Acidizing oil wells pdf

Oil Field Worker

ROBERT SMITH

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Objective

Oil Field Worker with 2+ years of experience Rig Hand. Experience working as a floor hand on a service rig and has interest in developing their derrick hand skills as well.

Skills

Work Well Under Pressure, Communication Skills, Management Skills.

Work Experience

Oil Field Worker

ABC Corporation - November 2014 – March 2015

- Hooked cranes up to oil rigs take them apart and move them.
- Learned what its like to not get lunch all the time.
- Worked harder and harder every day to keep moving up.
- Used Heavy lifting, hammers, sled hammers, heavy equipment, 16 hours shifts barely any breaks.
- Assisted in day-to-day drilling operations.
- Assisted in managing the central operations center.
- Assisted in the creation of a new asset inventory system.

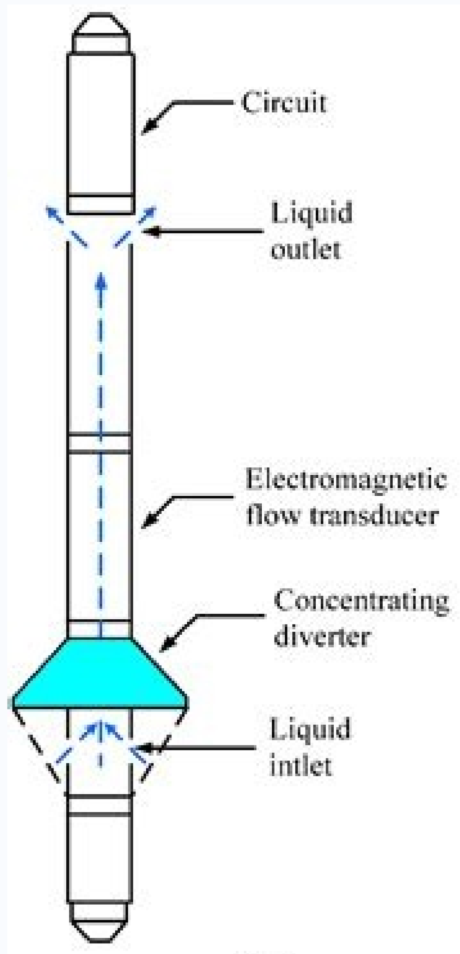
Oil Field Worker

Delta Corporation - 2013 – 2014

- Oil fill services Equipment operator Truck driver Pumped cement into oil rigs to secure casings Frac-worker.
- Roustabout Operated Machinery ACHIEVEMENTS Graduated from All-State Career with perfect attendance and 3.6 GPA (92%) Possesses Class CDL with HazMat.
- Maintain Drilling operations, Rig operations, Payroll, Crews, Transporting of the rig.
- Had a little more responsibility with overseeing and managing guys with a work task and ensuring they were done as fast as possible.
- As before I had an accomplishment of heating homes, giving people electricity, and fuel for cars/trucks.
- Assisted in assembly, disassembly, and transportation of drilling machinery and service equipment.
- Performed general rig maintenance Cleaning rig floor, chipping, and painting.

