

BEFORE THE BOARD OF OIL, GAS AND MINING
DEPARTMENT OF NATURAL RESOURCES
in and for the STATE OF UTAH

IN THE MATTER OF THE APPLICATION)	FINDINGS OF FACT,
OF PAGE PETROLEUM INC. TO PERMIT)	CONCLUSIONS OF LAW,
A SECOND WELL IN CERTAIN 640-ACRE)	AND ORDER
DRILLING AND SPACING UNITS, CEDAR)	
RIM-SINK DRAW AREA, DUCHESNE COUNTY,)	CAUSE NO. 140-12
UTAH)	

Pursuant to the application of Page Petroleum Inc., this cause came on for hearing before the Board of Oil, Gas and Mining, at 9:00 a.m., on Thursday, June 25, 1981, in the Wildlife Resources Auditorium, 1596 West North Temple, Salt Lake City, Utah, and again on Wednesday, July 22, 1981, at the same location. The following Board Members were present:

Charles R. Henderson, Chairman
E. Steele McIntyre
Margaret Bird
Herm Olsen
Robert R. Norman
John L. Bell

Appearances were made as follows:

For Page Petroleum Inc.	Robert G. Pruitt, Jr., Esq. Salt Lake City, Utah
For Gulf Oil Corporation	Hugh C. Garner, Esq. Salt Lake City, Utah
For Shell Oil Company	Phillip Wm. Lear, Esq. Salt Lake City, Utah
For Koch Oil Company	Brent Ward and John Mangum Salt Lake City, Utah
For Bow Valley Petroleum Inc.	Ed Wicker Denver, Colorado
For Chevron Oil Company	William Blakovatz, Esq. Denver, Colorado

In addition, letters in support of the application were read into the record from Mapco Petroleum Company and Bow Valley Petroleum Inc. Statements in support of the application were made on behalf of Diamond Shamrock Oil & Gas Company, Utex Oil Company, Koch Oil Company, and Bow Valley Petroleum Inc.

At the continued hearing on July 22, the Applicant voluntarily deleted from its application two of the 640-acre drilling units, Section 9, Township 3 South, Range 6 West, and Section 20, Township 3 South, Range 5 West, USM.

NOW, THEREFORE, the Board having considered the statements and evidence at said hearing, and being fully advised in the premises, now makes and enters the following:

FINDINGS OF FACT

- (1) Due and regular notice of the time, place and purpose of the hearing was given to all interested parties in the form and manner and within the time required by law and by the rules and regulations of the Board.
- (2) The Board has jurisdiction over the matter covered by said application and over all parties interested therein, and has jurisdiction to make and promulgate the Conclusions of Law and Order hereinafter set forth.
- (3) Orders by the Board in Cause No. 140-6, dated August 11, 1971, and Cause No. 139-8, dated September 20, 1972, established 640-acre drilling and spacing units for the Green River and Wasatch formations for specific lands in the Cedar Rim-Sink Draw area, designating each surveyed government section as a drilling unit and placing the permitted well location at the NE $\frac{1}{4}$ of each 640-acre drilling unit.
- (4) The Green River-Wasatch reservoir which underlies the Sink Draw-Cedar Rim area is a fractured reservoir in tight shale and sandstone beds, with the recoverable oil being trapped primarily in the fractures of the rock. The fracture pattern is complex and unpredictable, but apparently not as extensive as it is elsewhere in the Altamont Field.
- (5) There is existing within each of the drilling units covered by the application, an original producing oil well which has diminished in production since initial completion, with several of the original wells being currently shut-in due to poor production. Each of said original wells is in the NE $\frac{1}{4}$ of its respective 640-acre drilling unit.
- (6) Page Petroleum Inc. has drilled three test wells at offset locations in the SW $\frac{1}{4}$ of three widely separated 640-acre drilling units and has produced said test wells simultaneously with the original wells in the same drilling units,

to determine whether new oil reserves could be found and recovered from these existing drilling units and, if so, whether the test wells had an effect on production from the original wells in the same units or offset wells in adjoining drilling units.

(7) Evidence produced by Page Petroleum Inc. at the hearings on June 25 and July 22 shows that new oil was found and recovered by each of the three test wells, and that simultaneous production of oil from each of the test wells appeared to have no significant effect on production from the original wells in the same drilling unit. Further, the evidence showed that the test wells had no significant effect on any offset wells on adjoining drilling units, with the exception that the Page 2-20-C5 well, located in the SW $\frac{1}{4}$ of Section 20, Township 3 South, Range 5 West, was found to be in communication with an offset well, Gulf's Voda 1-19-C5 well, located in the NE $\frac{1}{4}$ of Section 19, Township 3 South, Range 5 West. Increased gas and oil production was observed in the Voda 1-19-C5 well soon after Page's offset 2-20-C5 well was completed and put on production. Further testing showed that the Page 2-20-C5 well was in communication through only one fractured horizon with the offset Voda 1-19-C5 well, and when this communicating fracture horizon was sealed off in the Page 2-20-C5 well there was no further communication between the two wells.

