A PRIMER ON FEDERAL UNITIZATION, UNIT AGREEMENTS
AND UNIT OPERATING AGREEMENTS

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Introduction.
In the early days of oil and gas exploration and development, the migratory nature
of the valued hydrocarbons presented a legal issue of ownership. The courts and the
industry adopted the rule of capture as a solution. The rule of capture states that there is
no liability for producing oil and gas that was originally in place under the land of
another, so long as the producing well does not trespass.\(^1\) Initially, the effect of this rule
spurred a dramatic increase in drilling causing needless depletion and destruction of oil
and gas reservoirs. In an effort to minimize waste and protect correlative rights\(^2\), state
regulatory agencies implemented spacing rules which mandated areas of allocation to
promote efficient reservoir drainage. The concepts of pooling and communitization
succeeded spacing and allowed several small tracts to be combined for the purposes of
state conservation regulation compliance and to obtain state well permits.\(^3\) Also seeking
an efficient way to develop federally owned minerals, in the 1930s Congress enacted a
series of amendments to the Mineral Leasing Act of 1920\(^4\) which granted the Secretary of

\(^1\) 13 Tex. L. Rev. 391, 393 (1935).
\(^2\) The term “correlative rights” is commonly defined as “the opportunity afforded… to the owner of each
property in a pool to produce without waste his just and equitable share of the oil or gas, or both, in the
pool; being an amount… so far as can practicably be obtained without waste, substantially in the proportion
that the quantity of recoverable oil or gas… under such property bears to the total recoverable oil or gas…
in the pool, and for such purposes to use his just and equitable share of the reservoir energy.” 14 H.
\(^3\) Id. at 1026-1027.
the Interior the authority to approve unit or cooperative plans of development and operations on federally owned lands.

Unitization is the joint operation of all or some portion of a producing reservoir and is instrumental in the efficient and economical exploration and recovery of minerals where there is separate ownership of portions of the rights in a common producing pool.\(^5\) A unit is the total area incorporated in a unitization agreement.\(^6\) There are three common types of federal units: the exploratory onshore unit, the development unit and the secondary recovery unit. The development unit covers large amounts of acreage, generally requires a commitment for geological and geophysical studies and typically precedes a federal exploratory onshore unit. The secondary or enhanced recovery unit is formed for the purpose of increasing total production after a unit area is fully developed.\(^7\) This article is limited to a discussion of the exploratory onshore unit, the benefits of unitization and an introduction to the basic characteristics of the unit agreement and unit operating agreement.

**Why Unitize? The Benefits of Unitization.**

There are many advantages to unitization. First, unitization facilitates the exploration of a large area where common geological and reservoir characteristics exist. Unitization increases the economic practicability of exploration and production through (i) the sharing of risks and costs with partners; (ii) providing more options for strategic well locations thus maximizing efficient reservoir recovery and minimizing waste; and (iii) consolidation of facilities, pipelines and access roads.\(^8\) Strategic well and facilities placement also minimizes surface disturbance causing less environmental degradation.

Yet another benefit of unitization is the ability to operate a unitized area as a single lease. Sections 18(a)-(b) of the Federal Form Unit Agreement\(^9\) describes this advantage as follows: “...operations performed upon any tract of unitized lands will be deemed to be performed upon, and for the benefit of, each and every tract of unitized

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\(^5\) See Williams, *supra* note 2 at 1026-27.
\(^6\) *Id.* at 1024.
\(^8\) *Id.* at 5A-4-5.
\(^9\) 43 C.F.R. § 3186.1.
land, and no lease shall be deemed to expire by reason of failure to drill or produce wells situated on the land therein embraced.” Unitization also relieves the federal chargeability limitations. A single entity is prohibited from owning more than 246,080 federal acres within a single state. Unitized acreage is exempt from an entity’s federal acreage accounting.

A final benefit of unitization is that leases within the unitized area are extended beyond their initial term. State and fee leases within a unit are extended for the life of the unit. Federal leases are extended as long as either (i) drilling operations have commenced prior to the end of the primary term of such lease and are being diligently prosecuted at that time; or (ii) production of unitized substances in “paying quantities” has been established prior to the expiration date of the term of the lease. Production in paying quantities is defined as “quantities sufficient to repay the costs of drilling, completing, and producing operations, with a reasonable profit” and will be addressed in detail below.

