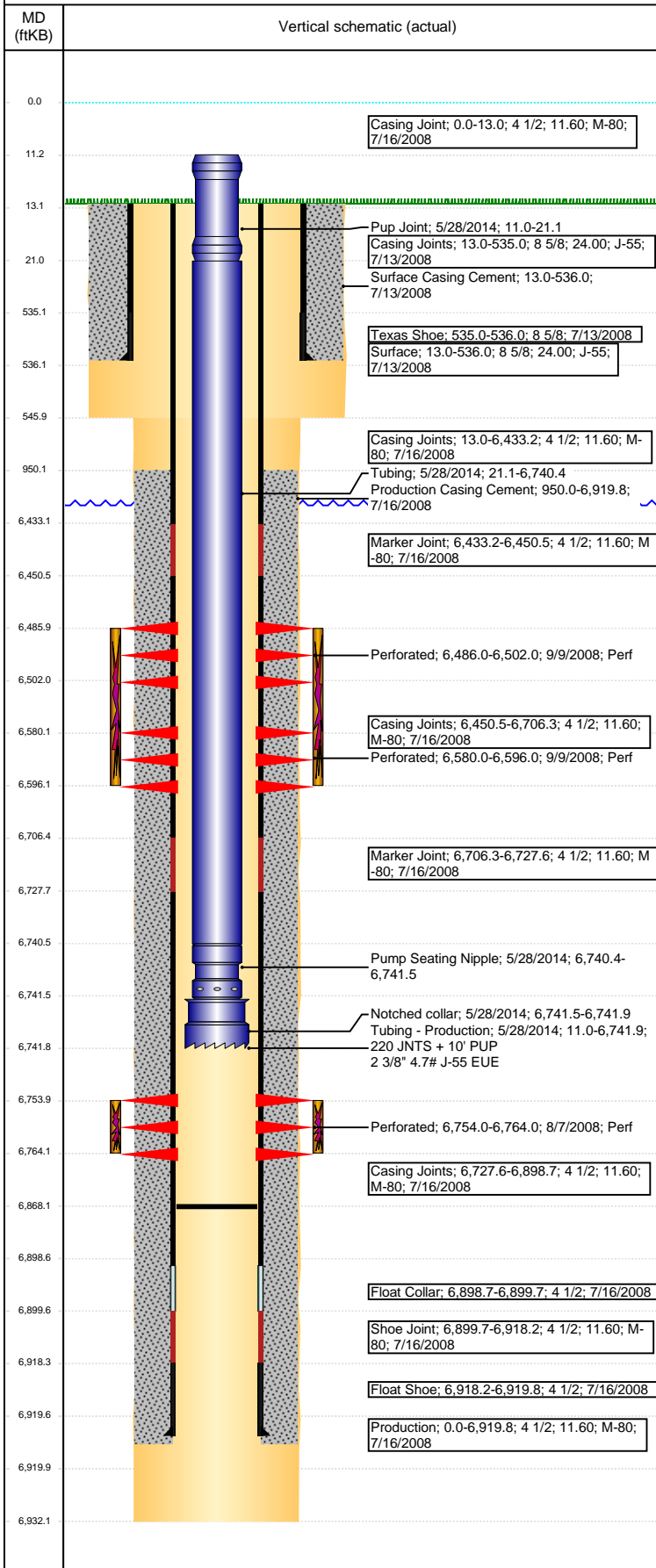


Wellbore Schematic Input Report

Well Name: WELLS RANCH AA21-13

VERTICAL - ORIGINAL HOLE, 3/14/2017 3:18:26 PM



Well Header

API 05-123-26804	Business Unit DJ BASIN	District 15	Well Config VERTICAL
Original KB Elevation (ft) 4,710	KB - GL / MSL (ftKB) 13.00	Spud Date 7/13/2008	P & A Date
Comment			

Directions To Well

WCR 67 & WCR 68, E 0.2, S 0.9, W 0.9, SW 0.2 INTO LOCATION.

