown or Crown
 (If alienated submit name and address of owner and occupant.)

Petroleum and natural gas rights owned by Crown
 We propose to use the following strings of casing, either cementing or landing them as indicated below:-

Casing Size O.D. (Inches)	Weight kg/m	Grade	New or Used	Estimated Depth	Sacks of Cement
1. 508	140.18	H-40	New	230	
2. 340	107.37	N-80	New	1050	
3. 244	64.87/70.09	N-80	New	3350	
4. 178	43.25/47.72	N-80	New	4420	
5.					

Expected water, gas, and oil horizons and type of control equipment:
 Nahanni
 1 x 339.73 mm 5000# Hydril
 1 x 339.73 mm Shaffer Double Gate
 1 x 339.73 mm Shaffer Single Gate

Well will be drilled with Rotary Rig No. 9 by Nabors Drilling Ltd.
 (Drilling Contractor or company)

Responsible agent of applicant:- LTD. Contractor's Business Licence No. 4471
 At well D&S PETROLEUM FIELD SERVICES LTD. At registered office D&S PETROLEUM FIELD SERVICES LTD.
 Address 700, 633 Sixth Avenue S.W. Address 700, 633 Sixth Avenue S.W.
 It is understood that if changes become necessary, notice of the change of plan will be submitted.
 Dated at Calgary this 15 day of March 1979
 Signed by [Signature] Company D&S PETROLEUM FIELD SERVICES LTD.
 Title Agent Operator's Licence No. 95206A

(For Oil and Mineral Division use only)

APPROVED

This application has been examined and approved subject to the following conditions:

..... See attached list of conditions
 development well (status)

Dated March 22 1979 [Signature]
 District Conservation Engineer

Forms to be submitted to District Conservation Engineer
 Department of Indian Affairs and Northern Development.

COLUMBIA ET AL KOTANEELEE YT I-48

Drilling Program

1. Set 15 m of 762 mm conductor barrel.
2. Drill 660 mm hole to ± 230 m.
3. Run and cement to surface ± 230 m of 508 mm, 140.18 kg/m H-40, ERW casing.
4. Head up and pressure test 508 mm Hydril and single gate BOP's.
5. Drill 444.5 mm hole to ± 1050 m.
6. Log
7. Run and cement to surface, ± 1050 m of 340 mm, 107.37 kg/m, N-80 buttress casing.
8. Head up and pressure test 340 mm BOP stack with manifold.
9. Drill 311.2 mm hole to ± 3350 m.
10. Log
11. Run and stage cement ± 3350 m of 244.5 mm casing. String will be composed of approximately 1524 m of 70.09 kg/m, N-80, 8RD casing, ran below approximately 1875 m of 64.87 kg/m, N-80 buttress casing.
12. Head up and pressure test 244.5 mm BOP stack with manifold.
13. Drill 215.9 mm hole to total depth.
14. Log and test as required.
15. Run to T.D. and cement 178 mm casing. String will be composed of approximately 1225 m of 47.72 kg/m, N-80, 8RD, ran below approximately 3195 m of 43.25 kg/m, N-80 buttress.
16. Remove BOP's and install wellhead.

March 15, 1979

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Logging Program

±230 m - ±1,050 m (444.5 mm hole)

1. Dual Induction Laterlog
2. Borehole Compensated Sonic

±1,050 - ±3,350 m (311.2 mm hole)

1. CNI-FDC
2. Dual Induction Laterlog
3. Borehole Compensated Sonic

±3,350 - T.D. (215.9 mm hole)

1. Compensated Neutron - Formation Density Gamma Ray
2. Dual Laterlog
3. Borehole Compensated Sonic
4. Dipmeter

March 15, 1979

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TO BE ATTACHED TO AND MADE A PART OF DRILLING AUTHORITY NO. 929
FOR COLUMBIA ET AL KOTANEELEE Y.T.1-48 APPROVED 22 March 1979

CONDITIONS OF APPROVAL

1. Copies of this Drilling Authority or Amendments to a Drilling Authority shall be exhibited at the drilling rig in both the Doghouse and the Drilling Foreman's office between spud and rig release dates.
2. The Company shall submit to this office, on Tuesday of each week/daily, the latest reports received on the progress of the well.
3. During well drilling and testing operations, every effort shall be made to ensure that drilling fluids, chemicals and wastes shall be disposed of or contained in a manner that will prevent contamination of adjacent area, or sub-surface waters.
4. We draw your attention to Sections 95 and 96 of the Canada Oil and Gas Land Regulations.
5. Approval must be obtained from the Regional Conservation Engineer to run any casing or liners not approved on the Drilling Authority.
6. All shows of oil and/or gas, and water flows, or any unusual events shall be reported to the Regional Conservation Engineer immediately.
7. Should a fatal accident occur, drilling operations are to be suspended and the Regional Conservation Engineer notified immediately. Permission to resume drilling must be obtained from the Regional Conservation Engineer.
8. Two field print copies of all well logs and three copies of the core analysis and fluid analysis must be forwarded to the Regional Conservation Engineer as soon as they are available.
9. Formation tops (samples or logs) of the section penetrated each week are to be reported with the weekly drilling reports.
10. The Regional Conservation Engineer must be notified at least 24 hours before spudding the well.
11. Permission to drill beyond the approved final depth MUST be obtained from the Regional Conservation Engineer.


Regional Conservation Engineer
Yukon Territory