How to Unitize.

Federal exploratory onshore units are formed by virtue of the execution of two separate agreements. First, the unit agreement (“UA”) is a contract between the Bureau of Land Management (“BLM”) and the working interest owner designated as operator (the “Proponent”) of the unit and is ratified by all of the committed owners in the unit area. The second agreement, the unit operating agreement (“UOA”), is executed by the unit working interest owners and sets forth the cost allocation formula for the implementation of the UA, operational provisions and voting procedures. Before either agreement is drafted; however, the Proponent must first consider whether unitization is warranted.

Criteria and Preparation for Unitization.

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10 43 C.F.R. § 3101.2-1(a); note acreage limitations for Alaska differ, see 43 C.F.R. § 3101.2-1(b).
11 Federal Form Unit Agreement, Section 18 (43 C.F.R. § 3186.1).
12 Id. at Section 18(e).
13 Id. at Section 9.
15 See Williams, supra note 2 at 1028.
A Unit will only be approved by the BLM if unitization serves the public interest of conservation of natural resources. This public interest requirement plus the following seven categories: size, term, formations, initial drilling obligation, continuing drilling obligation, productivity requirement and participating area revisions; are the basic criteria for creating a federal unit. Below is a table outlining the basic criteria applicable to a conventional federal exploratory onshore unit.

<table>
<thead>
<tr>
<th>Unit Criteria</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Size</td>
<td>Negotiated; should encompass those lands considered necessary for proper development of the unitized substances</td>
</tr>
<tr>
<td>Term</td>
<td>Five years (may be extended)</td>
</tr>
<tr>
<td>Formations</td>
<td>Usually all depths, although specific formations may be unitized</td>
</tr>
<tr>
<td>Initial Drilling Obligation</td>
<td>Drill initial well within 6 months of the effective date of the agreement</td>
</tr>
<tr>
<td>Continuing Drilling Obligation</td>
<td>Drill at least 1 well every 6 months from completion until production in paying quantities is obtained</td>
</tr>
<tr>
<td>Productivity Requirement</td>
<td>Paying well determination</td>
</tr>
<tr>
<td>Participating Area Revisions</td>
<td>Each well must receive a paying well determination</td>
</tr>
</tbody>
</table>

Bearing in mind the criteria for and benefits of unitization, a Proponent will begin by having its geologists identify a prospect area, boundary and the depths of exploratory target formations. Once a prospect area is identified, the landman will (i) assess the mineral and leasehold ownership in each target formation underlying the prospect area; and (ii) identify the leasehold ownership as federal, state, tribal or fee. If the prospect area is comprised of more than ten percent federal acreage, and unitization is deemed appropriate, the Proponent will pursue a meeting with the applicable area BLM office.

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17 Federal Form Unit Agreement; note criteria will differ based on geographic location of units and formations targeted; i.e. coal bed methane units in Wyoming will have a dissimilar term, drilling obligation and productivity requirement than a conventional federal exploratory onshore unit targeting oil and gas in Utah; see also Draft BLM Manual Section 3180 - Unitization (Exploratory), supra note 16.

18 Participating Area is “that part of a unit area which is considered reasonably proven to be productive of unitized substances in paying quantities or which is necessary for unit operations and to which production is allocated in the manner prescribed in the unit agreement.” 43 C.F.R. § 3180.0-5.

19 Per 43 C.F.R. § 3181.1, if a proposed unit is less than 10 percent federal lands, a non-federal unit agreement may be used.
At this preliminary conference, the PropONENT will present the BLM with the geologic and engineering basis for selecting the proposed unit area. Once the BLM determines the public interest requirement is met, the BLM and PropONENT will select a unit name, set the unit boundary and select the location, formation and depth of the initial test well.

Subsequent to the preliminary conference, the PropONENT will submit a formal application. This application letter will include: (i) a map showing the proposed unit boundary and clearly delineated individual federal, state, tribal and fee owned tracts within the unit; (ii) a schedule of ownership of all the oil and gas interests in the lands within the unit boundary, as presently known; (iii) a listing of all federal and state lease numbers and expiration dates; (iv) the initial drilling obligation; (v) a map showing the location of the initial well or wells; (vi) a description of the unitized land and substances, depths and formations; (vii) a geologic report including appropriate cross-sections, geophysical interpretations, and other pertinent information; and (viii) any additional obligations and unique provisions as applicable. The application will be reviewed by a BLM authorized officer and if approved, the BLM will send the PropONENT a notice of preliminary approval designating the outlined area as a logical unit area. This preliminary approval will confirm the PropONENT’s application for depth and formation of the test well and will tabulate any special provisions and requirements. Final approval from the BLM is reserved until after the submission, review and acceptance of a unit agreement.