Congressional Location

Quarter 3 SW	Quarter 4 SW	Section 21	Township 6	Twnshp N/S Dir N	Range 63	Range E/W Dir W
-----------------	-----------------	---------------	---------------	---------------------	-------------	--------------------

Bottom Hole Location

North-South Distance (ft)	From N or S Line	East-West Distance (ft)	From E or W Line
---------------------------	------------------	-------------------------	------------------

Plug Back Total Depths

Date	Depth (ftKB)	Method	Com
7/16/2008	6,899.8	CASING TALLY	DRILL CIFTF W/ CUTRITE BIT AND CHASE DOW... TAG PRIOR TO SETTING RBP.
10/27/2008	6,879.0	TUBING TALLY	
1/24/2012	6,854.7	TUBING TALLY	
3/17/2014	6,863.2	TAG	
5/28/2014	6,868.0	TAG- TBG TALLY	

Wellbore Sections

Section Des	Size (in)	Act Top, MD (ftKB)	Act Btm, MD (ftKB)
SURFACE	12 1/4	13	546
PRODUCTION	7 7/8	546	6,932

Zone Statuses

Zone Name	Status Date	Status	Fluid Type	Job	Prod Method
CODELL	9/11/2008	PR	Water	DRILLING/CO...	Flowing
CODELL	4/14/2010	PR		DRILLING/CO...	
NIOBRARA	9/11/2008	PR	Water	DRILLING/CO...	Flowing
NIOBRARA	4/14/2010	PR			
NIOBRARA	8/14/2015	PR			
NIOBRARA	3/10/2017	SI			

Casing Strings

Surface, 536.0ftKB

Casing Description	Run Date	OD (in)	Wt/Len (l...)	Grade	Top, MD (ft...)	MD (ftKB)
Surface	7/13/2008	8 5/8	24.00	J-55	13.0	536.0

Production, 6,919.8ftKB

Casing Description	Run Date	OD (in)	Wt/Len (l...)	Grade	Top, MD (ft...)	MD (ftKB)
Production	7/16/2008	4 1/2	11.60	M-80	0.0	6,919.8

Cement

Description	Top Depth (ftKB)	Bottom Depth (ftKB)
Surface Casing Cement	13.0	536.0
Description	Top Depth (ftKB)	Bottom Depth (ftKB)
Production Casing Cement	950.0	6,919.8

Tubing Strings

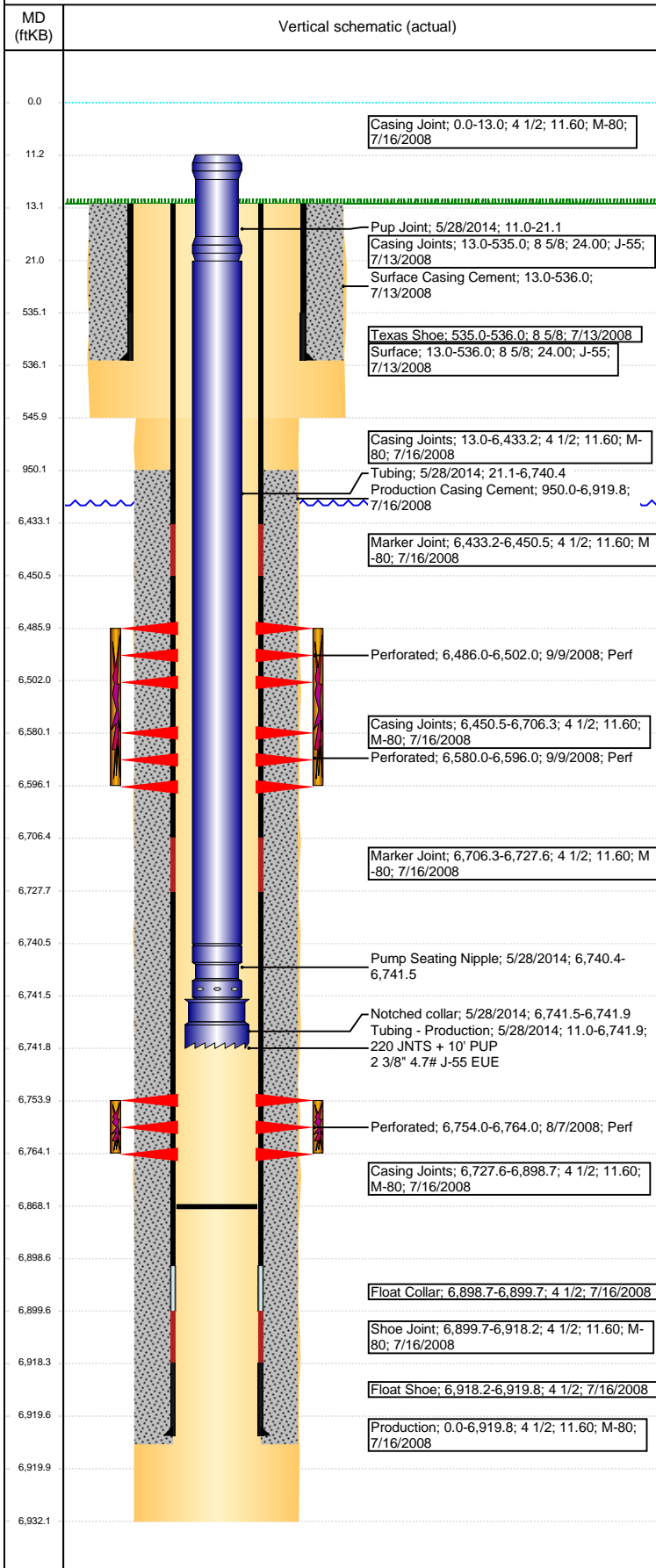
Tubing Description	Run Date	String...	ID (in)	Wt (lb/ft)	Grade	Len (ft)	Set De...
Tubing - Production	10/27/2008	2 3/8	2.00	4.70	J-55	6,728.82	
Tubing - Production	1/24/2012	2 3/8	2.00	4.70	J-55	6,728.07	
Tubing - Production	3/19/2014	2 3/8	2.00	4.70	J-55	5,804.42	
Tubing - Production	5/28/2014	2 3/8	2.00	4.70	J-55	6,730.88	

