

Entered June 19, 1984
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STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION COMMISSION

IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
COMMISSION FOR THE PURPOSE OF
CONSIDERING:

CASE NO. 8190
Order No. R-7556

APPLICATION OF AMOCO PRODUCTION
COMPANY FOR TEMPORARY SPECIAL
SPACING RULES, UNION, HARDING, AND
QUAY COUNTIES, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9:00 a.m. on May 15, 1984, at Santa Fe, New Mexico, before the Oil Conservation Commission of New Mexico, hereinafter referred to as the "Commission".

NOW, on this 19th day of June, 1984, the Commission, a quorum being present, having considered the testimony presented and the exhibits received at said hearing, and being fully advised in the premises,

FINDS:

(1) That due public notice having been given as required by law, the Commission has jurisdiction of this cause and the subject matter thereof.

(2) That the applicant, Amoco Production Company, hereinafter referred to as "Amoco", as unit operator for the Bravo Dome Carbon Dioxide Gas Unit Area, hereinafter referred to as the "Unit", seeks the promulgation of temporary spacing rules for the Unit and for a distance of one mile outside the Unit, including a provision for 640-acre spacing and proration units and specified well locations.

(3) That the Unit, the outer boundaries of which encompass some one million acres, more or less, lies within all or portions of Township 16 North, Ranges 34 and 35 East, Townships 17 and 18 North, Ranges 30 through 37 East, Township 19 North, Ranges 29 through 36 East, Townships 20 and 21 North, Ranges 29 through 35 East, and Township 24 North, Ranges 31 through 34 East, NMPM, Union, Harding, and Quay Counties, New Mexico.

(4) That with the exception of certain areas in the Western and Southwestern portion of the Unit, a high percentage of the owners have ratified the Unit Agreement, and their lands are committed to the Unit.

(5) That in the Western and Southwestern portion of the unit, specifically in Townships 17 and 18 North, Ranges 30 and 31 East, Townships 19 and 20 North, Ranges 29, 30, and 31 East, and Township 21 North, Range 29 East, NMPM, Harding County, New Mexico, a large percentage of the owners have not ratified the Unit Agreement, and their lands are not committed to the Unit.

(6) That in support of its application for 640-acre spacing, Amoco offered certain geological, engineering, and economic data relating to quantity and quality of pay, long-term flow tests, and well economics.

(7) That a large portion of the data presented was developed from analysis of wells drilled in the Eastern part of the Unit, where the Bravo Dome carbon dioxide reservoir(s) are of superior quality to the carbon dioxide reservoir(s) in the Western and Southwestern portion of the Unit.

(8) That the owners of lands in the Western and Southwestern portion of the Unit appeared at the hearing and objected to the adoption of temporary 640-acre spacing and specified well locations.

(9) That some of said owners have drilled and produced carbon dioxide wells and have built and operated carbon dioxide processing plants in the area for many years, while others of said owners are currently engaged in drilling wells and designing plants for the purpose of carbon dioxide gas production and processing in the near future.

(10) That all of the aforesaid well drilling, plant construction, and plant design has been in good faith reliance upon the 160-acre spacing rules now in existence.

(11) That to change the spacing of wells in the Western and Southwestern portion of the Unit would impair the correlative rights of those owners who have invested in and planned for the development of their properties in reliance upon the existing 160-acre spacing rules, and would force the cancellation of certain plans for the drilling and development of carbon dioxide reserves and for plant construction, thereby causing waste and imposing an unjustified economic hardship upon said owners.

(12) That the evidence presented at the hearing establishes that the quantity and quality of the pay deteriorates from East to West.

(13) That the quantity and quality of the pay is considerably better in the area in which Amoco has drilled the vast majority of its wells, and in which the interference tests and long-term flow tests were conducted.

(14) That the quantity and quality of the pay is considerably poorer in the Western and Southwestern portion of the Unit where the protestant owners have drilled wells and have built and are planning to build carbon dioxide gas processing plants.

(15) That no evidence was presented at the hearing to support Amoco's contention that one well will efficiently and economically drain 640 acres in the Western and Southwestern portion of the Unit.