Unit Agreement.

The majority of the leg work is done by the time the PropONENT has received its preliminary approval. The BLM has acknowledged the public interest requirement is satisfied, and now the balance of the criteria for unitization will be detailed in the UA. The size, term, target formations, initial and continuing drilling obligations, productivity requirement and participating area revisions are specifically addressed within the Federal Form UA. The map showing the proposed unit boundary; the schedule of ownership of oil and gas interests in the lands within the unit boundary; and the listing of all federal

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21 See 43 C.F.R. § 3186.1 supra note 9.
and state lease numbers and expiration dates which were prepared for the BLM as a part of the preliminary application letter will be finalized and included with the UA as Exhibits A, B and C, respectively.

The UA must be properly executed by (i) the unit operator (the “Operator”), who is likely the Proponent; (ii) the other participating working interest owners, and (iii) the consenting royalty interest owners. The BLM regards any owner of any right, title or interest within the proposed unitized area as proper parties to a UA and the Proponent must provide evidence of its reasonable effort to obtain consent and participation from each party or an explanation for why a party did not elect to participate.\textsuperscript{22} The Proponent must also receive a minimum of 85 percent approval, on an acreage basis,\textsuperscript{23} from working interest owners within the proposed unit area.\textsuperscript{24}

There are four categories by which tracts\textsuperscript{25} within a unit may be deemed approved or committed. A tract may be fully committed which means that all record title, operating rights and working interest owners, royalty, overriding royalty and production payment owners have agreed to participate in the unit. Effectively committed means all owners except owners of overrides or production payments have agreed to participate in the unit. Partially committed with respect to a fee tract denotes that the lessee and all working interest owners have committed their interest but the royalty interest owner(s) has not agreed to participate in the unit. With respect to a state or federal tract, partially committed means that the record title owner is not committed but the operating rights or working interest owner has agreed to participate in the unit. Finally, a tract may be uncommitted if less than all of the working interest owners have agreed to participate in the unit. Fully committed and effectively committed tracts receive all of the benefits of unitization and count toward the 85 percent approval required by the BLM. Partially committed and uncommitted tracts do not enjoy the benefits of unitization. For example, a lease within a partially committed tract must be held by production on a leasehold basis and will not be extended by virtue of production from wells within the unit.

\textsuperscript{22} 43 C.F.R. § 3181.3.
\textsuperscript{23} Draft BLM Manual, supra note 16 at §C.6; Mr. Marranzino would like to take this opportunity to correct an inadvertently erroneous answer given to an attendee of the June 19th AAPL Annual Meeting lecture from which this article was based – the 85 percent approval is on an acreage basis and not a tract basis.
\textsuperscript{24} 43 C.F.R. § 3183.4(a); a unit agreement will not be approved unless the parties signatory to the agreement hold sufficient interests in the unit area to provide reasonably effective control of operations.
\textsuperscript{25} A tract is generally perceived as acreage with common ownership.
It is imperative to read the UA to obtain a clear understanding of (i) the Operator’s obligations to the BLM, (ii) the provisions governing state and fee leases, and (iii) other special provisions contained therein. The UA also sets forth the method of allocating production for the disbursement of royalties, overriding royalties and production payments. The UA does not provide for the allocation of costs and expenses or for the sharing of production amongst the working interest owners. That is covered in the separate and distinct UOA.

Unit Operating Agreement.

The UOA is entered into by the working interest owners who have committed their interest to the unit. The purpose of the UOA is to govern the relationship among the parties, provide for unit operations and allocate expenses and production between the working interest owners. There are two separate types of UOAs: Form 1 – Rocky Mountain Unit Operating Agreement - Oil and Gas (Undivided Interest) (May 1954) and Form 2 - Rocky Mountain Unit Operating Agreement - Oil and Gas (Divided Interest) (Feb.1994). The undivided interest type UOA is applicable when the extent and uniformity of a prospect are known. Under this agreement, the working interest owners agree to fix each participant’s share of costs and production for the life of the unit. Working interest and ownership of production does not fluctuate as participating areas expand or contract. The divided interest UOA is utilized when the extent and uniformity of a prospect is unknown. Here, the working interest owner’s share of costs and revenue is determined on an acreage basis within a drilling block or participating area.