Education

High School Diploma



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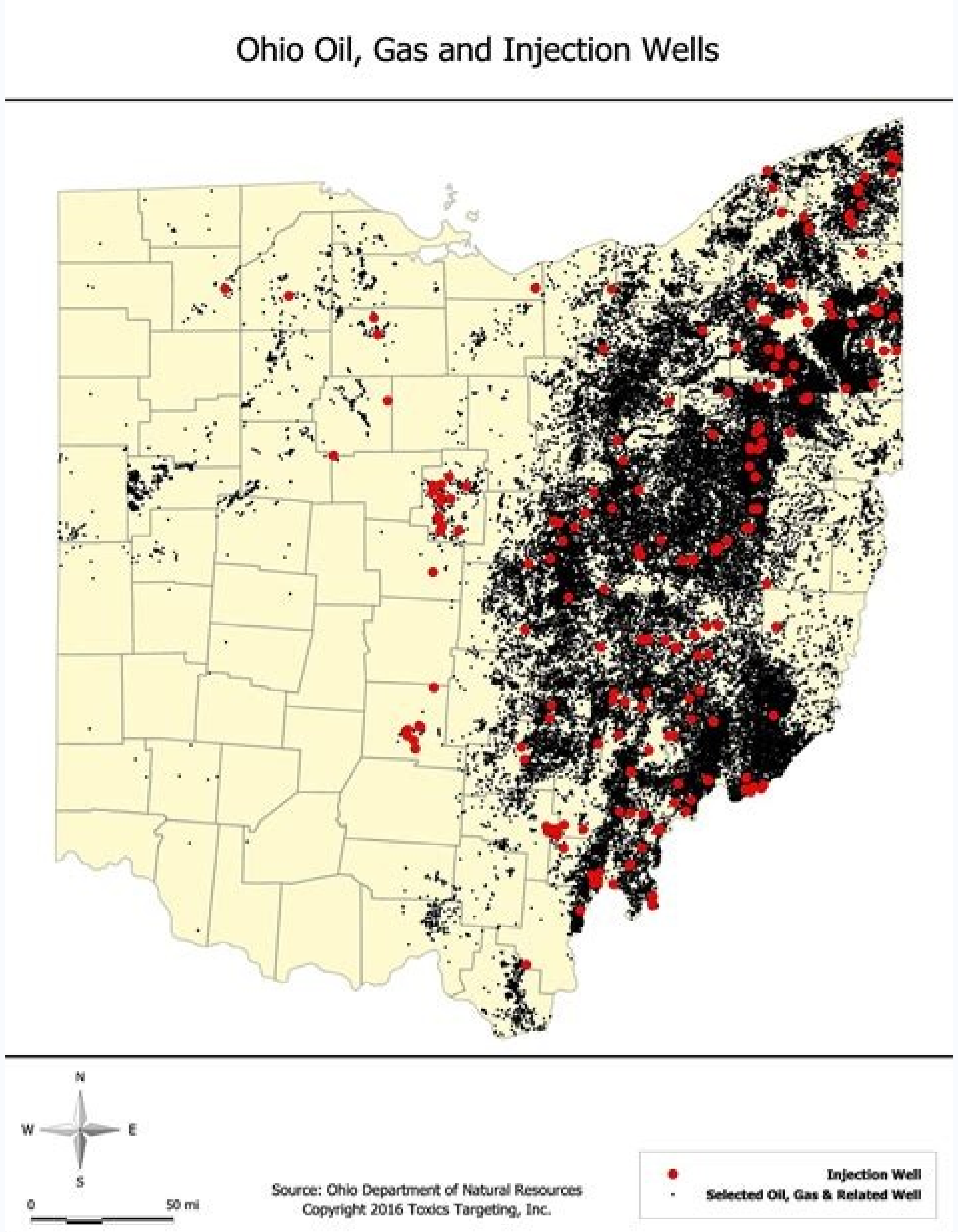

