

BAISH B NO. 5
PLUG AND ABANDON

Summary: The following procedure is recommended to permanently plug and abandon Baish B No. 5.

1. Spot 25 sack cement plug on top of cement retainer.
2. Spot 15 sack cement plug across intermediate casing shoe.
3. Spot 15 sack cement plug across top of salt.
4. Perforate @ 350' and circulate 120 sacks of cement to set surface plug.

Location: 1980' FSL & 860' FML, Unit L, Sec. 22, T17S, R32E
Lea County, New Mexico

Elevation: 4022' DF (14' AGL)

Completion: Majamar Devonian
TD: 13,939' PBTD: 4200'

5-1/2" cement retainer set @ 4200'.

Casing/Tubing Specifications:

O.D. (in)	Weight (lbs/ft)	Grade	Depth (ft)	Drift (in)	Collapse (psi)	Burst (psi)	Capacity (bbl/ft)	Capacity (ft ³ /ft)
13-3/8"	48.0	H-40	100	12.559	770	1,730	.1570	.8817
9-5/8"	36.0	J-55	2700	8.765	2,020	3,520	.0773	.4340
5-1/2"	20.0	C-75	2811	4.653	8,440	8,610	.0221	.1245
5-1/2"	20.0	N-80	12,535	4.653	8,830	9,190	.0221	.1245
5-1/2"	23.0	N-80	13,554	4.345	11,160	10,560	.0211	.1189
2-7/8"	6.5	N-80	2,347	11.160	10,570		.00579	.03250

-3/8" casing set @ 100' with 100 sacks cement circulated to surface.

5/8" casing set @ 2700' with 1700 sacks cement circulated to surface.
5-1/2" casing set @ 13,554' with 1390 sacks cement. TOC @ 4480' by temperature survey.
5-1/2" casing was perforated @ 4300' and squeezed with 400 sacks cement to protect Grayburg. Estimated TOC @ 3000'.
Use safety factor of 70% for collapse and burst pressures.
Assume 2-7/8" workstring will be used.

- Notes:
1. All cement slurry used in this procedure shall be Class "C" w/2% CaCl₂ mixed @ 14.8 ppG.
 2. All mud shall be 9.5 ppG with 25 lbs gel/bbl brine.
 3. Notify BLM prior to commencing any work.

Safety:

This procedure includes cementing and perforating. A pre-job safety meeting involving all personnel on location should be held before any work commences. Conoco policies and the service company's safety procedures should be reviewed. Arrange for a pre-determined assembly area in case of an emergency. No unauthorized personnel are allowed on location.

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The following checklist is recommended during cementing operations:

1. All pump and storage trucks should rig up outside dead man anchors and guy wires if possible.
2. All connections on the wellhead must have a pressure rating higher than the maximum pump pressure.
3. Data recording equipment should be located as far as practical from the discharge line.
4. Anchor all lines and pressure test as needed.
5. A service company and/or company employee must be designated to operate valves at the wellhead in case of an emergency.
6. All service and company personnel must keep a safe distance from pressured-up lines. No one should be in the derrick or on the rig floor while pumping cement.

The following checklist is recommended during perforating operations:

1. The perforating truck should rig up outside dead man anchors and guy wires and be positioned upwind of the wellhead if possible.
2. The perforating company must place warning signs at least 500' away from the operation on all incoming roads.
3. Welding, on location, is not permitted during the perforating operation.
4. Perforating must be suspended during electrical or thunderstorms and sandstorms.
5. Turn off all radios that are within 500' of the operation. They should not be used while rigging up and loading perforating guns or until the gun is at least 500' in the hole. The same process should be repeated when pulling out of the hole.
6. The perforating truck must be grounded to the rig and wellhead before installing the blasting cap(s).
7. Insure that the key to the perforating panel is removed from the panel and the generator on the truck is turned off while arming the gun.
8. No one is allowed in the derrick or on the rig floor while perforating.
9. Upon completion of the operation, the work area shall be thoroughly inspected and all scraps and explosive materials shall be properly removed from the location by the service company performing the operation.

Recommended Procedure:

1. Prepare well for P&A:

- A. MURU. Bleed well pressure down.
- B. ND wellhead and NU BOP.

2. Spot cement on cement retainer: @ 4200'

- A. MURU cement services.
- B. GIH w/2-7/8" workstring to 4200'. Tag cement retainer and pick up 2'.
- C. Spot 25 sacks cement from 4200'-3935' and displace with 22 bbls mud.
- D. PU to 3930' and circulate hole with 70 bbls mud.
- E. POOH laying down WS to 2775'.

3. Spot cement plug across intermediate casing shoe:

- A. Load hole with 2 bbls mud.