(16) That while the geological, engineering, and economic evidence presented by Amoco may justify the adoption of 640-acre spacing throughout certain portions of the Unit Area on a temporary basis, said evidence does not support -- even on a temporary basis -- any geological, engineering or economic, or other valid and compelling justification within the jurisdiction of the Commission, for such spacing in the Western and Southwestern portion of the Unit Area.

(17) That the application for 640-acre spacing in the Western and Southwestern portion of the Bravo Dome Carbon Dioxide Gas Unit Area should be denied, and such denial should be applicable to those lands lying in the area in which the reservoir characteristics are not conducive to good drainage.

(18) That such lands as described in Finding No. 17 above in which the application should be denied and which should continue to be spaced in accordance with Rule 104 of the Division Rules and Regulations are those lands within the Unit Area in Townships 17 and 18 North, Ranges 30 and 31 East, Townships 19 and 20 North, Ranges 29, 30, and 31 East, NMPM, Harding County, New Mexico, and as more specifically defined in Exhibit "A" attached hereto and made a part hereof, and said lands should be known as the "Bravo Dome 160-acre Area".

(19) That the geological and engineering evidence presented at the hearing justifies the approval of 640-acre spacing on a temporary basis for those remaining lands in the Unit Area, and outside the Unit Area but within one mile

thereof and defined in Exhibit "A" attached hereto, but not within the lands described in Finding No. (18) above.

(20) That approval of the application for said lands, will prevent waste, protect correlative rights, will permit the more rapid development and evaluation of said lands, expedite evaluation of said lands, and expedite the gathering of reservoir data in the area.

(21) That the area approved for temporary 640-acre spacing should be known as the "Bravo Dome 640-acre Area," and should comprise those lands defined in Exhibit "B" attached hereto and made a part hereof, as well as those lands outside the Unit Area but within one mile thereof but not within the 160-acre area (the lands defined in Exhibit "A" attached hereto).

(22) That Special Rules and Regulations for the Bravo Dome 640-acre Area should be promulgated, and said rules should provide for 640-acre spacing with the spacing and proration units to comprise a single governmental section; further that the rules should specify that wells be located no nearer than 1,650 feet to the outer boundary of the spacing and proration unit nor nearer than 330 feet to any governmental quarter-quarter section line.

(23) That the vertical limits of the Bravo Dome 640-acre Area should be the Tubb formation (from the base of the Cimarron Anhydrite to the top of the Granite).

(24) That the Special Rules and Regulations for the Bravo Dome 640-acre Area should remain in effect for a period of three years from date of entry of this Order.

(25) That Amoco Production Company should be required to submit a plan, which plan should include extensive shut-in periods for one or more Unit wells, to demonstrate the drainage efficiency of wells located on 640-acre spacing units.

(26) That this case should be reopened at a hearing in June, 1987, at which time Amoco and other interested parties should appear and show cause why the Bravo Dome 640-acre Area should not be developed on less than 640-acre spacing and proration units.

(27) That that portion of Order No. R-6645 relating to denial of 640-acre spacing should be superseded but that portion of said Order relating to administrative approval for the reinjection of carbon dioxide gas for the purpose of testing wells and production facilities should remain in effect.

IT IS THEREFORE ORDERED:

(1) That the application of Amoco Production Company for the promulgation of temporary special spacing rules for the Bravo Dome Carbon Dioxide Gas Unit Area to provide for 640-acre spacing and specified well locations within said Unit Area and outside the Unit Area but within one mile thereof is hereby denied.

(2) That the "Bravo Dome 160-acre Area" is hereby established comprising those lands defined in Exhibit "A" attached hereto and made a part hereof.

(3) That said Bravo Dome 160-acre Area shall be spaced, drilled, and operated in accordance with the Division Rules and Regulations, particularly with respect to those rules governing 160-acre gas well spacing.

(4) That the "Bravo Dome 640-acre Area" is hereby established comprising those lands defined in Exhibit "B" attached hereto and made a part hereof.

(5) That the vertical limits of the Bravo Dome 640-acre Area shall be the Tubb formation (from the base of the Cimarron Anhydrite to the top of the Granite).

(6) That 640-acre spacing and proration units and limited well locations, being no closer than 1,650 feet to the outer boundary of the unit and no closer than 330 feet to any governmental quarter-quarter section line, are hereby established for the Bravo Dome 640-acre Area for a period not to exceed three years from date of entry of this Order.