In the undivided UOA, Article 2 provides that all costs, material and equipment shall be borne by the parties to the agreement in proportion to their respective Participating Interests and that available production shall be owned by the parties in proportion to their respective Beneficial Interests. Participating Interest is defined as the proportion (expressed as a percentage) that the acreage of party’s committed working interest or interests bears to the total acreage of all the committed working interests of all of the parties.\textsuperscript{26} Beneficial Interest of a party means the proportion (expressed as a percentage) that the net acreage of its committed working interest or interests bears to the

\textsuperscript{26} Rocky Mountain Unit Operating Agreement Form 1 (Undivided Interest) §1.6, May 1954.
total net acreage of all the committed working interests of the parties; for the purposes of the definition, the net acreage of the committed working interests owned by a party shall be calculated by multiplying the acreage of each tract in which it owns an interest, as shown in Exhibit B to the UA, by the percentage of the oil and gas which, if produced from such tract in the absence of the UA and the applicable UOA, would accrue to such committed working interest after deducting lease burdens (whether payable in cash or in kind) shown on said Exhibit B as an encumbrance upon such committed working interest, then adding all such interests together.\textsuperscript{27} The below illustration is a simplified example of how Participating and Beneficial Interests would be calculated for a 640 acre undivided type unit.

\begin{center}
\begin{tikzpicture}
\begin{scope}[xscale=0.5,yscale=0.5]
\node at (0,0) {Company A \hfill \textcolor{blue}{480 \text{ Acres}} \hfill \textcolor{blue}{100\% \text{ Working Interest}} \hfill \textcolor{blue}{12.5\% \text{ Burdens}}};
\node at (4,0) {Company B \hfill \textcolor{green}{160 \text{ Acres}} \hfill \textcolor{green}{100\% \text{ Working Interest}} \hfill \textcolor{green}{25\% \text{ Burdens}}};
\end{scope}
\end{tikzpicture}
\end{center}

In the divided type UOA, ownership and the allocation of costs is addressed in Article 6.\textsuperscript{28} Here, all costs incurred in drilling and production from within a participating area are allocated on an acreage basis. For example, if the area in the 640 acre illustration above were a proposed drilling block, Company B’s allocated portion of costs would be 25 percent. Later, if a participating area were approved with additional lands outside of this section, Company B’s ownership in any wells drilled and its share of

\textsuperscript{27} \textit{Id.} at §1.7.

\textsuperscript{28} Rocky Mountain Unit Operating Agreement Form 2 (Divided Interest) §6, 1994.
production would be recalculated based upon its committed working interests within the expanded participating area.\textsuperscript{29}

Divided and undivided UOAs govern operations much the same way as the A.A.P.L. Model Form 610 Operating Agreement does. Both operating agreements provide for the drilling of an initial well, subsequent operations, the operator’s duties and responsibilities and regulate the relationship between the parties. The operating agreements differ in that a UOA is written to implement the provisions of the UA. See Articles 7, 10 and 13 of the divided type UOA for a few examples of how a UOA differs from the traditional operating agreement and works in conjunction with a UA.\textsuperscript{30}

Production in Paying Quantities

Section 9 of the UA requires that the Operator continue to drill test wells until a well capable of production in paying quantities is discovered.\textsuperscript{31} Once a paying well determination is made in accordance with the BLM Manual Handbook, and production in paying quantities is established, the Operator prepares and submits the initial participating area for approval by the BLM. Prior to establishing a participating area, failure to drill the additional test wells, usually within six months (plus any extension granted by the BLM) of completion of one well and commencement of the next, will cause the unit to terminate automatically. The term “production in paying quantities” carries different meanings depending on the context in which it is used. Section 9 of the UA defines production in paying quantities as "quantities sufficient to repay the costs of drilling, completing, and producing operations with a reasonable profit..."\textsuperscript{32}

