

encana™



Malone 27-12B (E27E)

SW/NW Section 27, T7S, R92W

FEE / FEE

API: 05-045-09390

Lat. 39.418032 /Long. -107.660882

Garfield County, Colorado

P&A Procedure

January 27, 2015

Engineer: Sam Bearman

Production Group Lead: Mark Thrush

Western Operations Team Lead: Jeff Balmer

API Number:	05-045-09390	
Spud Date:	October 13, 2003	
GL Elevation:	6,537 ft	
TD:	5957 ft MD PBSD 5565 ft. MD	
Surface Casing:	13 3/8" OD, 54.5 lb/ft, K-55, set at 836 ft.	
Surface Casing Properties:	ID:	12.515"
	Drift ID:	12.359"
	Collapse:	1,540 psig
	Burst:	3,090 psig
	Joint Yield Strength:	595,000 lb
	Capacity:	0.1521 BBL/ft
	Capacity 13 3/8" casing x 17 1/2" hole:	0.1237 BBL/ft
Intermediate Casing:	9 5/8" OD, 36 lb/ft, J 55, set at 2525 ft.	
Intermediate Casing Properties:	ID:	8.921"
	Drift ID:	8.765"
	Collapse:	2,020 psig
	Burst:	3,520 psig
	Joint Yield Strength:	423,000 lb
	Capacity:	0.0773 BBL/ft
	Capacity 9 5/8" casing x 12 1/4" hole:	0.0558 BBL/ft
	Capacity 13.3/8" X 9.5/8"	0.0646 BBL/ft.
	Capacity: 9.5/8" X 7"	0.0297 BBL/ft.
Production Casing:	7" OD, 23 lb/ft, P110, set at 5835'.	
Production Casing Properties:	ID:	6.366"
	Drift ID:	6.250"
	Collapse:	5,650 psig
	Burst:	8,720 psig
	Joint Yield Strength:	122,000 lb
	Capacity:	0.03937 BBL/ft
	Capacity 7" casing x 8 3/4" hole:	0.0268 BBL/ft
	Casing Annular 9.5/8" X 7"	0.0297 BBL/ft
		33.6583 ft/BBL
Liner	5 1/2" OD, 15.5 lb/ft, J 55, set at 5335' to 5565'	
Liner Properties:	ID:	4.950"
	Drift ID:	4.825"
	Collapse:	4,040 psig
	Burst:	4,810 psig
	Joint Yield Strength:	348,000 lb
	Capacity:	0.0238 BBL/ft
	Capacity 5 1/2" casing x 9 5/8" casing:	0.0479 BBL/ft
	Capacity 5 1/2" casing x 6 3/4" hole:	0.0450 BBL/ft
Tubing:	No tubing in the hole.	
Perfs:	Williams Fork: 5157' to 5522'. RBP's set @ 5070'. Ran 6.2 gauge ring to 5157'	

Objective

Plug and abandon the Malone 27-12B (K28E)

Background

The Malone 27-12B (K28E) is a vertical well drilled in August of 2003. The well was originally completed in the Williams Fork and has been awaiting permanent P&A. A Halliburton RBP was set @ 5070' to T&A the well and now the well has moved on to P&A status.

Safety

Safety meetings are to be held with all service company personnel prior to each job. Well site supervisor must notify contractors as to known hazards of which the contractors may be unaware. Well site supervisor must ensure that all workers are aware of their responsibilities and duties under the EH&S guidelines. All safety meetings will be recorded on the EnCana daily completion reports in Well View. Well site supervisor is responsible to ensure that all utility one calls and ground disturbance forms are completed and on location for safety review. All JSA, Ground disturbance forms and Utility one call paper work is to be turned in to Parachute safety department at the completion of the job.

Regulations

All verbal notifications and approval from government regulatory agencies will be recorded on the EnCana daily report. The name of the individual contacted and the subject matter of approval or notification will be recorded.

Plug & Abandon Procedure

1. Notify the COGCC at least 48 hours before plugging operations commence.
2. Hold a pre-job safety meeting. Discuss all aspects of the procedure with any involved personnel. Identify and address any safety concerns before the job begins.
3. MIRU pulling unit. Call for workstring of @ least 5070' of 2 3/8" tubing.
4. Monitor any pressure on wellbore. ND wellhead, NU BOP.
5. Load hole.
6. TIH with tubing & to RBP @ 5070'. Due to extreme pressure below the RBP we will not remove the plug.
7. Mix & pump 20 sacks (4 BBLS) cement on top of RBP @ 5070'.
8. TOH w/ tubing to 4789', 50 feet below the DV Tool @ 4739'
9. Mix & pump 20 sacks (4 BBLS) cement to cover 50 feet below & 50 feet above the DV Tool @ 4739'
10. TOH w/ tubing. Stand back 2575' of tubing. Lay down the remaining tubing.
11. RU wireline. RIH w/ perf gun & shoot perfs @ 2575' or below if in a collar. This will allow us to squeeze cement 50' below the intermediate casing shoe @ 2525'. ROH w/ wireline.
12. TIH w/ tubing to 2575'.
13. Mix & pump 40 sacks (8 bbls.) cement from 2575' to 2475''. This will cover the 9.625" casing shoe 50' below the shoe and 50' above the shoe. TOC minimum is 2475'. If TOC is below this footage mix & pump cement as needed. WOC overnight & hard tag TOC.
14. TOH w/ tubing standing back 886 ft. Lay down the remaining tubing.
15. RU wireline & RIH w/ perf gun to 886'. Shoot perfs @ 886' or below if in a collar. Must perf through 7" & 9 5/8" casings to squeeze the surface casing shoe @ 836'. ROH w/ wireline & release.
16. TIH w/ tubing to 886', 50 feet below the surface casing shoe @ 836'.
17. Mix & pump 80 sacks (14 bbl's) cement from 886 to 786. This will cover the surface casing shoe 50' below the shoe and 50' into the annular spaces. Cement volume in the 13 3/8" X 9 5/8" annular is 35 sacks (7 bbls). 9 5/8" X 7" annular volume is 15 sacks (3bbls) and the 7" cement volume is 20 sacks (4 bbls)
18. TOH w/ tubing laying down. Stand back 786 feet. WOC overnight.
19. Hard tag surface casing shoe plug w/ tubing.
20. TOH w/ tubing laying down to 90'.
21. Mix & pump 70 sacks (14 BBL's) cement from 90' to surface in the 7" X 9 5/8" annular, 9 5/8" X 13 3/8" annular and the 7" casing.
22. TOH w/ tubing laying down.
23. Dig down around wellhead 4' below ground level. Cut off wellhead & casings. Top off with cement as needed to surface. Install information plate & weep hole & backfill.