(8) There is evidence that a second well may be justified to produce remaining oil reserves and in such a manner that a greater ultimate recovery of oil and gas may be obtained and that the State, the land owners, the royalty owners, and the general public may realize and enjoy the greatest possible good from these vital natural resources, provided that such second well is drilled at a location diagonally offset to the original well in the unit and on a reasonably uniform pattern with other producing wells in the area.

(9) That if said second well were allowed to be produced simultaneously with the existing producing well on the same unit, it could be produced without causing waste and without violating correlative rights.

(10) That taking into consideration all factors relating to geology, reservoir conditions, and field technology, the seven sections proposed for infill drilling was not delineated as a specific or separate geological zone.

(11) That said seven sections could not be delineated by ownership.

(12) That to permit the doubling of wells on said seven sections would bring pressure upon all other lease holders in the area to drill in a similar manner with substantial economic impact.

CONCLUSIONS OF LAW

(1) By authority of Section 40-6-6(d), Utah Code Annotated, 1953, as amended, the Board may modify any order establishing drilling units in a pool, and may designate a geographical or geological zone within which additional wells may be drilled on a reasonably uniform plan in the pool or any zone thereof.

(2) That, since the seven sections proposed within the application as a zone could be delineated by no other factor than ownership, a "reasonably uniform plan" as a standard required by the above referred to section was not met.

ORDER

IT IS THEREFORE ORDERED:

(1) That the application is hereby denied.

(2) That "test wells" may continue to be drilled in the Greater Altamont-Bluebell Field without the necessity for a Board hearing.

(3) That said "test wells" may be produced alternately with the existing "unit well" within the same drilling unit. Both wells may not be produced at the same time, except during the 60-day test period.


(4) The operator of all test wells must supply all information and pressure testing, including bottom hole pressure, no later than the time the well log is required (90 days).

(5) Any operator drilling test wells under the provisions of this Order or other Board Orders of the Division, shall be strictly liable for damage done to adjoining wells, whether producing or not.

(6) That the Board retains continuing jurisdiction over all matters covered by this application and order and over the parties appearing therein.

DATED this 27th day of August, 1981.

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
BOARD OF OIL, GAS AND MINING

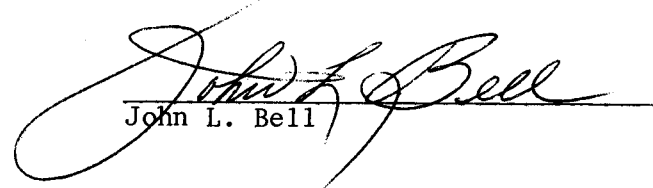

Charles R. Henderson, Chairman


E. Steele McIntyre


Margaret R. Bird

Herm Olsen

Robert R. Norman


John L. Bell

BEFORE THE BOARD OF OIL, GAS AND MINING
DEPARTMENT OF NATURAL RESOURCES
IN AND FOR THE STATE OF UTAH

DRAFT
*Signed but
not approved*

IN THE MATTER OF THE APPLI-)	
CATION OF PAGE PETROLEUM INC.)	FINDINGS OF FACT,
TO PERMIT A SECOND WELL IN)	CONCLUSIONS OF LAW,
CERTAIN 640-ACRE DRILLING AND)	AND ORDER
SPACING UNITS, CEDAR RIM-SINK)	
DRAW AREA, DUCHESNE COUNTY,)	Cause No. 140-12
UTAH.)	

Pursuant to the Application of Page Petroleum Inc., this Cause came on for hearing before the Board of Oil, Gas and Mining, at 9:00 a.m., on Thursday, June 25, 1981, in the auditorium, Division of Wildlife Resources, Salt Lake City, Utah, and again on Wednesday, July 22, 1981, at the same location. The following Board Members were present:

Charles R. Henderson, Chairman (both days)

E. Steele McIntyre (June 25 only)

Margaret Bird (both days)

John L. Bell (both days)

Herm Olsen (both days)

Robert R. Norman (July 22 only)

Also present on both days were Cleon B. Feight, Director, and Carolyn Driscoll, staff attorney of the Division of Oil, Gas and Mining. Robert G. Pruitt, Jr., of Pruitt & Gushee, appeared for Page Petroleum Inc.; Hugh C. Garner appeared for Gulf Oil Corporation; Phillip Wm. Lear, of VanCott, Bagley, Cornwall & McCarthy, appeared for Shell Oil Company; Brent Ward and John Mangum, of Nielson & Senior, appeared for Koch Oil Company; Ed Wicker appeared for Bow Valley Petroleum Inc.; and William Balkovatz appeared for Chevron Oil Company. In addition, letters in support of the application were read into the record from Mapco Petroleum Company and Bow Valley Petroleum Inc. Statements in support

of the application were made on behalf of Diamond Shamrock Oil & Gas Company, Utex Oil Company, Koch Oil Company, and Bow Valley Petroleum Inc.