In Yates Petroleum Corp.,\textsuperscript{33} the Interior Board of Land Appeals addressed the definition of "production in paying quantities" as it applies to production for purposes of extending a federal lease committed to a unit beyond its primary term. Yates, the unit operator, appealed the BLM's decision that a federal lease committed to the unit expired because no drilling operations were conducted over the expiration date of the lease. Yates had drilled a well on another committed tract, and although it was determined that

\textsuperscript{29} Id. at §6.2.
\textsuperscript{30} Id. at §§ 7, 10 and 13.
\textsuperscript{31} Federal Form Unit Agreement, Section 9 (43 C.F.R. § 3186.1).
\textsuperscript{32} Id.
\textsuperscript{33} 67 IBLA 246 (1982).
the well was not a “commercial well” and the unit terminated, the issue remained as to whether production sufficient to recover production and marketing costs, but not drilling costs was sufficient to extend Yates' lease under Section 17 of the Mineral Leasing Act. The IBLA held that it was, and observed that in regards to a habendum clause of an oil and gas lease, "commercial quantities" is normally defined as including costs of production and marketing, but excluding the costs of drilling.34

Based on the IBLA's decision in Yates, a well capable of production in paying quantities on a lease basis (i.e. production sufficient to recover the costs of day to day production operations and marketing) but does not meet the UA Section 9 definition of a well capable of production in paying quantities (i.e. does not recover the costs of drilling in addition to the costs of production and marketing) will still serve to extend the term of a federal lease beyond its primary term, and if the well is on a committed unit tract, will extend all federal leases that are fully and effectively committed to the unit.35 A well capable of recovering the costs of production and marketing, but not the costs of drilling, is known as a "Yates well" or a "lease well." A well capable of production in paying quantities as defined in Section 9 of the UA is know as a "unit well."

Production on any fully or effectively committed tract is considered to be on, or for the benefit of, each fully or effectively committed lease. Note that a "lease well" or a "Yates well" will extend the life of the leases for the life of the unit, but will not extend the unit. The Operator will be required to continue drilling one well every six months until discovery of a “unit well.” By including drilling costs in the definition of production in paying quantities, Section 9 of the UA is congruent with the goal of establishing a commercial reservoir.

To determine if a well is capable of production in paying quantities the reservoir engineer does a paying well determination for submittal to the BLM for approval. The paying well determination validates that a commercial discovery has been made.36 The BLM Manual Handbook provides guidance and requirements for making paying well determinations, and notes that generally no more than 12 months production data should

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34 Id. at 250-51, 58.
36 Id. At 11-5.
be required for the determination. Unless an extension is granted, the requirement that additional wells be drilled with no more than six months between them continues in effect while the evaluation is being conducted. The calculation may require an estimate of future production, operating costs, product prices, taxes, and leasehold burdens. A paying well determination for a unit well requires a calculation to determine if and when the costs of drilling and completing will be recovered.

Making the first paying well determination and establishing the initial participating area causes the unit to convert to producing status, and all subsequent unit wells and operations are to be conducted under an approved plan of operations. Section 10 of the UA, "Plan of Further Development and Operation", requires that within six months after completion of a well capable of producing in paying quantities (a unit well), the Operator submit a plan of development for approval. The plan should include the number and locations of any wells to be drilled, the timing and sequence that drilling will take place, as well as a summary of operations and production for the previous year. Subsequent plans of development should be filed on a calendar year basis, not later than March 1st of each year. The plan may be modified or supplemented as necessary, but only wells approved in the plan of development may be drilled, except as may be necessary to protect against drainage.

After the first well capable of production in paying quantities is completed, and a paying well determination is approved by the BLM, a participating area is established in accordance with Section 11 of the UA, "Participation after Discovery". The regulations define “participating area” as “that part of a unit area which is considered reasonably proven to be productive of unitized substances in paying quantities or which is necessary for unit operations and to which production is allocated in the manner prescribed in the unit agreement.” Section 11 of the UA requires the Operator to submit a schedule of all lands regarded as reasonably proved to be productive. As stated, the UA may provide for inclusion of lands that are necessary for unit operations. This does not

37 Draft BLM Manual, supra note 16 at § F.
38 See Clawson, supra note 35 at 11-12 to 11-13.
39 Federal Form Unit Agreement, Section 10 (43 C.F.R. § 3186.1).
40 Id at Section 11 (43 C.F.R. § 3186.1).
41 43 C.F.R 3180.0-5.
42 Federal Form Unit Agreement, Section 11 (43 C.F.R. § 3186.1).
include lands on which unit operations provide only an indirect benefit to the participating area such as those that contain water disposal wells, water supply wells, or product treatment equipment. The BLM Manual notes that most units formed prior to 1968 do not provide for additional lands to be included in the participating area. The BLM Manual also notes that nonproductive acreage may be included in the participating area based on a negotiated agreement between the working interest owners, with the acceptance of the BLM.  