(7) That effective July 1, 1984, special rules and regulations for the Bravo Dome 640-acre Area in Union, Harding, and Quay Counties, New Mexico, as more fully described in Exhibit "B" attached to this Order and made a part hereof, are hereby promulgated as follows:

SPECIAL RULES AND REGULATIONS
FOR THE
BRAVO DOME 640-ACRE AREA

RULE 1. Each well completed or recompleted in the Bravo Dome 640-acre Area shall be spaced, drilled, and operated in accordance with the Special Rules and Regulations hereinafter set forth, that these rules shall be applicable to the Tubb formation outside the Bravo Dome 640-acre Area but not within the Bravo Dome 160-acre Area.

RULE 2. Each well shall be located on a standard unit containing 640 acres, more or less, consisting of a governmental section; provided, however, that nothing contained herein shall be construed as prohibiting the drilling of a well on each of the quarter sections in the unit.

RULE 3. The Director of the Oil Conservation Division may grant an exception to the requirements of Rule 2 without notice and hearing when an application has been filed for a non-standard unit and the unorthodox size or shape of the unit is necessitated by a variation in the legal subdivision of the United States Public Land Surveys, or the following facts exist and the following provisions are complied with:

- (a) The non-standard unit consists of quarter-quarter section or lots that are contiguous by a common bordering side.
- (b) The non-standard unit lies wholly within a governmental section and contains less acreage than a standard unit.
- (c) The applicant presents written consent in the form of waivers from all offset operators and from all operators owning lands in the section in which the non-standard unit is situated which lands are not included in said non-standard unit.
- (d) In lieu of Paragraph (c) of this rule, the applicant may furnish proof of the fact that all of the aforesaid operators were notified by registered or certified mail of his intent to form such non-standard unit. The Director may approve the application if no such operator has entered an objection to the formation of such non-standard unit within 30 days after the Director has received the applications.

RULE 4. Each well shall be located no nearer than 1,650 feet to the outer boundary of the section and no nearer than 330 feet to any governmental quarter-quarter section line; provided, however, that any subsequent wells drilled on a unit shall be located no nearer than 1,320 feet from any existing well drilling to or capable of producing from the Bravo Dome 640-acre Area, and provided, further, that in the case of a 640-acre unit offset by a spacing and proration unit of 160 acres or less in an area spaced on 160 acres which has thereon a well completed in and capable of producing from the

equivalent vertical limits of the Bravo Dome 640-acre Area, the 640-acre unit well may be located equidistant from the common line between the units as the well on the lesser sized unit.

RULE 5. The Director may grant an exception to the requirements of Rule 4 without notice and hearing when an application has been filed for an unorthodox location necessitated by topographical conditions. All operators offsetting the spacing and proration unit shall be notified of the application by registered or certified mail, and the application shall state that such notice has been furnished. The Director may approve the application upon receipt of written waivers from all operators offsetting the spacing and proration unit or if no objection to the unorthodox location has been entered within 20 days after the Director has received the application.

IT IS FURTHER ORDERED:

(1) That within 60 days following entry of this Order, Amoco Production Company shall submit a plan, acceptable to the Director of the Oil Conservation Division, to demonstrate the drainage efficiency of wells located on 640-acre spacing units which plan should include extensive shut-in periods for one or more Unit wells.

(2) That this case shall be reopened in June, 1987, at which time the applicant herein or other interested parties may appear and show cause why the Bravo Dome 640-acre Area should not be developed on less than 640-acre spacing and proration units.

(3) That that portion of Order No. R-6645 relating to spacing is hereby superseded but that portion of said Order relating to the reinjection of gas for test purposes shall remain in full force and effect.

(4) That the locations of all wells presently drilling to or completed in the Bravo Dome 640-acre Area are hereby approved; that the operator of any well having an unorthodox location shall notify the Santa Fe District Office of the Division in writing of the name and location of the well on or before August 1, 1984.

