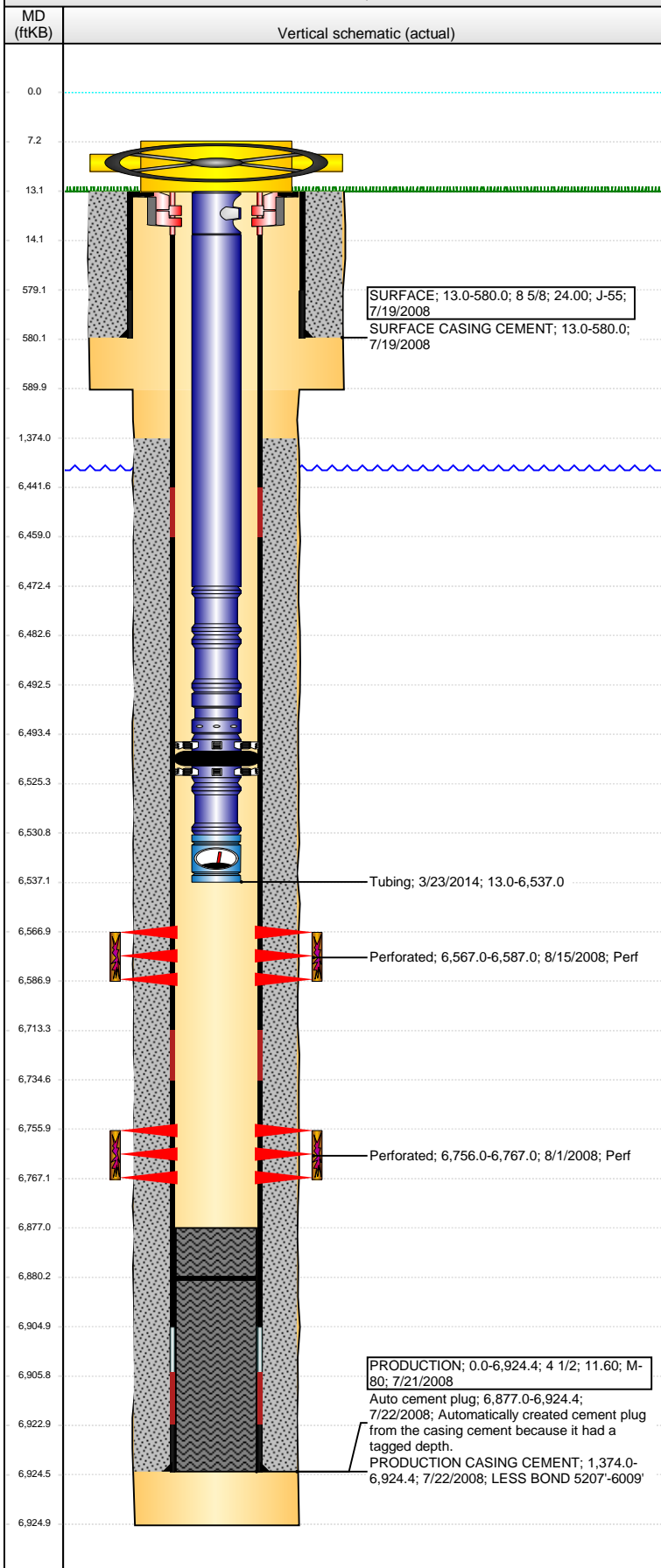


Well Name: WELLS RANCH AA21-08

VERTICAL - ORIGINAL HOLE, 3/8/2016 9:27:14 AM



Well Header

API 05-123-26816	Business Unit DJ BASIN	District 15	Well Config VERTICAL
Original KB Elevation (ft) 4,731	KB - GL / MSL (ftKB) 13.00	Spud Date 7/19/2008	P & A Date

Comment

SCIENTIFIC TESTING 4/2014

Directions To Well

WCR 67 & WCR 68, E 0.2, N 0.3, W 0.5, N 0.2 INTO LOCATION.

Congressional Location

Quarter 1	Quarter 2	Quarter 3	Quarter 4	Section	Township	Twnshp N...	Range	Rng E/W Dir
		SE	NE	21	6	N	63	W

Bottom Hole Location

North-South Distance (ft) 2,077.0	From N or S Line FNL	East-West Distance (ft) 735.0	From E or W Line FEL
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Plug Back Total Depths

Date	Depth (ftKB)	Method	Com
7/22/2008	6,905.8	CASING TALLY	FLOAT COLLAR
7/31/2008	6,877.0	CASED HOLE LOG	CBL DEPTH LOGGER
10/2/2008	6,861.0	TUBING TALLY	DRILL CIFT W/ CUTRITE BLADE BIT AND CHAS...
3/14/2014	6,880.4	TBG TALLY 221JTS B-B CSG S...	