The method for determining the lands to be included in the participating area depends on the geological data available and unless the Operator receives approval to commingle production, a separate participating area is established for each productive reservoir. The objective of the participating area is to define the lands that are at the time, regarded as reasonably proved to be productive of unitized substances in paying quantities, so the size of the initial participating area should attempt to reflect the drainage area. The BLM Manual notes that unless the data and available information suggests otherwise, radial drainage should be assumed and that state spacing, if not vacated should be accepted in determining the participating area unless the BLM determines that it is not in the public interest. Even if spacing is vacated, it may be used as a guide. The size of the area to be included around the well(s) is based on what spacing is or would be for each reservoir. Using a radial drainage pattern, a circle is drawn around the well encompassing the number of acres that would be included in a rectangular spacing unit.

The radius can be determined using the formula $\text{Area} = (\pi)(r)^2$

<table>
<thead>
<tr>
<th>Area</th>
<th>Radius</th>
</tr>
</thead>
<tbody>
<tr>
<td>40 acre spacing</td>
<td>745 feet</td>
</tr>
<tr>
<td>80 acre spacing</td>
<td>1,053 feet</td>
</tr>
<tr>
<td>160 acre spacing</td>
<td>1,489 feet</td>
</tr>
<tr>
<td>320 acre spacing</td>
<td>2,106 feet</td>
</tr>
</tbody>
</table>

44 Laura Lindley, Participating Areas, Special Institute on Onshore Pooling and Unitization, Paper No.12, 12-4 (Rocky Mtn. Min L. Fdn. 1997).
46 Id.
All 40 acre subdivisions that are cut by more than 50% by the circle are included in the participating area outline. The schedule of all lands to be included in the participating area should be submitted along with two counterparts of a substantiating geologic report, including structure-contour map, cross sections and pertinent data.\textsuperscript{47} The participating area is usually effective as of the date of completion of the discovery well (the first "unit well").\textsuperscript{48} This is an important date to keep in mind because it starts the clock for the five year period for automatic elimination of non-participating lands from the unit.\textsuperscript{49} While the regulations don't require that the initial participating area be submitted by a certain date, the BLM Manual notes that the Operator should be contacted within three months of completing a unit well if an application to establish the initial participating area has not been submitted.\textsuperscript{50}

As more wells are drilled, and additional paying well determinations are made, the participating area is revised as necessary to include additional lands that are reasonably proved to be productive in paying quantities. Once included in the participating area, lands are not excluded due to depletion, but may be excluded if those lands are reasonably proved not to be productive.\textsuperscript{51} For example if a dry hole is drilled on lands in the participating area and it is determined that those lands should be excluded, the participating area may be revised. If a well is drilled on a tract that is not already in the participating area, and is not capable of production in paying quantities, i.e. is not a unit well, the participating area is not revised to include that land, rather production is allocated on a lease basis.

When an additional well capable of production in paying quantities is completed outside of a participating area and it is not located more than 10,000 feet from the initial well, the circle-tangent method may be applied to determine the lands to be included in the revised participating area. A circle is drawn around the well and the two circles are

\textsuperscript{47} 43 C.F.R. § 3183.5.
\textsuperscript{48} Draft BLM Manual, supra note 16 at § G. 2.
\textsuperscript{49} Federal Form Unit Agreement, Section 2(e) (43 C.F.R. § 3186.1).
\textsuperscript{50} Draft BLM Manual, supra note 16 at § G. 2.
\textsuperscript{51} Federal Form Unit Agreement, Section 11 (43 C.F.R. § 3186.1).
connected by tangent lines. The participating area will include all 40 acre subdivisions cut by more than 50% by each circle or the tangent lines.\textsuperscript{52}

As a note, this method is not required by statute, the UA, or the BLM. There are other ways to determine the lands to be included in a participating area, and it is advised to consult with each state office at the time the unit is proposed to determine the appropriate method.

