

Nomenclature for Basin Mancos Pool

There is a need to create the Basin Mancos Gas Pool (97232) in San Juan County and Rio Arriba County in New Mexico for the purpose of producing natural gas and natural gas liquids from natural fractures and from sandstone/siltstone intervals in the Mancos Formation. This will allow a small resource to be developed in conjunction with Basin Dakota Gas Pool and Blanco Mesaverde Gas Pool wells. For the most part, the gas in place in the Mancos will only be a few scf/t and would not form economically viable targets to drill as stand alone wells, but will add value to wells drilled to the other pools. In order to facilitate development of the Basin Mancos Pool, it is requested that it should be pre-approved for down hole commingling with the Basin Dakota and Blanco Mesaverde gas pool wells under Rule 303.C.3.b. and added to the list of pre-approved pool combinations.

The Mancos Formation contains massive shale/siltstones and 4 sandstone/siltstone members here listed in ascending order: the Semilla Sandstone which lies just above the Greenhorn Limestone, the Juana Lopez Member (sometimes incorrectly called Sanostee Sandstone) that underlies the interval where the Gallup Formation would occur if it was present in the main San Juan Basin, the Tocito Member (or basal Niobrara Sandstone) and the El Vado Sandstone, which is an offshore equivalent of the Dalton Sandstone Member of the Crevasse Canyon Formation. These members have often been (erroneously) called Gallup Formation, which does not occur north of Hoshpah in the southernmost San Juan Basin.

Horizontal limits for the Basin Mancos Pool will be San Juan and Rio Arriba Counties, New Mexico plus Section 21, T23N, R5W in Sandoval County.

Vertical limits for the Basin Mancos Pool will be from the base of the Point Lookout Formation to the base of the Greenhorn Member (Bridge Creek Limestone) of the Mancos Formation.

Existing Gallup, Tocito, Sanostee and Mancos (oil, gas and associated) pools will be excluded from the Basin Mancos Gas Pool. A wide variety of spacing and setback requirements in these pools complicate the standard location of wells with primary targets in the Basin Dakota and Blanco-Mesaverde pools. These pools will not be extended for the purpose of multiple completions in wells drilled to the Basin Dakota Pool and/or the Blanco Mesaverde Pool. They may, however, be extended to include new wells dedicated as single completions to existing oil and associated pools.

In order to facilitate the multiple completions with Basin Dakota and Blanco Mesaverde Pools, the Basin Mancos should have the same spacing and setbacks. Drainage areas for each completion in the Basin Mancos will be smaller than those of either the Basin Dakota or the Blanco Mesaverde due to the relatively impermeable lithologies of the Mancos Formation. Therefore, it is requested the Basin Mancos Pool wells be spaced as follows to match the spacing units of the Basin Dakota and Blanco Mesaverde gas pools:

I. ACREAGE AND WELL LOCATION REQUIREMENTS

- A. Standard GPU (Gas Proration Unit):** A standard GPU in the Basin-Mancos Pool shall be 320 acres, more or less, comprising any two contiguous quarter sections of a single section that is a legal subdivision of the U. S. Public Land Surveys.
- B. Well density:**
 - (1) Up to four (4) wells may be drilled on a standard GPU, as follows:
 - (a) the FIRST OPTIONAL INFILL WELL drilled on a GPU shall be located in the quarter section not containing the INITIAL Mancos well;

- (b) the SECOND OPTIONAL INFILL WELL drilled on a GPU shall be located in a quarter-quarter section not containing a Mancos well and within a quarter section of the GPU not containing more than one (1) Mancos well;
 - (c) the THIRD OPTIONAL INFILLWELL drilled on a GPU shall be located in a quarter-quarter section of the GPU not containing a Mancos well and within a quarter section of the GPU not containing more than one Mancos well;
 - (d) at the discretion of the operator, the second or third optional infill well may be drilled prior to the drilling of the first optional infill well;
 - (e) no more than two wells shall be located within either quarter section in a GPU; and
 - (f) any deviation from the above-described well density requirements shall be authorized only after hearing.
- (2) The plat (Form C-102) accompanying the *"Application for Permit to Drill" ("APD")* for subsequent wells on a GPU shall have outlined the boundaries of the GPU and shall show the location (well name, footage location, API number) of all existing Mancos wells on the GPU plus the proposed new well.