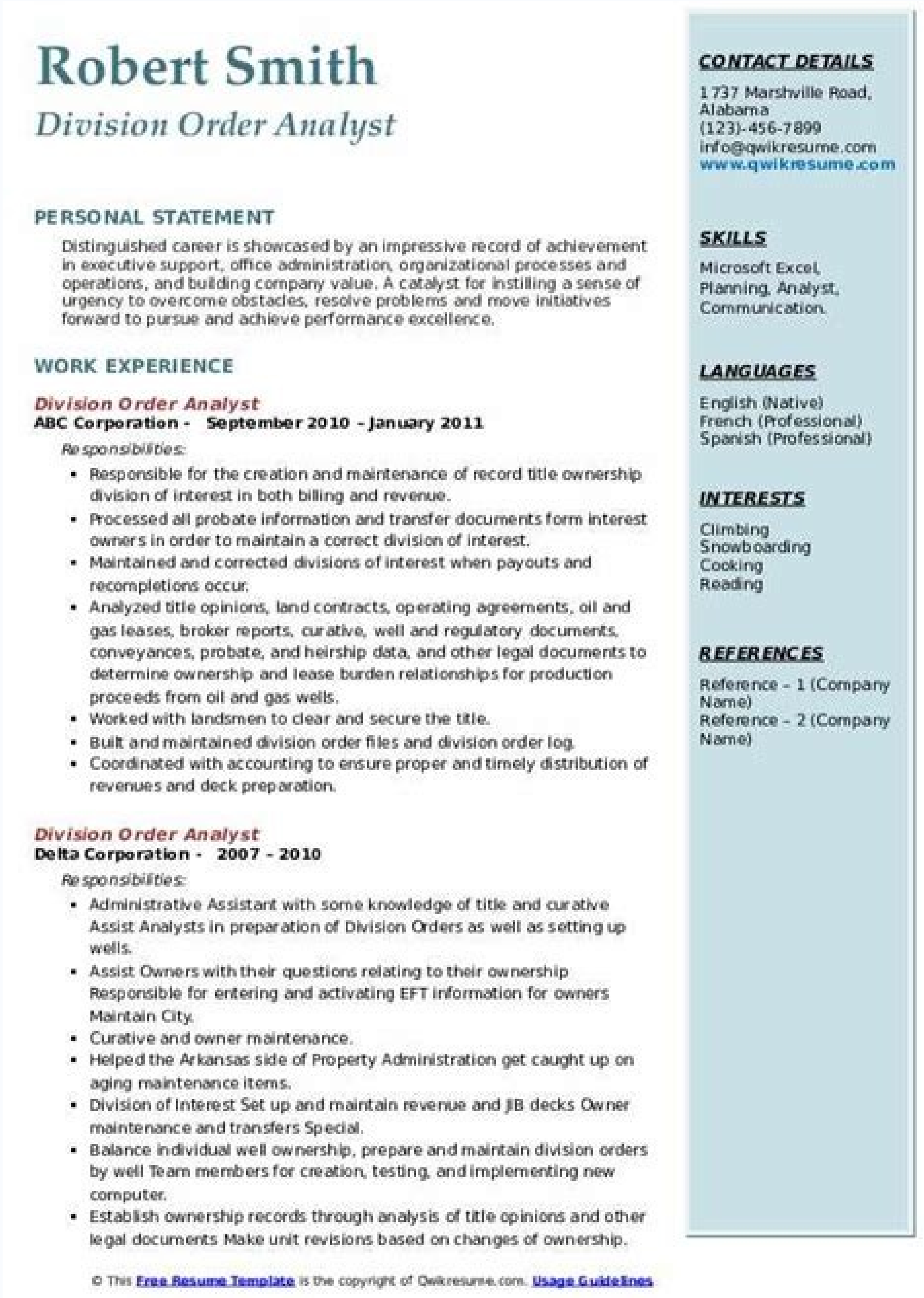

Robert Smith

Division Order Analyst

CONTACT DETAILS

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SKILLS

Microsoft Excel, Planning, Analyst, Communication.

LANGUAGES

English (Native)
French (Professional)
Spanish (Professional)

INTERESTS

Climbing
Snowboarding
Cooking
Reading

REFERENCES

Reference – 1 (Company Name)
Reference – 2 (Company Name)

PERSONAL STATEMENT

Distinguished career is showcased by an impressive record of achievement in executive support, office administration, organizational processes and operations, and building company value. A catalyst for instilling a sense of urgency to overcome obstacles, resolve problems and move initiatives forward to pursue and achieve performance excellence.

