DEPARTMENT OF MINES AND ENERGY

SOUTH AUSTRALIA

OPEN FILE ENVELOPE SERIES

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TENEMENT HOLDER: Delhi International Oil Corp.

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00003

DELHI INTERNATIONAL OIL CORPORATION
(INCORPORATED WITH LIMITED LIABILITY IN DELAWARE U.S.A.)
33 KING WILLIAM STREET, ADELAIDE
SOUTH AUSTRALIA 5000

ROBERT R. BLAIR
VICE PRESIDENT
GENERAL MANAGER — OIL & GAS OPERATIONS

February 25, 1971

The Director
Bureau of Mineral Resources
(Petroleum Exploration Branch)
P.O. Box 378
CANBERRA CITY A.C.T. 2601

Dear Sir,

APPLICATION FOR SUBSIDY

PETROLEUM SEARCH SUBSIDY ACT 1959-1969

Delhi International Oil Corporation, Santos Limited, Vamgas N.L., and TOTAL Exploration (Australia) Limited hereby apply for grant of subsidy under the provisions of the Petroleum Search Subsidy Act, 1959-1969 for a seismic survey to be conducted during 1971 in P.E.L. 5/6, South Australia and A.T.P. 66P/67P, Queensland.

1. The name "Tilparee Seismic Survey" is proposed for the project.

2. The applicant's name as Operator for the above-named companies is:

Delhi International Oil Corporation

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3. (a) The applicant's registered address in South Australia is:

33 King William Street
Adelaide, South Australia, 5000

(b) The applicant's registered address in Queensland is:

Hart, Lockhart Pty. Ltd.
C/- Messrs. Flower & Hart
400 Queen Street
Brisbane, Queensland, 4000

4. All communications with respect to this application should be addressed to the Operator as follows:

Robert R. Blair
General Manager, Oil & Gas Operations
Delhi International Oil Corporation
G.P.O. Box 1837P
Adelaide, South Australia, 5001

5. The survey is located in the northeastern part of South Australia and the southwestern part of Queensland, the centre of the area being about 35 miles south of Innamincka Homestead, and is bounded by Latitudes 28° 00' south and 28° 30' south and Longitudes 140° 30' east and 141° 15' east. (See Figure 1).

6. The following statements and discussions in support of our application are attached:

Attachment No. 1. The objective of the proposed survey.

Attachment No. 2. Proposed operations and cost of survey.

Attachment No. 3. Regional geology and existing geophysics.

The applicant agrees that progress reports and final reports will be prepared and submitted in accordance with specifications as set out in the Petroleum Search Subsidy Act (1959-1969) Guide to Applicants and Operators, of January, 1970. The Final Report covering the proposed survey will be submitted no later than four months after completion of the survey. The Final Report will be prepared by Austral-United Geophysical Corporation, and will incorporate interpretations by Delhi geophysical staff.

Yours very truly,
DELHI INTERNATIONAL OIL CORPORATION

By Robert R. Blair
General Manager, Oil & Gas Operations

WKT/DLB:jo

The Director
Bureau of Mineral Resources

Attachment No. 1

REASONS FOR AND OBJECTIVES OF THE SURVEY

The Dullingari No. 1 well penetrated a Permian Gidgealpa Formation section over 2,000 feet thick which contained some gas shows. In the Toolachee No. 1 and No. 2 wells, sediments belonging to this formation are over 1,000 feet thick and contain a number of well-developed sandstone intervals, some of which produced gas at Toolachee No. 1 but were water-filled at Toolachee No. 2. Further east, in Queensland, the Roseneath No. 1 well also encountered over 1,100 feet of Gidgealpa Formation sediments containing a number of sandstone intervals which gave substantial gas flows. Unfortunately subsequent testing has indicated that these reservoirs are rapidly depleting.

Re-interpretation of old seismic data, either sparse or of poor quality, east of Dullingari No. 1 suggests the possible presence of a large anticlinal structure over which the Permian is expected to be about 1,500 feet thick.

Objectives of the proposed survey are:

1) To further investigate the potential structure east of Dullingari No. 1 using the better recording techniques now available. The semi-reconnaissance lines initially programmed will be supplemented by further detail lines as required.

2) The location of structural anomalies in an area of thick Permian sediments east of Toolachee structure. If interesting leads are located by the initial reconnaissance traverses, further detail work may be programmed.