C. Well locations:

- (1) Except as provided in subparagraph I. C (2) below, wells drilled on a GPU shall be located not closer than 660 feet to the outer boundary of the GPU and not closer than 10 feet to any interior quarter or quarter-quarter section line or subdivision inner boundary.
- (2) **Well locations inside federal exploratory units:** Wells located within federal exploratory units are permitted an exception to the 660-foot setback requirement to the outer boundary of a GPU and shall be permitted to be no closer than 10 feet to any section, quarter section, or interior quarter-quarter section line or subdivision inner boundary, provided however:
 - (a) wells shall not be closer than 660 to the outer boundary of the federal exploratory unit;
 - (b) a well located within the unit area but adjacent to an existing or prospective GPU containing a non-committed tract or partially committed tract shall not be closer than 660 to the outer boundary of its GPU;
 - (c) a well located within a non-committed or partially committed GPU shall not be closer than 660 to the outer boundary of its GPU;
 - (d) a well located within a participating area but adjacent to an existing or prospective GPU that is not within the same participating area shall not be closer than 660 to the outer boundary of the participating area; and
 - (e) a well located within the unit area but in an existing or prospective GPU that is a non-participating GPU shall not be closer than 660 to the outer boundary of its GPU.

- (3) The operator filing an APD for any well within a unit area that is closer to the outer boundary of its assigned GPU than 660 feet shall provide proof in the form of a participating area plat that such well meets the requirements of **I.C. (2)** above.

2. Adjustments to the existing Gallup Pools in San Juan and Rio Arriba counties to facilitate Basin Mancos Pool establishment.

A. The following pools need to be contracted in the listed sections on the outer margins due to lack of production and abandonment of wells around the margins of existing Gallup Pools:

B. S. Mesa Gallup Gas Pool (72920)

T27N R4W

Section 32 S/2

Devil's Fork Gallup Associated Pool (17610)

T24N R6W

Section 29 N/2 and SE/4

T24N R7W

Section 11 E/2

Section 14 E/2 and SW/4

T25N R6W

Section 17 E/2

Section 18 All

Section 21 NE/4

Section 26 SE/4

Section 35 NE/4

T25N R7W

Section 13 NW/4

Section 25 All

Section 36 N/2

Dufer's Point Gallup-Dakota Oil Pool (19859)

T24N R7W

Section 6 W/2 and NE/4

T24N R8W

Section 1 E/2

T25N R8W

Section 5 SW/4

Section 19 W/2 and NE/4

Section 20 NW/4

Escrito Gallup Associated Pool (22619)

T24N R7W

Section 7 S/2 SW/4

Section 23 E/2 NW/4 and SW/4

Section 33 E/2

Section 35 W/2 NW/4

Gallegos Gallup Associated Pool (26980)

T26N R11W

Section 6 SW/4

T26N R12W

Section 1-3 S/2

Section 4 SE/4 and W/2
Section 24 SW/4
Section 25 NW/4

T27N R12W

Section 30 SW/4
Section 31 N/2
Section 32 S/2
Section 33 SW/4

T27N R13W

Section 22 SW/4
Section 25 S/2

Ice Canyon Gallup Gas Pool (93235)

T26N R7W

Section 23 W/2

Kutz Gallup Oil Pool (36550)

T27N R10W

Section 5 NW/4

T28N R10W

Section 32 SW/4

Laguna Seca Gallup Gas Pool (79870)

T31N R5W

Section 19 SE/4
Section 20 S/2
Section 21 S/2
Section 22 SW/4
Section 27 W/2
Section 28 All
Section 29 All
Section 30 NE/4
Section 32 N/2
Section 33 NW/4

T31N R6W

Section 14 E/2
Section 23 N/2
Section 36 NE/4

McDermott Gallup Gas Pool (81050)

T32N R12W

Section 20 NE/4

NE Ojito Gallup-Dakota Oil Pool (48025)

T26N R2W

Section 30 All
Section 31 All

Otero Gallup Oil Pool (48450)

T24N R5W

Section 1 W/2 and SE/4 of NW/4
Section 2 N/2 N/2

Tapacito Gallup Associated Pool (58090)

T26N R5W

Section 18 SW/4
Section 19 W/2 and SE/4
Section 20 S/2
Section 21 S/2

Totah Gallup Oil Pool (59750)

T28N R13W

Section 13 S/2 NE/4

T29N R13W

Section 18 S/2
Section 19 NE/4
Section 20 W/2 NW/4 and S/2
Section 21 W/2 SW/4
Section 27 N/2
Section 28 N/2
Section 35 N/2

T29N R14W

Section 11 S/2 SW/4
Section 15 N/2 NE/4
Section 23 E/2 NE/4
Section 24 NW/4, E/2 SE/4

Wild Horse Gallup Gas Pool (87360)

T26N R3W

Section 3 S/2
Section 4 S/2
Section 5 SE/4
Section 6 N/2
Section 19 W/2

Willow Gallup Gas Pool (96379)

T31N R4W

Section 10 E/2
Section 11 N/2 and SW/4
Section 14 W/2
Section 22 NE/4
Section 23 SE/4
Section 24 E/2

B. The following pools need to be extended in the listed sections:

Baca Gallup Oil Pool (3745)

T26N R8W

Section 5 SW/4 SE/4, W/2 W/2 and SE/4 SW/4
Section 8 N/2 SE/4 and NE/4 SW/4
Section 9 N/2 SW/4

Based on:

Burlington Resources, Starr #5 in D-5-T26N-R8W.