(5) That, pursuant to Paragraph A. of Section 70-2-18, NMSA 1978, contained in Chapter 271, Laws of 1969, existing wells in the Bravo Dome 640-acre Area shall have dedicated thereto 640 acres in accordance with the foregoing pool rules, or, pursuant to Paragraph C. of said Section 70-2-18, existing

wells may have non-standard spacing or proration units established by the Division and dedicated thereto.

(6) That failure to file new Forms C-102 with the Division dedicating 640 acres to a well or to obtain a non-standard unit approved by the Division within 60 days from the date of this Order shall subject the well to being shut-in. Until said Form C-102 has been filed or until a non-standard unit has been approved, and subject to the 60-day limitation, each well presently drilling to or completed in the Bravo Dome 640-acre Area shall receive no approved Form C-104, provided, however, that no further approval shall be required for any non-standard spacing and proration unit comprising less than 160 acres or for any 160-acre unit consisting of other than a single governmental quarter section, provided such unit has previously been approved by order of the Division.

(7) That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.


DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

JIM BACA, Member



ED KELLEY, Member



JOE D. RAMEY, Chairman and
Secretary

S E A L

BRAVO DOME 160-ACRE AREA

HARDING COUNTY

TOWNSHIP 17 NORTH, RANGE 30 EAST, NMPM

Section 1: N/2, SE/4 and E/2 SW/4
Section 11: SE/4 and E/2 SW/4
Section 12: E/2, SW/4 and E/2 NW/4
Section 13: All
Section 14: E/2, E/2 W/2 and SW/4 NW/4
Section 15: SE/4 NE/4
Section 22: SE/4 SE/4
Sections 23 through 25: All
Section 26: NE/4 and E/2 NW/4
Section 27: NE/4 NE/4
Section 35: SE/4
Section 36: All

TOWNSHIP 17 NORTH, RANGE 31 EAST, NMPM

Sections 1 through 36: All

TOWNSHIP 18 NORTH, RANGE 30 EAST, NMPM

Sections 1 and 2: All
Section 3: E/2 E/2 and SW/4 SE/4
Section 10: E/2 NE/4
Section 11: N/2
Sections 12 through 14: All
Section 23: E/2 and E/2 W/2
Section 24: All
Section 25: E/2, E/2 W/2, W/2 NW/4 and NW/4 SW/4
Section 26: NE/4, E/2 NW/4 and N/2 S/2
Section 36: All

TOWNSHIP 18 NORTH, RANGE 31 EAST, NMPM

Sections 1 through 36: All

TOWNSHIP 19 NORTH, RANGE 29 EAST, NMPM

Section 1: NE/4 and E/2 NW/4

TOWNSHIP 19 NORTH, RANGE 30 EAST, NMPM

Sections 1 through 4: All
Section 5: E/2
Section 6: E/2 SE/4, NW/4 SE/4 and NE/4 SW/4
Section 7: NE/4 NE/4, E/2 SE/4, SW/4 SE/4 and
SE/4 SW/4
Sections 8 through 16: All
Section 17: N/2 and SE/4
Section 18: NE/4 NE/4
Section 20: W/2 NE/4 and S/2 SE/4

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Exhibit "A"