WORK EXPERIENCE

Division Order Analyst
ABC Corporation - September 2010 - January 2011

Responsibilities:

- Responsible for the creation and maintenance of record title ownership division of interest in both billing and revenue.
- Processed all probate information and transfer documents form interest owners in order to maintain a correct division of interest.
- Maintained and corrected divisions of interest when payouts and recompletions occur.
- Analyzed title opinions, land contracts, operating agreements, oil and gas leases, broker reports, curative, well and regulatory documents, conveyances, probate, and heirship data, and other legal documents to determine ownership and lease burden relationships for production proceeds from oil and gas wells.
- Worked with landsmen to clear and secure the title.
- Built and maintained division order files and division order log.
- Coordinated with accounting to ensure proper and timely distribution of revenues and deck preparation.

Division Order Analyst
Delta Corporation - 2007 - 2010

Responsibilities:

- Administrative Assistant with some knowledge of title and curative Assist Analysts in preparation of Division Orders as well as setting up wells.
- Assist Owners with their questions relating to their ownership Responsible for entering and activating EFT information for owners Maintain City.
- Curative and owner maintenance.
- Helped the Arkansas side of Property Administration get caught up on aging maintenance items.
- Division of Interest Set up and maintain revenue and JIB decks Owner maintenance and transfers Special.
- Balance individual well ownership, prepare and maintain division orders by well Team members for creation, testing, and implementing new computer.
- Establish ownership records through analysis of title opinions and other legal documents Make unit revisions based on changes of ownership.

Largest oil well. Deepest oil wells in the world. First oil wells in the world. Oil wells in world.