At the continued hearing on July 22, the Applicant voluntarily deleted from its application two of the 640-acre drilling units, Section 9, Township 3 South, Range 6 West, and Section 20, Township 3 South, Range 5 West, USM.

NOW, THEREFORE, the Board having considered the statements and evidence at said hearings, and being fully advised in the premises, now makes and enters the following:

FINDINGS OF FACT

1. Due and regular notice of the time, place and purpose of the hearing was given to all interested parties in the form and manner and within the time required by law and by the rules and regulations of the Board.

2. The Board has jurisdiction over the matter covered by said application and over all parties interested therein, and has jurisdiction to make and promulgate the Conclusions of Law and Order hereinafter set forth.

3. Orders by the Board in Cause No. 140-6, dated August 11, 1971, and Cause No. 139-8, dated September 20, 1972, established 640-acre drilling and spacing units for the Green River and Wasatch formations for the lands in the Cedar Rim-Sink Draw area covered by this application, among other lands, designating each surveyed government section as a drilling unit and placing the permitted well location at the NE $\frac{1}{4}$ of each 640-acre drilling unit.

4. The Green River-Wasatch reservoir which underlies Sections 1, 2, 11, 12, 13, 23 and 24 of Township 3 South, Range 6 West, USM, is a fractured reservoir in tight shale and sandstone beds, with the recoverable oil being trapped primarily in the fractures in the rock. The fracture

pattern is complex and unpredictable, but apparently not as extensive in this portion of the Cedar Rim-Sink Draw Area as it is elsewhere in the Altamont Field.

5. There is existing within each of the drilling units covered by the application, an original producing oil well which has diminished in production since initial completion, with several of the original wells being currently shut-in due to poor production. Each of said original wells is in the NE $\frac{1}{4}$ of its respective 640-acre drilling unit.

6. Page Petroleum Inc. has drilled three test wells at offset locations in the SW $\frac{1}{4}$ of three widely separated 640-acre drilling units and has produced said test wells simultaneously with the original wells in the same drilling units, to determine whether new oil reserves could be found and recovered from these existing drilling units and, if so, whether the test wells had an effect on production from the original wells in the same units or offset wells in adjoining drilling units.

7. Evidence produced by Page Petroleum Inc. at the hearings on June 25 and July 22 shows that new oil was found and recovered by each of the three test wells, and that simultaneous production of oil from each of the test wells had no significant effect on production from the original wells in the same drilling unit, each of which prior to drilling the test wells had declined to a level below 75 barrels per day average monthly production. Further, the evidence showed that the test wells had no significant effect on any offset wells on adjoining drilling units, with the exception that the Page 2-20-C5 well, located in the SW $\frac{1}{4}$ of Section 20, Township 3 South, Range 5 West, was found to be in communication with an offset well, Gulf's Voda 1-19-C5 well, located in the NE $\frac{1}{4}$ of Section 19, Township 3 South, Range 5 West. Increased gas and oil production was observed in the Voda 1-19-C5 well soon after Page's offset 2-20-C5

well was completed and put on production. Further testing showed that the Page 2-20-C5 well was in communication through only one fractured horizon with the offset Voda 1-19-C5 well, and when this communicating fracture horizon was sealed off in the Page 2-20-C5 well there was no further communication between the two wells.

8. The Board finds that, within the zone hereinafter designated, when the existing producing well on a 640-acre unit has diminished to less than 75 barrels per day average monthly production, this is evidence that a second well may be justified to produce remaining oil reserves, if any, believed by the operator to underlie the same drilling unit, provided that such second well is drilled at a location diagonally offset to the original well in the unit and on a reasonably uniform pattern with other producing wells in the area.

9. If the second well can be made to produce oil or gas without a significant effect on production from the existing unit well or offset wells on adjoining units, then the Board finds that the second well may be produced simultaneously with the existing producing well on the same unit without causing waste and without violating correlative rights.

10. The existing permitted well location for the established 640-acre drilling units is the NE $\frac{1}{4}$ of each unit, so that a reasonably uniform pattern for additional in-fill wells would be in the SW $\frac{1}{4}$ of each such unit.