Page 1 of 2

TOWNSHIP 19 NORTH, RANGE 30 EAST, NMPM con'd

Sections 21 through 28: All

Section 29: NE/4

Section 32: NE/4 NE/4

Section 33: NW/4, W/2 NE/4, NE/4 NE/4,
NW/4 SE/4 and NE/4 SW/4

Section 34: N/2 and E/2 SE/4

Sections 35 and 36: All

TOWNSHIP 19 NORTH, RANGE 31 EAST, NMPM

Sections 1 through 36: All

TOWNSHIP 20 NORTH, RANGE 29 EAST, NMPM

Sections 1 and 2: All

Section 3: E/2, SW/4, S/2 NW/4 and Lot 3

Section 4: Lot 4, SE/4 NE/4 and E/2 SE/4

Section 5: SW/4 and SW/4 SE/4

Section 6: Lots 1, 2, and 3, SE/4 NW/4,
S/2 NE/4, SE/4 and NE/4 SW/4

Section 7: Lots 2 and 3, NE/4 SW/4 and N/2 SE/4

Section 8: NW/4 NW/4 and W/2 SW/4

Section 9: NE/4 NW/4, NE/4 and E/2 E/2

Sections 10 through 15: All

Section 16: E/2, NE/4 NW/4, S/2 SW/4 and
NW/4 SW/4

Section 17: S/2, SW/4 NE/4, S/2 NW/4 and
NW/4 NW/4

Section 18: Lots 1 through 4, SE/4 NW/4,
E/2 SW/4 and E/2

Section 19: Lots 1 and 2, E/2 W/2 and E/2

Section 20: All

Section 21: W/2 NW/4, NW/4 SW/4, NE/4 and
NE/4 SE/4

Sections 22 through 26: All

Section 27: N/2, SE/4, and NE/4 SW/4

Section 28: NE/4 NE/4

Section 29: N/2

Section 30: N/2 NE/4 and SE/4 NE/4

Section 34: NE/4 NE/4

Section 35: N/2 and SE/4

Section 36: All

TOWNSHIP 20 NORTH, RANGE 30 EAST, NMPM

Sections 1 through 36: All

TOWNSHIP 20 NORTH, RANGE 31 EAST, NMPM

Sections 1 through 36: All

BRAVO DOME 640-ACRE AREA

UNION COUNTY, NEW MEXICO

TOWNSHIP 18 NORTH, RANGE 34 EAST, NMPM
Sections 1 through 36: All

TOWNSHIP 18 NORTH, RANGE 35 EAST, NMPM
Sections 1 through 36: All

TOWNSHIP 18 NORTH, RANGE 36 EAST, NMPM
Sections 1 through 36: All

TOWNSHIP 18 NORTH, RANGE 37 EAST, NMPM
Sections 6 and 7: All
Sections 18 and 19: All
Sections 30 and 31: All

TOWNSHIP 19 NORTH, RANGE 34 EAST, NMPM
Sections 1 through 36: All

TOWNSHIP 19 NORTH, RANGE 35 EAST, NMPM
Sections 1 through 36: All

TOWNSHIP 19 NORTH, RANGE 36 EAST, NMPM
Section 16: All
Section 18: S/2
Sections 19 and 20: All
Section 21: W/2, W/2 NE/4 and SE/4 NE/4
Section 26: S/2 S/2
Section 28: W/2
Sections 29 through 36: All

TOWNSHIP 20 NORTH, RANGE 34 EAST, NMPM
Sections 1 through 36: All

TOWNSHIP 20 NORTH, RANGE 35 EAST, NMPM
Section 3: W/2
Sections 4 through 10: All
Section 11: SW/4
Section 14: NW/4
Sections 15 through 22: All
Section 23: NW/4
Sections 27 through 34: All

TOWNSHIP 21 NORTH, RANGE 34 EAST, NMPM
Sections 1 through 36: All

TOWNSHIP 21 NORTH, RANGE 35 EAST, NMPM
Sections 1 through 24: All
Section 25: N/2 and SW/4
Section 26: All
Section 27: NE/4 and N/2 NW/4
Sections 28 through 33: All

TOWNSHIP 22 NORTH, RANGE 30 EAST, NMPM
Sections 1 through 36: All

TOWNSHIP 22 NORTH, RANGE 31 EAST, NMPM
Sections 1 through 36: All

TOWNSHIP 22 NORTH, RANGE 32 EAST, NMPM
Sections 1 through 36: All

TOWNSHIP 22 NORTH, RANGE 33 EAST, NMPM
Sections 1 through 36: All

TOWNSHIP 22 NORTH, RANGE 34 EAST, NMPM
Sections 1 through 36: All

TOWNSHIP 22 NORTH, RANGE 35 EAST, NMPM
Section 5: S/2
Sections 6 through 8: All
Section 9: W/2 and SE/4
Section 10: S/2 S/2
Sections 15 through 21: All
Section 22: N/2
Section 27: SW/4
Sections 28 through 33: All
Section 34: NW/4 and N/2 SW/4
Section 36: All

