



**Energy Search Company
P.O. Box 1896
Edwards, CO 81632
Tsuzuki #5
SWNW Sec. 27, T1S, R67W
Adams County, Colorado
API 05-001-07229**

March 30, 2016

Plugging and Abandonment Procedure

Objective – Safely plug and abandon per COGCC regulations and current owner operating agreement.

PROCUREMENT: Workover unit, blowout prevention equipment (BOPE), wireline unit, work tank(s), control fluids, wireline services, cementing services.

Directions to Site – From 136th Ave at Yosemite, cont. 0.1 mi S, cont. 0.1 mi E, cont. 0.3 mi S.

Required COGCC forms for compliance:

Pre-job: COGCC Form 6 intent with current and proposed well bore diagrams (needs approval)

Pre-job: 48 hr notice, COGCC Form 42

Post-job: COGCC Form 6 subsequent

(And any additional COA (Condition of Approval) listed on the approved Form 6 Intent)

PROCEDURE (See attached current and proposed well bore diagrams)

1. Where well pressures are significantly above sales line pressures, two days prior to rig operations, production personnel will set valves/timers for 24 hour sales to reduce pressures.
2. MIRU roustabout contractor, dismantle and remove 114 National pump jack.
3. MIRU plugging contractor – Magna Energy Services.
4. Conduct job-specific JSA daily and maintain daily JSA documents on location for inspection and for duration of operations.
5. Check for BrHd pressure, conduct BrHd test if required by COGCC on approved Form 6.



6. Relieve well pressures and control well with fresh water. POH and lay down rods and pump, hot-oil as needed for paraffin relief.
7. NDWH, NU BOPE, function-test BOP for 2-3/8" tubing. Release probable 2-3/8" x 4-1/2" TAC and POH standing and tallying 1400' of tubing, lay down remainder of tubing.
8. If required by COGCC COA on approved Form 6, MIRU Core-Tech Wireline and run memory tool (Vaughn Energy Services) gyro survey. RDMO wireline. Submit data to COGCC and to Energy Search Company.
9. MIRU Magna Wireline. Set 4-1/2" CIBP at 4992'. Dump-bail 2 sks cement (Class G, 15.8#, 1.15 cu ft/sk yield) on top of CIBP. POH and standby w/ wireline.
10. Load and pressure-test casing to 500 psi. for 15 min. If test is good, continue to step 10. If test fails, isolate and evaluate leak intervals, notify COGCC, and plan for cement remediation.
11. RU wireline CBL tools, RIH to 4700', run GR/CCL/CBL from 4700' to surface verifying SUSX TOC, stage tool at 1237', and TOC above stage tool. Submit .las, .tif, and .pdf versions to IPT and Energy Search Company.
12. RIH tubing to 1396'. Mix and pump to place 50 sks cement plug (Class G, 15.8#, 1.15 cu ft/sk yield) in 4-1/2" casing from 1396' to 754' (across stage tool).
13. POH (laying down) tubing to 456'. Mix and pump to place 40 sks cement (Class G, 15.8#, 1.15 cu ft/sk yield) from 456' to surface. Circulate top 20' of 4-1/2" casing with water.
14. RDMO plugging contractor rig and equipment.
15. Safely excavate well head. Cut off 8 5/8" and 4-1/2" casings 20' below current grade. Weld on marker plate w/ well name, number & API number.
16. **NOTE:** Plugging contractor's rig tickets & operational logs will match IPT reports by footages, number of sks cement for each plug, cement yields, etc. for accurate and matching regulatory reporting.
17. Remove all production equipment.
18. Reclaim location back to original grade.