The Director 00007 Attachment No. 2
Bureau of Mineral Resources

PROPOSED OPERATIONS AND COST OF SURVEY

The proposed survey will be carried out within the bounds of Petroleum Exploration Licences 5 and 6, State of South Australia, and Authorities to Prospect 66P and 67P, State of Queensland. Detailed summaries of the provisions of these licences have been furnished with previous subsidy applications filed by Delhi International Oil Corporation.

The survey will be conducted by Austral-United Geophysical Corporation. A copy of the contract will be forwarded as soon as it is executed.

Single-fold split-spread reflection seismic profiling with shot-points at 2,640 feet intervals is proposed for the initial traverses. Some Common Depth Point profiling may be undertaken later in the survey to assist in the final location of well-sites.

The duration of the total survey will be not more than two (2) crew months, with an estimated three quarters (0.75) crew months being spent in the area for which subsidy is requested. The location of the initial traverses is shown in red on Figure 2. It is anticipated that additional traverses will be required, and if so these will be selected on the basis of results of initial lines.

Commencement of recording in the area for which subsidy is requested is tentatively planned for March 9, 1971.

The total cost of the survey in the area for which subsidy is requested is estimated to be $A48,000*. A sum of not less than ($A130,000) is available for the proposed operation.

* Providing the subsidy circle around Roseneath No. 1 is removed or reduced to a radius of ten miles.

The Director
Bureau of Mineral Resources

Attachment No. 3

REGIONAL GEOLOGY AND EXISTING GEOPHYSICS

Regional Geology

The proposed survey will be conducted in the southern portion of the Cooper Basin in South Australia. The formation of the Cooper Basin started sometime after Ordovician time, probably at about the beginning of the Permian. Subsidence continued intermittently throughout Permian, Triassic, Jurassic and Cretaceous time, allowing for the deposition of sediments of these ages to a varying degree. The greatest volume and areal extent of sedimentation was during the Jurassic and Cretaceous. During this long period of gentle tectonic activity, some folding took place along lines of weakness in the underlying Lower Paleozoic rock. Most of this folding was contemporaneous with deposition as can be demonstrated at such structures as Gidgealpa where the rocks thin over the structure. Underlying the Permian and younger rocks is a complex series of sediments ranging in age from Devonian to Cambrian. The structural and stratigraphic relationships of these rocks is incompletely understood. It is known, however, that structurally they are very much more disturbed than the Upper Paleozoic and Mesozoic rocks above, where tectonic activity was mild.

The Jurassic and Cretaceous sequences contain thick beds of shales and sandstones which could be source and reservoir rocks for hydrocarbon generation and entrapment. To date, however, these reservoirs have not been productive as they are apparently flushed. Given the proper hydrodynamic and structural conditions, they could produce hydrocarbons in large quantities.

Triassic sediments are expected to be present in the area and must be considered prospective in the Cooper Basin because of the good gas shows produced in several of the wells drilled.

Permian sediments throughout the area are very prospective, as demonstrated by the discovery of gas and gas-condensate at Moomba, Gidgealpa and Daralingie fields, which are of major importance. These rocks contain both source and reservoir beds, consisting of alternating sandstones and organic shales with numerous coal seams. Many hydrocarbon traps exist, both structural and stratigraphic.

The Ordovician has been drilled in several wells in the basin. These rocks are primarily marine shales, siltstones and fine grained sandstones. Good oil shows were found in the Pando No. 1 well, and similar sediments are petroliferous in the Amadeus Basin. If porosity is developed, they have hydrocarbon potential.

In summary, the Cooper Basin and nearby areas have great hydrocarbon potential with multiple objectives in much of the area and both structural and stratigraphic traps present.

Existing Geophysics

1. Aeromagnetic Surveys

Aeromagnetic surveys carried out over the area resulted in magnetic basement depth estimates ranging from 4,000 to 8,500 feet, however estimates made by different interpreters at essentially the same locations have varied by a factor of about 2 to 1. Seismic and well data in this part of the basin suggest that many of the magnetic basement depth estimates were pessimistic.