TOWNSHIP 23 NORTH, RANGE 30 EAST, NMPM
Section 36: All

TOWNSHIP 23 NORTH, RANGE 31 EAST, NMPM
Sections 1 through 36: All

TOWNSHIP 23 NORTH, RANGE 32 EAST, NMPM
Sections 1 through 36: All

TOWNSHIP 23 NORTH, RANGE 33 EAST, NMPM
Sections 1 through 36: All

TOWNSHIP 23 NORTH, RANGE 34 EAST, NMPM
Sections 1 through 36: All

TOWNSHIP 23 NORTH, RANGE 35 EAST, NMPM
Section 31: All

TOWNSHIP 24 NORTH, RANGE 31 EAST, NMPM
Sections 1 through 36: All

TOWNSHIP 24 NORTH, RANGE 32 EAST, NMPM
Sections 1 through 36: All

TOWNSHIP 24 NORTH, RANGE 33 EAST, NMPM
Sections 1 through 36: All

TOWNSHIP 24 NORTH, RANGE 34 EAST, NMPM
Sections 1 through 36: All

HARDING COUNTY, NEW MEXICO

TOWNSHIP 17 NORTH, RANGE 32 EAST, NMPM
Sections 1 through 36: All

TOWNSHIP 17 NORTH, RANGE 33 EAST, NMPM
Sections 1 through 36: All

TOWNSHIP 18 NORTH, RANGE 32 EAST, NMPM
Sections 1 through 36: All

TOWNSHIP 18 NORTH, RANGE 33 EAST, NMPM
Sections 1 through 36: All

TOWNSHIP 19 NORTH, RANGE 32 EAST, NMPM
Sections 1 through 36: All

TOWNSHIP 19 NORTH, RANGE 33 EAST, NMPM
Sections 1 through 36: All

TOWNSHIP 20 NORTH, RANGE 32 EAST, NMPM
Sections 1 through 36: All

TOWNSHIP 20 NORTH, RANGE 33 EAST, NMPM
Sections 1 through 36: All

TOWNSHIP 21 NORTH, RANGE 29 EAST, NMPM
Sections 1 through 27: All
Section 28: N/2, SE/4 and E/2 SW/4
Section 29: All
Section 30: Lots 1, 2 and 4, E/2 NW/4, NE/4,
 N/2 SE/4 and SE/4 SE/4
Section 31: All

TOWNSHIP 21 NORTH, RANGE 29 EAST, NMPM con'd
Section 32: W/2, SE/4, W/2 NE/4 and SE/4 NE/4
Section 33: W/2 SW/4, NE/4 SW/4, NE/4 NW/4
and N/2 NE/4
Sections 34 through 36: All

TOWNSHIP 21 NORTH, RANGE 30 EAST, NMPM
Sections 1 through 36: All

TOWNSHIP 21 NORTH, RANGE 31 EAST, NMPM
Sections 1 through 36: All

TOWNSHIP 21 NORTH, RANGE 32 EAST, NMPM
Sections 1 through 36: All

TOWNSHIP 21 NORTH, RANGE 33 EAST, NMPM
Sections 1 through 36: All

QUAY COUNTY, NEW MEXICO

TOWNSHIP 16 NORTH, RANGE 34 EAST, NMPM
Section 3: Lots 3 through 6, 11 and 12
Section 4: Lots 1, 2, 5 through 12,
N/2 SE/4 and SW/4

TOWNSHIP 16 NORTH, RANGE 35 EAST, NMPM
Section 1: Lots 1 through 8, NW/4 SW/4
and S/2 SW/4
Sections 2 through 6: All
Section 7: Lots 1, 2, E/2 NW/4 and E/2
Sections 8 through 10: All
Section 11: NW/4, N/2 SW/4, N/2 S/2 SW/4,
and N/2 S/2 S/2 SW/4

TOWNSHIP 16 NORTH, RANGE 36 EAST, NMPM
Section 5: Lots 4 and 5
Section 6: Lots 1 through 8 and 10

TOWNSHIP 17 NORTH, RANGE 34 EAST, NMPM
Sections 1 through 36: All

TOWNSHIP 17 NORTH, RANGE 35 EAST, NMPM
Sections 1 through 36: All

TOWNSHIP 17 NORTH, RANGE 36 EAST, NMPM
Sections 1 through 36: All

TOWNSHIP 17 NORTH, RANGE 37 EAST, NMPM

Sections 6 and 7: All

Sections 18 and 19: All

Sections 30 and 31: All