Burlington Resources, Newsome #7E in K-8-T26N-R8W

B. S. Mesa Gallup Gas Pool (72920)

T26N R5W

Section 2 NW/4

Section 3 N/2

Based on:

CDX Rio LLC, Jicarilla Apache Tribal #4 in C-3-T26N-R5W.

Counselors Gallup-Dakota oil Pool (13379)

T23N R6W

Section 5 N/2

Section 6 NE/4

Section 13 NW/4

Based on:

Range Productions Corporation, Marcus #4 in E-5-T23N-R5W.

Elm Ridge Exploration Company, Marcus A #12 in B-5-T23N-R6W.

Elm Ridge Exploration Company, Marcus A #2 in G-6-T23N-R6W.

M&M Production Company, Gallo Canyon #1 in E-13-T23N-R6W.

Devil's Fork Gallup Associated Pool (17610)

T24N R6W

Section 14 SE/4

Section 23 NE/4

Section 24 NW/4

Based on:

Merrion Oil And Gas Corporation, Canada Mesa #1E in C-24-T24N-R6W.

Dufer's Point Gallup-Dakota Oil Pool (19859)

T24N R8W

Section 14 NW/4

T25N R8W

Section 23 W/2

Section 26 W/2

Based on:

Merrion Oil And Gas Company, Shoofly #1, in C-14-T24N-R8W.

Great Western Drilling Company, Crow Mesa #1, in D-23, T25N, R8W.

Escrito Gallup Associated Pool (22619)

T24N R6W

Section 30 E/2 NE/4

Based on:

Elm Ridge Exploration, Rincon Unit #3, in A-30-T24N-R6W.

Gallegos Gallup Associated Pool (26980)

T26N R11W

Section 19 SW/4

Section 22 S/2

Section 23 SW/4

Section 30 W/2
Section 31 NW/4

Based on:

XTO Energy Inc, Berger #3 in I-22-T26N-R11W.
XTO Energy Inc, Berger #3E in L-22-T26N-R11W.
Redwolf Production Company, Windfall #10, in F-31-T26N-R11W.

Gallo Canyon Gallup-Dakota Oil Pool (96369)

T23N R5W

Section 4 SW/4 SW/4
Section 5 E/2 NE/4 and SW/4 NE/4 and SE/4
Section 9 W/2 NW/4

Based on:

Elm Ridge Exploration, Martin Whittaker #58, in E-9-T23N-R5W.

Ice Canyon Gallup Gas Pool (93235)

T26N R7W

Section 14 SE/4

Based on:

Dugan Production Company, Mona Lisa #2, in J-14-T26N-R7W.

Laguna Seca Gallup Gas Pool (79870)

T31N R6W

Section 19 SE/4
Section 20 SW/4
Section 30 E/2

Based on:

Devon Energy Production Company, Northeast Blanco Unit #302, in I-30-T31N-R6W.

La Jara Canyon Gallup Gas Pool (96483)

T30N R5W

Section 26 S/2
Section 27 S/2
Section 34 E/2

Based on:

ConocoPhillips Company, San Juan 30 5 Unit #102, in K-34-T30N-R5W.

Lindrith GallupDakota, South Oil Pool (96483)

T23N R4W

Section 13 E/2, NW/4, E/2 and SW/4 of SW/4

Based on:

Golden Holding Corporation, Jicarilla Tribal Contract 47 #39 in J-13-T23N-R4W.
Golden Holding Corporation, Jicarilla Tribal Contract 47 #11 in B-13-T23N-R4W.
Golden Holding Corporation, Jicarilla Tribal Contract 47 #17 in D-134-T23N-R4W.
Golden Holding Corporation, Jicarilla Tribal Contract 47 #7 in A-13-T23N-R4W.
Golden Holding Corporation, Jicarilla Tribal Contract 47 #16 in F-13-T23N-R4W.

Munoz Canyon Gallup Gas Pool (96767)

T28N R5W

Section 17 SW/4

Section 18 S/2 and NW/4

Based on:

Burlington Resources Company, San Juan 28 5 Unit #61E, in K-34-T30N-R5W.

Otero Gallup Oil Pool (48450)

T24N R5W

Section 3 S/2 NE/4

Based on:

Energen Resources Corporation, San Jicarilla L #11, in G-3-T24N-R5W.

Tapacito Gallup Associated Pool (58090)

T26N R5W

Section 13 SE/4

Section 24 NE/4

Based on:

CDX Rio LLC, Jicarilla C #7E in J-13-T26N-R5W.