Section 12 of the UA governs allocation of production for settlement of royalty, overriding royalty and production payments. The UOA governs how costs and production are allocated among the unit working interest owners. For royalty payment purposes under Section 12, each tract is allocated a percentage of production, generally the number of surface acres the tract contributes to the participating area as a percentage of the total number of acres of unitized lands and any unleased federal lands included in the participating area.\textsuperscript{53} The royalty owners share in production only from participating

\textsuperscript{52}See Lindley, \textit{supra} note 44 at 12-4.

\textsuperscript{53} Federal Form Unit Agreement, Section 12 (43 C.F.R. § 3186.1).
areas that they have an interest in. In an undivided type unit, working interest owners share in costs and production on a unit wide basis. In a divided type unit, costs and production are allocated based on the acreage in the participating area. As participating areas expand, the working interest owners’ interests are revised.

This reallocation of interests under a divided type UOA is accomplished through the investment cost adjustment procedure described in Article 13, "Adjustment on Establishment or Change of a Participating Area." While there are no adjustments for production prior to the effective date of the participating area revision, there are adjustments for the value of past investments, or "sunk costs". Adjustments for past investments are done in two steps. First, the working interest owners in the participating area are credited for the tangible and intangible costs of a well prior to the effective date of the participating area revision. Second, the working interest owners in the revised participating area ("Resulting Area") calculate what their share of those costs, less depreciation, in that well would have been if the costs were incurred under the new working interest percentages. If the working interest owner is charged an amount that exceeds the amount they were credited, the Operator credits that amount to distribute to the working interest owners who are credited more than they are charged.

In the following illustration, Jack and Diane each own a 50% working interest in a ten acre lease. They drill a well on the lease and their total tangible and intangible costs are $300,000.00. Jack, Diane and John each have a 33% working interest in a second ten acre tract and drill a well on the second tract totaling $250,000 in tangible and intangible costs. Paying well determinations are made and the participating area is revised. To determine each parties' interest in the Resulting Area and the wells after the revision, determine what their working interest would have been if the wells were drilled within the Resulting Area. As illustrated below, Jack and Diane would each have a 25% working interest from the first participating area and a 16% working interest from the second drilling block that is brought in for a total working interest of 41.6%. John does

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55 Rocky Mountain Unit Operating Agreement Form 2 (Divided Interest) §13, 1994.
56 A drilling block is an area upon which and exploratory well is proposed to be drilled. The term is sometimes described as “a subarea within the unit” upon which a well is drilled. See Williams, supra note 2 at 264.
not have an interest in the initial participating area and has a 16% working interest from
the second drilling block.

<table>
<thead>
<tr>
<th>Lease</th>
<th>W.I. Owner</th>
<th>Gross Acres</th>
<th>Lease W.I.</th>
<th>Tract Factor</th>
<th>Tract W.I.</th>
</tr>
</thead>
<tbody>
<tr>
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<td>10.00000000</td>
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<td>0.50000000</td>
<td>0.25000000</td>
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<tr>
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<td>0.50000000</td>
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</tr>
<tr>
<td>2</td>
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<td>10.00000000</td>
<td>0.33333340</td>
<td>0.50000000</td>
<td>0.16666670</td>
</tr>
<tr>
<td>2</td>
<td>Diane</td>
<td>10.00000000</td>
<td>0.33333330</td>
<td>0.50000000</td>
<td>0.16666665</td>
</tr>
<tr>
<td>2</td>
<td>John</td>
<td>10.00000000</td>
<td>0.33333330</td>
<td>0.50000000</td>
<td>0.16666665</td>
</tr>
</tbody>
</table>

Jack, Diane and John receive a credit for what they have spent for each well:

<table>
<thead>
<tr>
<th></th>
<th>Well #1</th>
<th>Well #2</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jack</td>
<td>$150,000.00</td>
<td>$300,000.00 * .50</td>
<td>$83,333.33</td>
</tr>
<tr>
<td>Diane</td>
<td>$150,000.00</td>
<td>$300,000.00 * .50</td>
<td>$83,333.33</td>
</tr>
<tr>
<td>John</td>
<td>$0.00</td>
<td>$83,333.33</td>
<td>$250,000.00 * .33</td>
</tr>
<tr>
<td>Total</td>
<td>$300,000.00</td>
<td>$250,000.00</td>
<td>$550,000.00</td>
</tr>
</tbody>
</table>

