PLUG AND ABANDOMENT PROCEDURE (RE-ENTER)

HSR-SAWDY 14-36

| Step | Description of Work |
|---|---|
| 1 | Locate and expose 8 5/8" casing stub. Extend stub to surface and install 8 5/8"x 11" SOW, 3M casing head with 3000 psi ball valves in both outlets. Prepare location for workover rig. Install perimeter fence as needed. |
| 2 | Provide notice to COGCC prior to rig up per request on approved Form 6 (e.g. call field coordinator, submit Form 42, etc.). |
| 3 | MIRU workover rig. NU 9" 3000 psi BOP stack on casing head. PT BOP and csg head per approved Form 2. Function test BOPE . NU rotating head on BOP. Hook up return line to shale shaker on flat tank |
| 4 | PU 7 7/8" mill tooth bit, necessary drill collars and drill pipe/work string (WS). Drill through existing cement plugs at surface (20 sk) and at the base of surface casing (100 sk plug ~340'-512') using fresh water with biocide. |
| 5 | Once surface cement plugs are drilled, displace hole with drilling mud and RIH to stub of 4 1/2" casing @ 4095'. (There are discrepencies on depth of casing stub. RIH to 3374' slowly then continue slowly to RIH to 4095'). Tag casing stub and TOH and LD drill collars and bit. |
| 6 | RIH WS open-ended to casing stub. Attempt to drift past stub by 100'. (Cement top in annulus is 4150'). Circulate and condition hole for additional cement plug. |
| 7 | Run gyro survey from csg stub to surface. |
| 8 | RU Cementers. Spot cement plug consisting of 100 sx (115 cu-ft) "G" w/0.25pps cello flake, 0.4% CD-32, 0.4% ASA-301 with CaCl2 as necessary. Mixed at 15.8 ppg, 1.15 cuft/sack. Cement to be preceded by sodium metasilicate mixed in 20 bbls water per cementing company recomendation. Calculated top of plug 3950' based on 10" hole with 40% excess. (Caliper log from this well.) POH to ~2500' and circulate mud. WOC per cement company recommendation. |
| 9 | Tag top of plug at 3950'. LD WS to place end of WS at 1230'. |
| 10 | Spot cement plug consisting of 500 sx (665 cu-ft) Type III w/cello flake and CaCl2 as deemed necessary, mixed at 1.33 cf per sack, 14.8 ppg. POH and WOC per cementing company reccomendation. Plug size is based on 10" hole with 40% excess covering 1230' to shoe of surface casing at 468' plus capacity of surface casing to 250'. TOH and WOC per cement company recommendation |
| 11 | Tag top of plug at 250'. POOH and LD WS. |
| 12 | RU wireline. Run and set CIBP in the 8 5/8", 24# surface casing at 80'. PT CIBP and surface casing to 1000 psi for 15 minutes. Assuming successful test, RD wireline. |
| 13 | RDMO workover rig. |

14 Instruct cementing and wireline contractors to e-mail copies of all job logs/job summaries to rscDJVendors@anadarko.com within 24 hrs of completion of the job.

15 Supervisor submit paper copies of all invoices, logs, and reports to Joleen Kramer.

16 Excavate hole around surface casing of sufficient size to allow welder to cut off 8 5/8" casing at least 5' Below ground level (depending on land owner requirements).

17 Fill surface casing with cement (4500 psi compressive strength, no gravel).

18 Spot weld steel marker plate on top of sfc casing stub. Marker shall be labeled with well name, well number, legal location (1/4 1/4 descriptor) and API number.

19 Obtain GPS location data as per COGCC Rule 215 and send to rscDJVendors@anadarko.com.

20 Back fill hole with native material. Reclaim location to landowner specifications

21 Submit Form 6 to COGCC. Provide "As plugged" wellbore diagram identifying the specific plugging completed.

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