

## Attachment 5

### Estimating Costs Associated with Orphaned Well(s) on Federal and Indian Lands

The Bureau of Land Management (BLM) provides the following guidance for BLM offices when preparing cost estimates for orphaned wells. This guidance follows well established best management practices when estimating the costs for permanent plugging, abandonment, and reclamation of the associated disturbance.

Cautionary Note on jurisdiction on Indian trust or restricted fee lands: Without a lease or agreement on Indian Lands, the BLM has no jurisdiction and enforcement and compliance is the duty of the Bureau of Indian Affairs (BIA). The BLM generally requires current or previous record title owners (RTO) or operating rights holders (ORH) to plug well(s) according to 43 CFR 3162.3-4, even if the lease has terminated for cessation of production. The BLM will issue a written order and require the RTO or ORH to submit a sundry notice with their planned permanent plugging and reclamation operations, which the BLM will review to ensure it complies with the applicable regulations. If the Tribe, individual Indian mineral owner, or the Bureau of Indian Affairs (BIA) informs the operator that they need to permanently plug and abandon the wells on an Indian lease when that lease terminates, the operator, RTOs, and ORHs will need to comply with the BLM's applicable regulations for permanently plugging and abandoning the well(s) and reclaiming the surface. If the tribe or Indian mineral owner prefer to retain the well(s) for other purposes, BIA should inform BLM of this decision in writing. The BLM then will transfer the responsibilities for managing the well(s) to the tribe or to the individual Indian mineral owner; once that transfer occurs, the parties receiving the transfer will assume responsibility for any needed permanent plugging, abandonment, or reclamation on those locations.

A reference is made to the [Gold Book in this policy](#). The Gold Book is the publication titled Surface Operating Standards and Guidelines for Oil and Gas Exploration and Development (commonly referred to as the Gold Book). It was developed to assist operators by providing information on the requirements for obtaining permit approval and conducting environmentally responsible oil and gas operations on federal lands and on private surface over Federal minerals (split-estate).

The following cost estimate guidance provides generalized processes for Federal and Indian orphaned well permanent plugging and abandonment and reclamation.

#### **Part 1 - Federal Orphaned Well Permanent Plugging and Abandonment and Reclamation Process for Cost Estimation**

- A. For Federal wells that the BLM Field Office (FO) determines to be orphaned wells, the FO will determine cost estimate(s) for performing permanent well plugging and abandonment and site reclamation. The cost estimates may be determined by using cost estimate(s) identified in a previous contract from a similar well, consulting with operators in the vicinity, or by contacting other businesses that perform permanent well plugging and site reclamation in the local area. After compiling an appropriate cost estimate, the FO will forward it to the

State Office (SO) for its consideration. As part of the submitted estimates, FOs should address the following typical items in the scope of work:

- Determine if additional NEPA review is needed for the BLM to address the orphaned well
- Briefly describe the history of the well or of the operator, if pertinent
- Document the geology
- Identify the well location(s)
- Provide wellbore information
- Identify any equipment left on location
- Establish the proposed Permanent Plugging and Abandonment (P&A) Program
- Calculate the permanent P&A cost estimate
- Consider H<sub>2</sub>S and other safety measures
- Calculate surface reclamation cost estimates
- Complete the orphaned well prioritization scoring sheet for each well.

