

Delaware Basin Changes to Form C-108



SWD-1488 / API pending
— Not major modifications
— changes to casing &
tubing (weight class)

Well Name: Salado Draw SWD 13 #1

 08/18/2014

PMAM 1409135446

County: Lea County, NM

Location: Section 13, T26S, R32E

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Summary of Changes to Form C-108

1. Injection Well Data Sheet (pages 5-6 of C-108)
2. Updated Wellbore Schematic (page 9 of C-108)
3. Updated Proposed Casing and Cement Program (page 11 C-108)
4. Updated Tubing Size and Lining Material (page 11 C-108)

(1) Injection Well Data Sheet

Summary: Surface casing hole size will be 20" and not 18-1/8" as stated in order to maintain sufficient diametrical clearances when running and cementing 16" surface casing.

As Defined in C-108:

Surface Casing Hole Size: 18-1/8"

Tubing Lining Material: None



As Planned on Well:

Surface Casing Hole Size: 20"

Tubing Liner Material: DUO-LINE D20

(2) Updated Wellbore Schematic

Summary: Both the 13-3/8" and 7-5/8" strings will have TSH W513 flush connection to aid in tight clearances for the respective hole sections.

As Defined in C-108:	As Planned on Well:
<p>Salado Draw SWD Sec. 13 T26S R32E Lea County, New Mexico</p>  <p>16", 84 ppf, J-55, BTC @ +/- 750' ID = 15.81" Drift = 14.822"</p> <p>13-3/8", 68 ppf, K-55HC, BTC @ +/- 4690' ID = 12.415" Drift = 12.259"</p> <p>DV Tool @ ~6000'</p> <p>9-5/8", 53.5 ppf, P-110HP, BTC (Special Drift = 8.5") @ +/- 12500' ID = 8.535" Drift = 8.506"</p> <p>7-5/8", 42.8 ppf, P-110, LTC (Special Cplg OD = 8.125") @ +/- 17410' ID = 6.501" Drift = 6.376"</p> <p>5-7/8" or 6-1/8" Open Hole to TD @ +/- 18200'.</p>	<p>Salado Draw SWD 13 #1 Sec. 13 T26S R32E Lea County, New Mexico</p>  <p>16", 75 ppf, J-55, BTC @ +/- 750' ID = 15.124" Drift = 14.937"</p> <p>13-3/8", 68 ppf, J-55, TSH W513 @ +/- 4690' ID = 12.415" Drift = 12.259"</p> <p>DV Tool @ ~6000'</p> <p>9-5/8", 63.5 ppf, P-110IC, BTC (Special Drift = 8.5") @ +/- 12500' ID = 8.535" Drift = 8.506"</p> <p>7-5/8", 42.8 ppf, P-110, TSH W513 @ +/- 17410' ID = 6.501" Drift = 6.376"</p> <p>5-7/8" or 6-1/8" Open Hole to TD @ +/- 18200'</p>

(3) Proposed Casing and Cement Program

Summary: Due to the change in the planned surface hole size from 18-1/8" to 20" the conductor size has changed from 20" to 24" and the planned sacks of cement for both conductor and surface have been modified accordingly.

As Defined in C-108:

Type	Hole Size	Casing Size	Casing Weight/Ft	Setting Depth	Sacks of Cement	Est. TOC	Comments
Conductor	26"	20"	133	±120'	44	Surface	
Surface	18-1/8"	16"	84	±750'	421	Surface	
Intermediate	14-3/4"	13-3/8"	68	±4690'	1096	Surface	
Intermediate	12-1/4"	9-5/8"	53.5	±12500'	2271	3690'	DV Tool at ± 6000'. 2-Stage Job.
Production Liner	8-1/2"	7-5/8"	42.8	±17410'	443	TOC @ 12,300'	
Open Hole	6-1/8"	N/A	N/A	±18200'	N/A	N/A	

As Planned for Well:

Type	Hole Size	Casing Size	Casing Weight/Ft	Setting Depth	Sacks of Cement	Est. TOC	Comments
Conductor	30"	24"	133	±120'	116	Surface	
Surface	20"	16"	75	±750'	547	Surface	
Intermediate	14-3/4"	13-3/8"	68	±4690'	1096	Surface	
Intermediate	12-1/4"	9-5/8"	53.5	±12500'	2271	3690'	DV Tool at ± 6000'. 2-Stage Job.
Production Liner	8-1/2"	7-5/8"	42.8	±17410'	443	TOC @ ±12,300'	
Open Hole	6-1/8"	N/A	N/A	±18200'	N/A	N/A	

(4) Tubing Size and Lining Material

Summary: Due to the high axial loads, the 4-1/2" tubing will require a tapered 4-1/2" string with heavier wall 17 ppf at the top crossed over to 12.6 ppf. Also, the 4-1/2" tubing connection will be TSH Blue and the tubing will be DUO-LINED.