2. Gravity Surveys

The area has been covered by reconnaissance helicopter gravity surveys on a four-mile grid. Also, gravity surveys had been carried out in conjunction with a number of seismic surveys. The gravity data indicated the presence of strong intra-basement (or at least pre-Permian) contrasts, inasmuch as the gradients were often opposite to those shown by seismic structure in Permian and younger rocks. However, "noses" off of the large gravity features often coincided with Permian or younger seismic structure. No evidence of diapirism had been detected.

3. Seismic Surveys

Seismic reflection surveys previously conducted in this part of the Cooper Basin indicated the presence of a number of significant anticlinal trends and implied the existence of significant thicknesses of Permian rocks. Also, work done in 1968 and 1969 suggested the possibility that the edge of the basin is further south-east than previously believed.

Selected References

Further details of geology and geophysics pertinent to this application for subsidy are included in the following reports on geophysical operations having been carried out over the region of the proposed Tilparee Seismic Survey:

Final Reports on Subsidized Operations

GEOPHYSICS

1. Innamincka-Betoota Aeromagnetic Survey, 1961
2. Cooper's Creek Seismic Survey, 1964
3. Strzelecki Creek Gravity Survey, 1964
4. Lake Gregory Gravity Survey, 1965
5. Strzelecki-Cooper Seismic and Gravity Survey, 1965
6. Tickalara Seismic and Gravity Survey, 1967
7. Cooper Basin Seismic and Gravity Survey, 1967
8. Southern Cooper Basin Seismic and Gravity Survey, 1969
9. Epsilon Seismic Survey, 1970

WELLS

1. Delhi-Santos Orientos No. 1
2. Delhi-Santos Dullingari No. 1
3 TOTAL Tickalara No. 1

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DELHI INTERNATIONAL OIL CORPORATION
INCORPORATED WITH LIMITED LIABILITY IN DELAWARE U.S.A.
33 KING WILLIAM STREET ADELAIDE
SOUTH AUSTRALIA 5000

March 1, 1971

The Director
Bureau of Mineral Resources
Box 378 P.O.
CANBERRA CITY 2601

Dear Sir:

Although it is acknowledged that subsidy was refused TOTAL in the drilling of Orientos North No. 1, within the 20 mile radius circle established around Roseneath No. 1; we submit that the circle should be removed, or reduced to a 10 mile radius for the following reasons:

1. Orientos North No. 1 was not a discovery, and Roseneath No. 1 production testing indicated an extremely small reservoir.

2. Interpretation of seismic data indicates other structures near Roseneath are too small to be of economic significance.

3. Near the circle of 20 mile radius from Roseneath a structure of possibly economic proportions may be present. If subsidy were to be made available for exploration, reserves of significance to the Commonwealth and to the Producers might be discovered.