Tubing Components

Item Des	OD (in)	Wt (lb/ft)	Grade	Jts	Len (ft)	Btm (ftKB)	Btm (TVD) (ftKB)
Pup Joint	2 3/8	4.70	J-55	1	10.14	21.2	
Tubing	2 3/8	4.70	J-55	220	6,719.24	6,740.4	
Pump Seating Nipple	2 3/8			1	1.10	6,741.5	
Notched collar	3 1/16		J-55	1	0.40	6,741.9	

Well Name: WELLS RANCH AA21-13

VERTICAL - ORIGINAL HOLE, 3/14/2017 3:18:29 PM



Other In Hole

Run Date	Des	OD (in)	Top (ftKB)	Btm (ftKB)

Logs

Date	Type	Top, MD (ftKB)	Btm, MD (ftKB)
7/15/2008	Caliper/Comp. Density/Neutron/GR/SP/ML	2,540.0	6,925.0
7/15/2008	DIL/GR/SP/Caliper	536.0	6,925.0
8/4/2008	CBL/CCL/GR	850.0	6,852.0
3/30/2013	GYRO	13.0	6,730.0

Perforation Data

Linked Zone	Bnch/St g	Sum of Entered Shot Total	Top (ftKB)	Btm (ftKB)	Date
NIORARA, ORIGINAL HOLE	A	2	6,486.00	6,502.00	9/9/2008
NIORARA, ORIGINAL HOLE	B	2	6,580.00	6,596.00	9/9/2008
CODELL, ORIGINAL HOLE		40	6,754.00	6,764.00	8/7/2008
Total (Sum)		44			

Stimulation Intervals

Start Date 9/9/2008	Primary Job Type DRILLING/COMPLETION - ORIGINAL	
Technical Result Success	Tech Result Details According to Plan	Tech Result Note
Comment SEVERE TANK LEAN CAUSED SAND TO BE INCREASED TO 0.1 PPG TO CONSERVE WATER. PRE-ISIP = 3034 PSI, 5-MIN = 2653 PSI. 13 OF 40 PERFS OPEN, 237 NWB FRICTION, 208 PSI PERF FRICTION, AND 705 PSI TOTAL FRICTION. POST JOB ISIP = 3095 PSI, 5-MIN = 3033 PSI.		
Start Date 9/9/2008	Primary Job Type DRILLING/COMPLETION - ORIGINAL	
Technical Result Success	Tech Result Details According to Plan	Tech Result Note
Comment SEVERE TANK LEAN CAUSED A 100 BBL CUT TO PAD AND THE SAND TO BE INCREASED TO 0.1 PPG TO CONSERVE WATER. SLICKWATER PAD-PRE-ISIP (294 BBL) = 2922 PSI. TREATMENT EXHIBITED A SLIGHTLY NEGATIVE PRESSURE TREND. POST ISIP = 3060 PSI, 5-MIN = 3001 PSI. TURN ON IN 31 MINUTES WITH 2950 PSI.		
Start Date 9/9/2008	Primary Job Type DRILLING/COMPLETION - ORIGINAL	
Technical Result	Tech Result Details	Tech Result Note
Comment SEVERE TANK LEAN CAUSED A 100 BBL CUT TO PAD AND THE SAND TO BE INCREASED TO 0.1 PPG TO CONSERVE WATER. SLICKWATER PAD-PRE-ISIP (294 BBL) = 2922 PSI. TREATMENT EXHIBITED A SLIGHTLY NEGATIVE PRESSURE TREND. POST ISIP = 3060 PSI, 5-MIN = 3001 PSI. TURN ON IN 31 MINUTES WITH 2950 PSI.		