11. The Board finds that waste occurs when the existing well for an established 640-acre drilling unit diminishes below 75 barrels per day average monthly production and, in the opinion of the Operator taking into consideration all factors relating to geology, reservoir conditions, economics, market conditions and field technology,

new oil not recoverable by the existing well could be recovered by an additional well in the same drilling unit.

CONCLUSIONS OF LAW

1. By authority of §40-6-6(d), Utah Code Annotated, 1953, as amended, this Board may modify any Order establishing 640-acre drilling units in a pool, and may designate a geographical zone within which additional wells may be drilled on a reasonably uniform plan and which may be produced simultaneously with the original producing well for the same 640-acre drilling unit.

2. Also pursuant to §40-6-6, this Board may establish criteria which must be met as a condition to the designation of such a geographical zone and the drilling of additional wells upon established drilling units within said zone.

3. When found necessary for the prevention of waste, and to protect correlative rights, this Board has authority to modify existing Orders and established drilling units in the manner set forth in the following Order.

ORDER

It is therefore ordered:

1. That the following described 640-acre drilling units be designated Zone No. 1 of the Cedar Rim-Sink Draw area:

(Cause No. 139-8, dated September 20, 1972)

Township 3 South, Range 6 West, USM

Section 1: All
Section 2: All

(Cause No. 140-6, dated August 11, 1971)

Township 3 South, Range 6 West, USM

Section 11: All
Section 12: All
Section 13: All
Section 23: All
Section 24: All

2. That the test wells designated below may continue to be produced indefinitely along with the existing producing wells within the same drilling units, so long as the operator deems such operations justified:

(a) Page No. 2-2-C6 well, located in the SW $\frac{1}{4}$ of Section 2, Township 3 South, Range 6 West.

(b) Page No. E-2 well, located in the SW $\frac{1}{4}$ of Section 12, Township 3 South, Range 6 West.

(c) Page No. 2-23-C6 well, located in the SW $\frac{1}{4}$ of Section 23, Township 3 South, Range 6 West.

3. That the operator may, in its sole opinion that such is justified, drill and produce an additional well at a location within the SW $\frac{1}{4}$ of any other established 640-acre drilling unit in said Zone No. 1 when the existing producing well for such drilling unit falls below 75 barrels per day average monthly production, provided that such additional well in the SW $\frac{1}{4}$ of the spacing unit shall be no closer than 660 feet from the quarter section boundary, with exceptions for topography to be granted by administrative action without necessity for a Board hearing.

4. That the Board retains continuing jurisdiction over all matters covered by this Application and Order, and over the parties appearing therein.

DATED this ___ day of August, 1981.

BOARD OF OIL, GAS AND MINING


Charles R. Henderson, Chairman

John L. Bell

Margaret R. Bird
Margaret Bird

Herm Olsen
Herm Olsen

E. Steele McIntyre
E. Steele McIntyre

Robert R. Norman

ORDER

1. This Cause is continued until Wednesday, July 22, 1981, at which time further testimony and evidence may be introduced by the applicant and any interested party wishing to appear. The applicant's witnesses may be cross-examined at that time.

2. During the interim the applicant may continue to produce all test wells and may commence to drill one additional test well (except on Section 9) to meet drilling obligations.

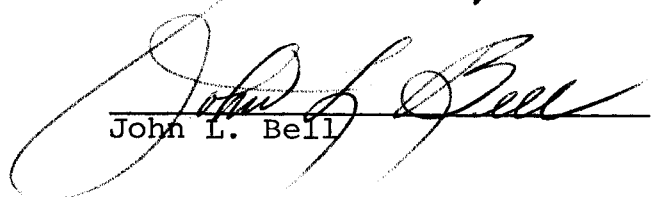
3. The Board retains continuing jurisdiction over all matters covered by this Application and Order, and over the parties appearing therein.

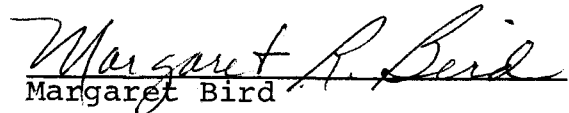
DATED this 25th day of June, 1981.

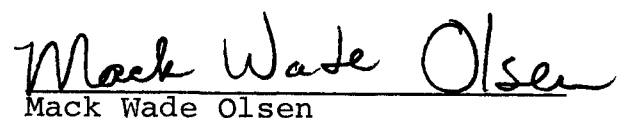
BOARD OF OIL, GAS AND MINING


Charles R. Henderson, Chairman


E. Steele McIntyre


John L. Bell


Margaret Bird


Mack Wade Olsen