

ISOLATION REQUIREMENTS FOR TYPICAL WELLS

Date 04/18/2016

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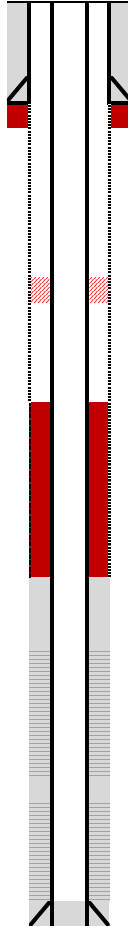
FIELD NAME BUZZARD CREEK
FIELD NUMBER 9500

LOCATION

Basin Piceance
Township(s) 9S
Range(s) 92W to 93W

Depth Formation/Member

0	Alluvium/ Green River/ U. Wasatch
1,000	
2,000	
3,000	Wasatch G
4,000	L. Wasatch
5,000	Ohio Creek U. Mesaverde
6,000	
7,000	Top of Gas
8,000	Cameo
9,000	Rollins Cozzette Corcoran



Casing and Cement Coverage

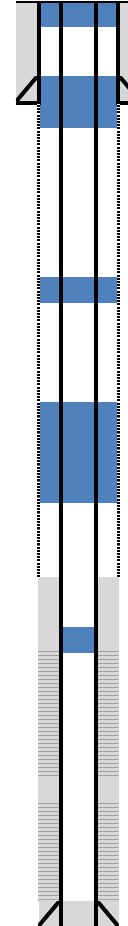
New Surface Casing Standard
Minimum 5% TVD (10% recommended) or cover all apparent water resources in the U. Wasatch, whichever is more stringent. Recommend 1,000 ft or greater based on potential water resources apparent on induction logs

New Cement Standard
Cement must provide coverage across Ohio Creek and 200 ft above L. Wasatch, in addition to productive interval coverage. Add Wasatch G coverage (stage cement, as shown here or increase primary coverage) within one mile of productive Wasatch G wells.

Typical Older Well Configuration
TOC covers productive intervals, but cement coverage of U. Mesaverde, Ohio Creek and L. Wasatch may be lacking

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Plug Placement

Surface plug

Surface casing shoe plug
Set deeper shoe plug if casing depth < 1,000 ft

Wasatch G plug if productive within one mile
Stabilization squeeze plug (use if separation between plugs above and below are > 3,000 ft)

Squeeze plug across Ohio Creek and across L. Wasatch (top of plug 200 ft above L. Wasatch)

Plug in casing above Mesaverde Group Completions