Jack, Diane and John are charged for their proportionate share of each well within the Resulting Area:

<table>
<thead>
<tr>
<th></th>
<th>Well #1</th>
<th>Well #2</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jack</td>
<td>$125,000.00</td>
<td>$300,000.00 * .416</td>
<td>$104,166.67</td>
</tr>
<tr>
<td>Diane</td>
<td>$125,000.00</td>
<td>$300,000.00 * .416</td>
<td>$104,166.67</td>
</tr>
<tr>
<td>John</td>
<td>$50,000.00</td>
<td>$300,000.00 * .167</td>
<td>$41,666.67</td>
</tr>
<tr>
<td>Total</td>
<td>$300,000.00</td>
<td>$250,000.00</td>
<td>$550,000.00</td>
</tr>
</tbody>
</table>

The credits and charges are combined and each party that is charged an amount in excess of the amount credited to it pays to the Operator the amount of the excess. The amount received by Operator is distributed or credited to the parties entitled to credits in excess of charges.\(^{57}\)

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\(^{57}\) Rocky Mountain Unit Operating Agreement Form 2 (Divided Interest) §13.3.D., 1994.
<table>
<thead>
<tr>
<th></th>
<th>Credits</th>
<th>Charges</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jack</td>
<td>$233,333.33</td>
<td>$229,166.67</td>
<td>-$4,166.67</td>
</tr>
<tr>
<td>Diane</td>
<td>$233,333.33</td>
<td>$229,166.67</td>
<td>-$4,166.67</td>
</tr>
<tr>
<td>John</td>
<td>$83,333.33</td>
<td>$91,666.67</td>
<td>$8,333.33</td>
</tr>
<tr>
<td>Total</td>
<td>$550,000.00</td>
<td>$550,000.00</td>
<td>$0.00</td>
</tr>
</tbody>
</table>

Through these adjustments, Jack’s, Diane’s and John’s investment in each well is now proportional to their acreage ownership in the resulting area.

**Additional Sections in the Unit Agreement and Unit Operating Agreement to Note.**

Article 14 of the UOA, “Supervision of Operations by Parties,” gives the non-Operator working interest owners a check on the Operator. It provides that each operation conducted by unit Operator under the UOA or the UA shall be subject to supervision and control by the parties that are chargeable with the costs thereof, and that the parties shall have the right to vote in proportion to their respective obligations for such costs. Agreements generally provide for 65 percent approval of the parties.58

Section 18 of the UA, “Leases and Contracts Conformed and Extended,” provides “the terms, conditions, and provisions of all leases, subleases, and other contracts relating to exploration, drilling, development, or operation for oil or gas on lands committed to this agreement are hereby expressly modified and amended to the extent necessary to make the same conform to the provisions hereof but otherwise to remain in full force and effect.” This Section provides for the “One Lease Theory” where operations performed on any tract of unitized lands will be deemed to be performed upon, and for the benefit of, every fully and effectively committed tract of unitized land. The UA provides that any fee lease which, by its terms might expire prior to the termination of the UA, is extended for the term of the UA.59

Section 20 of the UA addresses the effective dates and term of the unit. The agreement becomes effective upon approval and will automatically terminate five years from said effective date unless i) it is extended by the BLM, ii) terminates prior to expiration because exploration revealed lands incapable of producing unitized substances in paying quantities, iii) unitized substances in paying quantities are discovered, and the

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58 *Id* at §14.
59 Federal Form Unit Agreement, Section 18 (43 C.F.R. § 3186.1).
agreement remains in effect for so long thereafter as unitized substances can be produced in quantities sufficient to pay for the cost of producing unitized substances from wells on unitized land within any participating area established under the agreement, (notice this is not a paying quantities definition), or iv) the UA is voluntarily terminated by 75 percent of the working interest owners after the initial drilling obligation has been met.60

Conclusion

Unitization is an effective way to operate efficiently and minimize waste and disturbance. As with any form agreement, the UA and UOA should be thoroughly reviewed as they contain the parties’ rights, duties and obligations. The parties may also desire to modify or include additional provisions and undoubtedly these agreements will continue to evolve.61

60 Id at Section 20 (43 C.F.R. § 3186.1).
61 See Richardson, supra note 54 at 16-17, 18.