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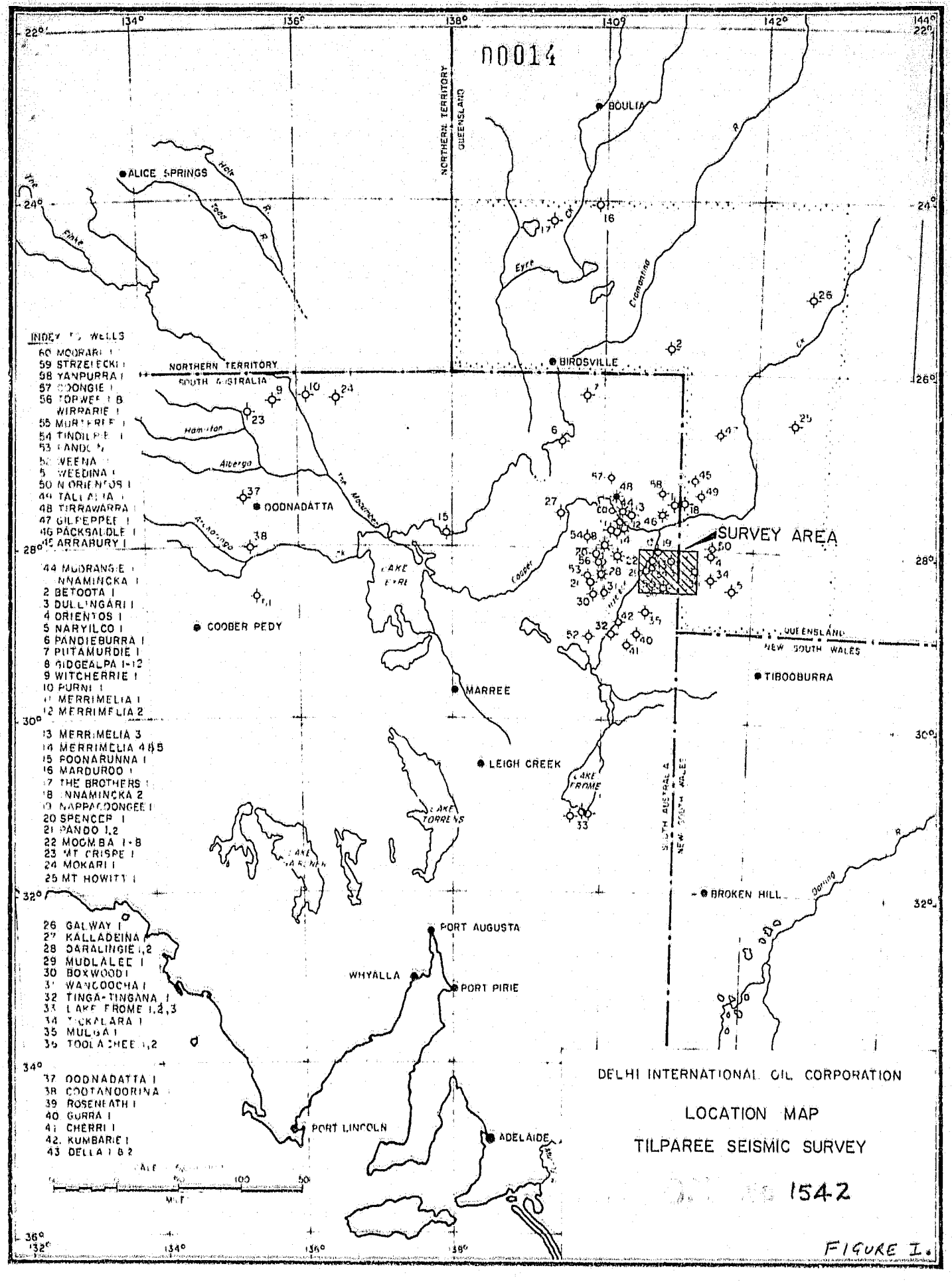
Your consideration of this submittal is respectfully requested.

Should you have any questions regarding this petition we would be pleased to meet with you at your convenience.

Yours very truly,
DELHI INTERNATIONAL OIL CORPORATION

By Robert R. Blair, Vice President &
General Manager, Oil and Gas Operations

DLB:bm



DELHI INTERNATIONAL OIL CORPORATION

LOCATION MAP

TILPAREE SEISMIC SURVEY

1542

FIGURE I.

NAPPACOONGEE - MURTEREE FARMOUT

SIHZELECKI No.1

MUDLALEE No.1

MURTEREE No.1

TOOLACHEE No.2

TOOLACHEE No.1

28° 10'
28° 15'
28° 20'
28° 25'
28° 30'
28° 35'

140° 30'
140° 35'
140° 40'
140° 45'
140° 50'
140° 55'
141° 00'

10 mile radius from proposed 1st Drilling subsidy area

10 mile radius from Boorthanna No.1 Drilling subsidy area

DELHI INTERNATIONAL OIL CORPORATION

SEISMIC BASE MAP
OF THE
TILPAREE AREA
SOUTH AUSTRALIA

BASE OF GIDGEALPA

(VELOCITY ADJUSTED)

CONTOUR INTERVAL 100 FEET

JANUARY 1971

SCALE 1:60,000

ENVELOPE No. 1542

1542-1

FRAME 1

FIGURE 2.

140°30'
140°35'
140°40'
140°45'
140°50'
140°55'
141°00'
28°00'
28°05'
28°10'
28°15'
28°20'
28°25'

NAPPACOONGEE - MURTEREE FARMOUT.

NAPPACOONGEE No 1

DELLA No 2

DELLA No 1

NAPPACOONGEE - MURTEREE FARMOUT

STHZELECKI No 1

MUDALEE No 1

MURTEREE No 1

TOOLACHEE No 2

TOOLACHEE No 1

3500
3600
3700
3800
3900
4000
4100
4200
4300
4400
4500
4600
4700
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5000
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