- B. By October 31, of each year, all SOs will provide to HQ-310 their Orphaned Well Combined Priority Rating Sheet (Attachment 6) and their Orphaned Well Individual Well Priority Scoring Sheet (Attachment 4) demonstrating the outstanding liability.
- C. The HQ-310 will review the SO-submitted priorities to prepare budget requests, and/or to distribute available funds for permanent plugging and abandonment and site reclamation of the orphaned wells.
- D. The FOs and SOs should use their available funding and/or pursue end-of-year funding to address any outstanding liability identified in the Orphaned Well Combined Priority Rating Sheet (Attachment 6) and their Orphaned Well Individual Well Priority Scoring Sheet (Attachment 4). These offices should work with their appropriate state regulatory agency(s) to develop a cost sharing agreement to plug and reclaim these identified orphaned wells. Funding strategies should be discussed with HQ-310 for tracking purposes.
- E. The SOs/FOs will ensure that any funding used for orphaned well permanent plugging or reclamation includes **WBS code LX.SLOWEL0000**. The addition of this WBS code will allow HQ-310 to systematically track the actual costs that the BLM incurs when it has to permanently plug and abandon and reclaim orphaned well sites.
- F. After the contractor completes the permanent plugging and abandonment and site reclamation, it must provide confirmation of that work to the BLM. The FO will review this information to make sure it is consistent with the BLM's applicable regulations and the contract statement of work. The SO will send confirmation of the permanent plugging and reclamation report to HQ-310.
- G. The FO will identify the well as being plugged (ABD) in AFMSS when the well is permanently plugged and abandoned and will monitor surface reclamation success. Refer to chapter 6 of the Gold Book. Offices must periodically review the ABD wells listed in AFMSS and inspect the locations to ensure reclamation is progressing to the BLM's desired

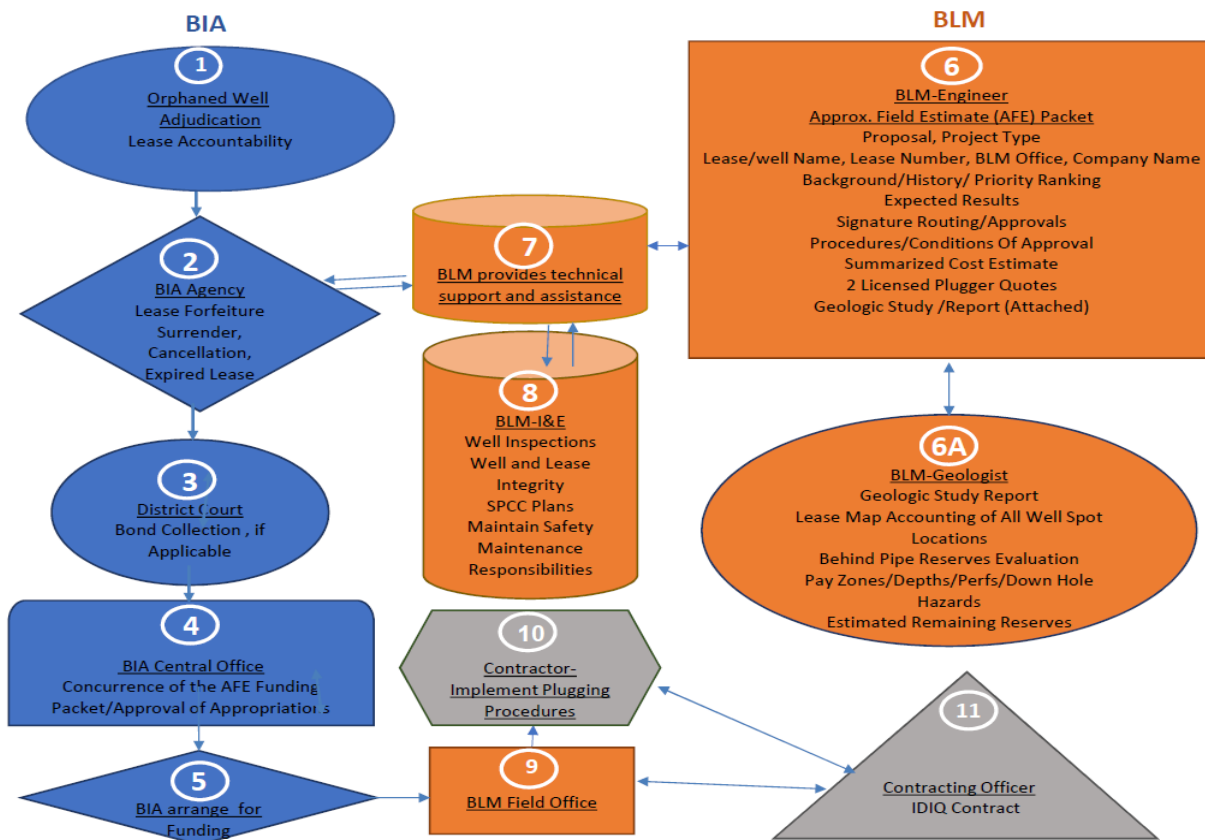
outcomes. When the surface area is reclaimed consistent with the BLM’s standards, the BLM will update the well record in AFMSS by changing the final status to plugged, abandoned, and reclaimed (P&A).

