

Well: Wagner 11-65 9-1H
Zone of Interest: Niobrara Shale

Drill 12-1/4" surface hole to section TD at 1,000'.

Set 9-5/8" 40# J-55 casing and cement with Lead and Tail cement (see details below). Cement will be circulated to surface.

Install 11" x 5,000 psi BOP and test as required

Drill 8-3/4" pilot hole to coring point at +/-8,500'.

Take 375' core to 8,875'

Drill to pilot hole TD at +/-9,020'

Log pilot hole

Plug back

Kick off and drill 8-3/4" curve at 10 deg/100' to end of build.

Drill 7-7/8" hole open hole to well TD

Acquire shuttle logs: Triple combo and image logs in open hole

Set 4-1/2" casing cement as shown below.

Suspend well and move drilling rig out in preparation for well completion

CASING AND CEMENTING PROGRAM

The proposed casing program will be as follows:

<u>Purpose</u>	<u>Interval</u>		<u>Hole</u>	<u>Casing</u>	<u>Weight</u>	<u>Grade</u>	<u>Thread</u>	<u>Condition</u>
	<u>From</u>	<u>To</u>	<u>Size</u>	<u>Size</u>	<u>Lbs/Ft</u>			
Surface	0	1000	12 1/4	9 5/8	40	J-55	LTC	New
Production	0	12423	8 3/4	4 1/2	11.6	P-110	LTC	New

Casing design subject to revision based on geologic conditions encountered.

Casing Safety Factors:

Interval	Casing	Burst	Collapse	Axial
Surface	9 5/8	2.03	2.03	4.78
Production	4 1/2	1.32	2.26	1.63

Centralizer Program

Casing	9 5/8	4 1/2
# of Bow-type spring centralizer	8	51

Cement Program

<u>Surface Casing</u>	<u>Slurry Volume</u>			<u>Weight</u>	<u>Yield</u>	<u>Mix H2O</u>	<u>TOC</u>
	<u>% Excess</u>	<u>(BBLs)</u>	<u>(Sacks)</u>	<u>(PPG)</u>	<u>(cuft/sk)</u>	<u>(GPS)</u>	
Lead Slurry	100%	84	159	11.50	2.95	17.88	0
Tail Slurry	100%	33	163	15.80	1.15	4.96	750

Lead	Tail
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Surface Casing with TOC at surface	Rockies LT 0.2 % Versaset (Additive Material) 0.2 % D-AIR 3000 (Additive Material) 0.125 lbm/sk Poly-E-Flake (Additive Material) 0.25 lbm/sk Kwik Seal (Additive Material)	Premium Cement, 94 lbm/sk Premium Cement (Cement) 1 % Calcium Chloride, Pellet (Accelerator) 0.125 lbm/sk Poly-E-Flake (Lost Circulation Additive)
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Cement must be circulated to surface

Plug back Cement Plan		Slurry Volume			Weight	Yield	Mix H2O	TOC	
	From	To	% Excess	(BBLs)	(Sacks)	(PPG)	(cuft/sk)	(GPS)	
Plug #1	8029'	8525'	20%	44	248	17.50	1.00	5.20	8029'
Plug #2	8525'	9020'	20%	44	165	15.80	1.52	6.21	8525'

Production Casing Cement		Slurry Volume			Weight	Yield	Mix H2O	TOC
		% Excess	(BBLs)	(Sacks)	(PPG)	(cuft/sk)	(GPS)	
Lead Slurry		20%	440	1122	12.00	2.20	12.30	800'
Tail Slurry		20%	263	1013	14.60	1.46	6.10	

	Lead	Tail
Production Casing Cement	Poz Type I-II 50/50 1 % Bentonite (Light Weight Additive) 3 lbm/sk Silicalite Compacted (Additive Material) 3 % Microbond HT (Additive Material) 0.2 % Halad(R)-322 (Low Fluid Loss Control) 0.4 % Halad(R)-344 (Low Fluid Loss Control) 0.3 % HR-5 (Retarder)	50/50 Poz Premium 2 % Bentonite (Light Weight Additive) 5 lbm/sk Silicalite Compacted (Light Weight Additive) 0.5 % Versaset (Thixotropic Additive) 0.5 % Econolite (Cement Material) 0.6 % HR-7 (Retarder) 0.5 % D-AIR 3000 (Defoamer) 0.125 lbm/sk Poly-E-Flake (Lost Circulation Additive) 0.25 lbm/sk Kwik Seal (Lost Circulation Additive)

The cement must achieve a compressive strength of at least 500 psi at the shoe prior to casing test and drilling out the shoe track. WOC time shall be recorded in the driller's log.

MUD PROGRAM

Purpose	Interval		Hole Size	Mud Type	Mud Weight	Viscosity	Fluid Loss	pH
	From	To	(")	(")	Lbs/Ft			
Surface	0'	1000'	12 1/4	WBM	8.4 – 8.8	28 – 32	N/C	9
Production	1,000	8,029	8 3/4	WBM	8.8 – 9.0	35 – 46	4 – 6	9
	8029'	12423'	7 7/8	WBM	9.0 - 9.4	36 – 46	4 – 6	9

WBM = Water Based Mud