As Defined in C-108:

Tubing: 4-1/2" 11.6# N-80 LTC TK Fiberline

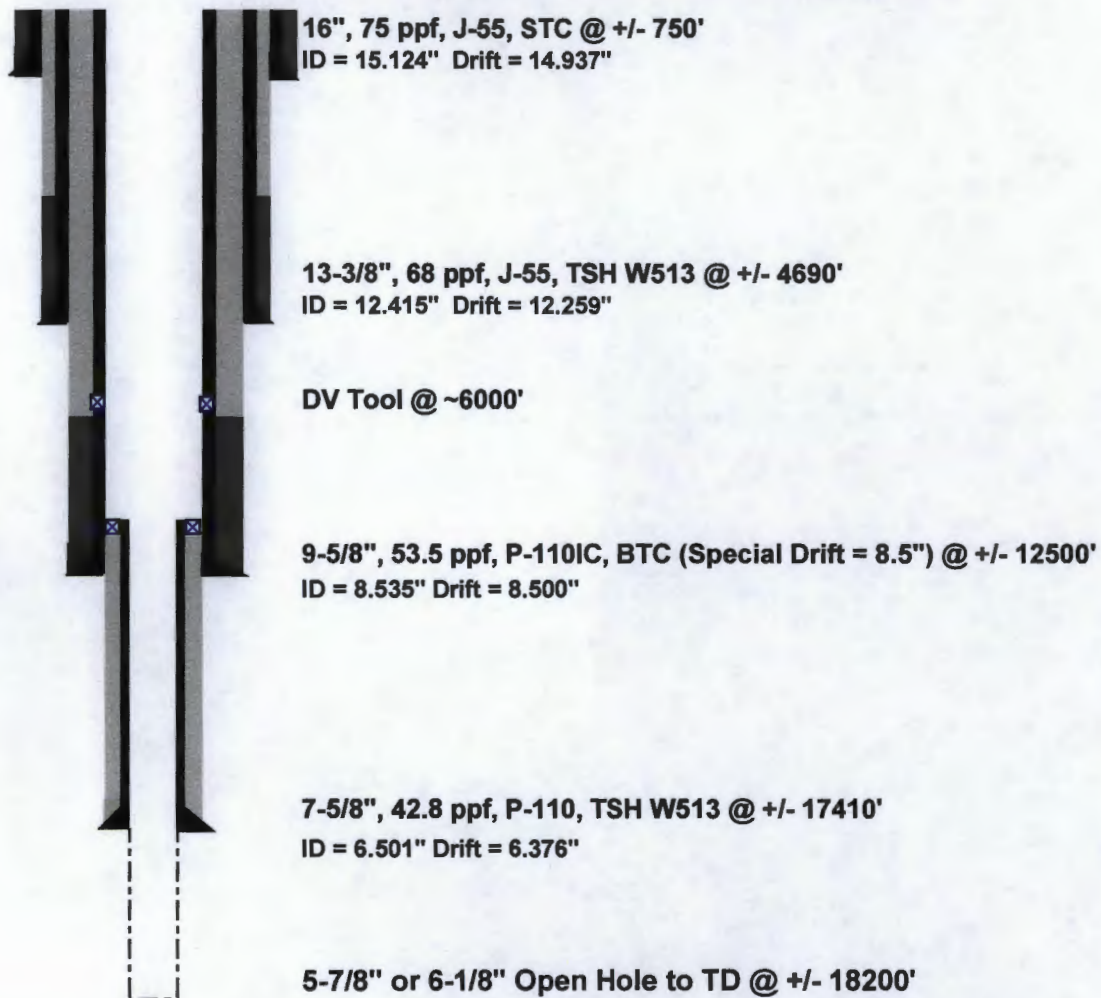
As Planned for Well:

Tubing:

Surf. - ±4300': 4-1/2" 17# P110-S TSH Blue
DUO-LINE

±4300' – 17,400': 4-1/2" 12.6# P110-S TSH Blue
DUO-LINE

Salado Draw SWD 13 #1
Sec. 13 T26S R32E Lea County, New Mexico



Sec. 13 T26S R32E
Lea County, New Mexico

Hole Size	Mud	Bits
20"	FW/Spud Mud	PDC
14-3/4"	Brine 10 PPG	PDC
12-1/4"	Cut Brine 8.8 - 10 ppg	PDC
8-1/2"	Weighted Brine/Polymer 10 - 12.5 PPG 12.5 - 14.0 PPG	PDC
6-1/8" or 5-7/8"	Cut Brine 8.4 - 9.0 PPG	PDC

Proposed Casing and Cement Program							
Type	Hole Size	Casing Size	Casing Weight/Ft	Setting Depth	Sacks of Cement	Est. TOC	Comments
Conductor	30"	24"	133	±120'	116	Surface	
Surface	20"	16"	75	±750	547	Surface	
Intermediate	14-3/4"	13-3/8"	68	±4690'	1096	Surface	
Intermediate	12-1/4"	9-5/8"	53.5	±12500'	2271	3690'	DV Tool at ± 6000'. 2-Stage Job.
Production Liner	8-1/2"	7-5/8"	42.8	±17410'	443	TOL @ ±12,300'	
Open Hole	6-1/8"	N/A	N/A	±18200'	N/A	N/A	