Wells may perform poorly or less than expected due to three factors: Inefficient mechanical system (wrong size tubing in a flowing well or inefficient artificial lift equipment for pumping or gas lift wells) Low reservoir permeability Wellbore restriction because of formation damage or incomplete perforating If the problem is formation damage, then matrix acidizing may be an appropriate treatment to restore production. This page discusses ways to evaluate whether a well is a good candidate for acidizing. Selecting acidizing candidates A good matrix acidizing candidate is any well producing from: Formation with permeability greater than 10 md Permeability of which in the near-wellbore or near-perforation region has been reduced by solid plugging. This plugging can be either mechanical or chemical. Mechanical plugging is caused by either introduction of suspended solids in a completion or workover fluid, or dispersion of in-situ fines by incompatible fluids and/or high interstitial velocities. Chemical plugging is caused by mixing incompatible fluids that precipitate solids. If formation damage is the cause for poor production, the well is a good candidate for acidizing. Formation evaluation for acidizing provides more information about assessing the nature of the formation damage. Evaluate damage Several methods can be used to evaluate the presence of damage: Production history plots that show sudden change, slope change, and gradual change Offset well comparison Pressure buildup tests Well performance analysis Production plots Production rate/time plots are normally available for oil/gas wells that show change of rate with time and that note significant events such as workovers and stimulation treatments. Damage is revealed by at least three different characteristics as previously listed. The first is a sudden change in productivity following an event like a workover, as shown in Fig. 1. [1] An unfiltered produced brine was used to kill the well during a workover to repair a tubing leak. In this example, formation damage is obvious in the reduced productivity immediately after the workover. This lowered productivity persisted until an acid treatment removed the damage. Many times the analysis of a damaged condition is not so obvious. Fig. 1—Production history graph-sudden chage (workover).[1] A depletion-type history curve may decline at a certain rate, as shown in Fig. 2. [2] This well followed a certain decline rate and then began to decline faster as shown by the change in slope. This is often characteristic of scale buildup around the wellbore from produced water. This well was diagnosed and treated with hydrochloric (HCl) acid to dissolve calcium carbonate scale, and production rate was restored. Fig. 2—Production history graph-change in slope:scale buildup (after Farina).[2] Some changes occur so slowly over time that productivity change is difficult to detect. Overlaying history curves of different wells will reveal this change in productivity. Fig. 3 shows this overlay for two California wells. Increasing water production called attention to one well, and testing revealed a casing leak in this well. [1] Fig. 3—Production history graph-overlaying graphs to detect damage.[1] Offset well comparison Often acidizing candidates are selected on the basis of offset well comparisons. The productivities of offset wells are compared, and the poorer-performing wells are selected for acidizing. Many times, this selection is made without sufficient well testing. Pressure buildup testing may be too expensive in terms of lost production during long shut-ins, or well interference may circumvent reliable long-time pressure data. Table 1 shows such an offset comparison. [3] On the basis of production only, three wells are acidizing candidates. However, when one compares the formation potential through log analysis, as expressed by net porosity feet, only one well is a reliable acidizing candidate: Well B-1. Acidizing all three wells on the basis of production rate alone may provide only a 33% success. In waterfloods, it is also important to compare effective reservoir pressures around each well or to compare the injection rates from adjacent water injection wells. If a well's water injectivity is low, production will be less in the offset producing well. Pressure buildup tests Where wells flow naturally, as in natural gas wells or new oil wells, pressure buildup tests provide a reliable measure of reservoir permeability and wellbore condition (skin factor, S). The skin factor, S, when positive, indicates restricted flow; however, the restriction is not necessarily formation damage. A skin factor of 5 to 20 or more can result from inadequate perforation size and/or low shot density when combined with either non-Darcy or two-phase fluid flow. Two-phase flow effects and non-Darcy flow cause high skin factors by themselves and can amplify the restriction caused by limited perforating. Such an example is shown in the buildup test in Fig. 4. [3] See the chapter on fluid flow in the reservoir engineering section of this handbook for more details on this type of plot. Fig. 4—Pressure buildup of a south Texas gas well.[3] This gas well was perforated with sufficient underbalance to achieve clean undamaged perforations, yet the skin factor from the pressure buildup test was 11. Well flow analysis showed that this skin was caused mainly by high-velocity flow of gas into small perforations created by the small through-tubing perforating gun used in this well. Other wells have been identified with high skin factors that were the result of limited perforating and two-phase-flow effects. One gas condensate well had a skin factor of 29, which was the result of liquid saturation buildup and non-Darcy flow around the wellbore after a compressor was installed to pull the well harder. Another well in a deep, overpressured oil reservoir had a positive skin factor even after fracturing because of a solution gas/oil ratio (GOR) over 1,200 scf/bbl and a high pressure drawdown. Acidizing such wells have caused productivity decreases because acidizing sometimes produces damage where no damage existed before acidizing; therefore, use the checklist shown in Table 2 before selecting acidizing candidates on the basis of high skin factors alone. [3] A skin factor can be analyzed by well flow analysis to show when it is caused by the previously described effects or when it is the result of permeability damage. An example of such a damaged well is shown in Fig. 5. [3] This figure shows predicted gravel-pack pressure drop vs. flow rate for different effective shots per foot (perforations). This well was perforated adequately and should have produced much better after completion. Review of the completion procedure showed that formation damage probably occurred during completion, and a standard acidizing treatment was used to dissolve the damage. Performance significantly improved, as shown by the reduction of completion pressure drop and increase of flow rate in this gas well. Fig. 5—Well completion analysis.[3] References

↑ 1.0 1.1 1.2 1.3 McLeod Jr., H.O., Ledlow, L.B., and Till, M.V. 1983. The Planning, Execution, and Evaluation of Acid Treatments in Sandstone Formations. Presented at the SPE Annual Technical Conference and Exhibition, San Francisco, California, 5-8 October 1983. SPE-11931-MS. . ↑ 2.0 2.1 Farina, J.R. 1971. An Approach to Estimating Skin Damage and Appropriate Treatment Volumes. Proc., 18th Annual Southwestern Petroleum Short Course Association, Lubbock, Texas, 53–57. ↑ 3.0 3.1 3.2 3.3 3.4 3.5 McLeod, H.O. 1989. Significant Factors for Successful Matrix Acidizing. Presented at the SPE Centennial Symposium at New Mexico Tech, Socorro, New Mexico, 16-19 October 1989. SPE-20155-MS. . 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