H. If the reclamation is unsuccessful, an additional contract or additional site-specific efforts may be needed to establish the desired outcome. Refer to chapter 6 of the Gold Book.

**Part 2 - Indian Orphaned Well Permanent Plugging, Abandonment, and Reclamation Process**

Orphaned wells on Indian land cannot be addressed using BLM funds. BLM Offices will inform BIA of the status of those wells, the priority level, and the cost of plugging, abandonment, and reclamation of the wells to facilitate such activities by the Indian landowners. Included below is the BIA’s Approximate Field Estimate (AFE) Flow Chart as of 2020.

The flow chart was developed by the BIA and is provided to illustrate the general process.



The BLM provides technical support to and coordination with the BIA under 43 CFR Subpart 3160 and 3161. The BIA is responsible for the lease actions and bond actions. The BIA does not have a statutory or regulatory duty to plug, abandon, or reclaim orphaned wells, nor does it have a dedicated funding source for such activities, but will coordinate with the BLM for technical support and assistance to the Indian mineral owner to implement plugging, abandonment and reclamation operations on Indian leases. If assistance is needed or requested by the BIA, the BLM technical staff will prepare, or assist in preparing, the Approximate Field Estimate (AFE)

packet and field estimates for permanent plugging and abandonment, and provide a Geologic Study Report. The BLM will conduct follow-up well inspections after permanent well plugging and abandonment and reclamation have occurred, if requested to do so.

### **Part 3 - Typical items to consider when developing a cost estimate on an orphaned well.**

The following items are those commonly encountered when a BLM office begins to assess and estimate what an orphaned well will potentially cost to properly plug and reclaim the location. Offices should consider this list as containing the typical items an office may encounter, but it is not intended to be all inclusive:

- Project Management and Contracting, including completing any necessary environmental analysis.
- Downhole P&A procedures.
- H2S services or any other special safety, detection, and mitigation measures during plugging operations.
- Water hauling, water fees, miscellaneous transportation costs in the field and tank rentals.
- Workover rig anchors: testing existing anchors or installing new anchors, removal of anchors
- Review of casing inspection logs, other potential evaluation services
- Natural gas and oil rig services: digging around wellhead, disassembling pumping units, moving pumping units from wellhead, disassembly, cleaning, capping, and/or removal of flowlines, risers, removal of excess or equipment on location (e.g., pumping rod)
- Pit Reclamation: All pits should be reclaimed to a safe and stable condition and restored to a condition that blends with the rest of the reclaimed pad area. (Refer to chapter 6 of the )
- Soil Removal: The concentration of nonexempt hazardous substances in the reserve pit at the time of pit area cleanup should not exceed the standards set forth in the Comprehensive Environmental Response. (Refer to chapter 6 of the Gold Book)
- Potential costs associated with the hauling of topsoil and/or subsoil to and from the location
- Access to Location: Access roads may require repair or partial reconstruction to access the well location when bringing in well plugging and reclamation equipment. Gold Book or industry standards should be adhered to minimize the disturbance associated with acquiring safe access to the location.
- Equipment disposal: pumping units and accessories – haul off location, transport to salvage or secondary market, when feasible.
- Equipment disposal: tanks will need cleaning onsite and haul off location to salvage or secondary market. Majority of tanks may not be in good enough condition for reuse in oil/gas operations or suitable for other containment.
- Other equipment disposal and haul off: production units, separators, filters, tubulars, solids control equipment, instrumentation/control units etc., and any ancillary items such as electric power poles, fencing, gates etc.
- Dirt work/location surface rehabilitation (per BLM direction for topography)

- requirements, reseeding as required, and road repair, improvement, or elimination.)
- Field Sampling and Surface Cleanup.
  - Contractor preparation of final reports.