Wellbore Sections

Section Des	Size (in)	Act Top, MD (ftKB)	Act Btm, MD (ftKB)
SURFACE	12 1/4	13.0	590.0
PRODUCTION	7 7/8	590.0	6,925.0

Zone Statuses

Zone Name	Status Date	Status	Fluid Type	Job	Prod Method
CODELL	8/26/2008	PR		DRILLING/CO...	
NIOBRARA	8/26/2008	PR		DRILLING/CO...	

Casing Strings

SURFACE, 580.0ftKB

Casing Description	Run Date	OD (in)	Wt/Len (l...)	Grade	Top, MD (ft...)	MD (ftKB)
SURFACE	7/19/2008	8 5/8	24.00	J-55	13.0	580.0

PRODUCTION, 6,924.4ftKB

Casing Description	Run Date	OD (in)	Wt/Len (l...)	Grade	Top, MD (ft...)	MD (ftKB)
PRODUCTION	7/21/2008	4 1/2	11.60	M-80	0.0	6,924.4

Cement

Description	Top Depth (ftKB)	Bottom Depth (ftKB)
SURFACE CASING CEMENT	13.0	580.0
Description	Top Depth (ftKB)	Bottom Depth (ftKB)
PRODUCTION CASING CEMENT	1,374.0	6,924.4

Tubing Strings

Tubing Description	Run Date	String...	ID (in)	Wt (lb/ft)	Grade	Len (ft)	Set De...
Tubing - Production	10/2/2008	2 3/8	1.995	4.70	J-55	6,734.98	
Tubing - Production	3/14/2014	2 3/8	1.995	4.70	J-55	6,474.71	
Tubing	3/23/2014	2 3/8	1.995	4.70	J-55	6,524.00	

Tubing Components

Item Des	OD (in)	Wt (lb/ft)	Grade	Jts	Len (ft)	Btm (ftKB)	Btm (TVD) (ftKB)
Mandrel	2 3/8	0.00	N/A	1	1.00	14.0	
EUE 8rd Tubing	2 3/8	4.70	J-55	208	6,458.60	6,472.6	
Pup Joint	2 3/8	4.70	N-80	1	10.00	6,482.6	
Pup Joint	2 3/8	4.70	N-80	1	10.00	6,492.6	
Seal Nipple	2 3/8	4.70	J-55	1	1.00	6,493.6	
Packer	2 3/8	4.70	N-80	1	31.50	6,525.1	
Pup Joint	2 3/8	4.70	N-80	1	5.90	6,531.0	
Pressure / Temperature Sensor	2 3/8	0.00	N/A	1	6.00	6,537.0	

Perforation Data

Zone	Bnch/St g	Entered Shot Total	Top (ftKB)	Btm (ftKB)	Date
NIOBRARA, ORIGINAL HOLE	B	80	6,567.00	6,587.00	8/15/2008
CODELL, ORIGINAL HOLE		44	6,756.00	6,767.00	8/1/2008

Well Name: WELLS RANCH AA21-08

VERTICAL - ORIGINAL HOLE, 3/8/2016 9:27:17 AM

Stimulations & Treatments

Date 8/15/2008	Zone CODELL, ORIGINAL HOLE	Primary Job Type DRILLING/COMPLETION - ORIGINAL
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Technical Result Success	Tech Result Details According to Plan	Tech Result Note
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Comment
CODELL: REVERSE STEP RATE RESULTS PO 24 NWB 157 PSI WB 518 PSI PPF 156 PSI FOR A TOTAL OF 831 PSI OF FRICTION DUE TO LATE START ON FRAC WE RAISED THE RATE TO 50 BPM AND MADE THE PROPER ADJUSTMENTS ON THE VICON AND CATS 3 & 4
HAD TO SHUT DOWN THE RATE ON THE BLENDER WOULD NOT GO ABOVE 38.8 BPM THEY ONLY HAD TWO HOSES OPEN FROM THE BLENDER TO THE MISSLE TREATMENT WENT WELL NO ISSUES TO REPORT AVG VISC 28 CPS AVG TEMP 70.1F AVG PH 10.18 POST JOB 5 MINUTE OF 3103 PSI

Date 8/25/2008	Zone NIOBRARA, ORIGINAL HOLE	Primary Job Type DRILLING/COMPLETION - ORIGINAL
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Technical Result	Tech Result Details	Tech Result Note
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Comment
15% HCL BREAKDOWN. ISIP = 3069 PSI, 5-MIN = 2683 PSI.THE TREATMENT WENT WELL. pH PROBE ON BLENDER IS FAULTY. POST-ISIP = 3191 PSI, 5 -MIN = 3050 PSI. TURN ON IN 22 MINUTES WITH 3000 PSI

Other In Hole

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

Logs

Date	Type	Top, MD (ftKB)	Btm, MD (ftKB)
7/21/2008	Caliper/Comp. Density/Neutron/GR/SP/ML	2,660.0	6,904.0
7/21/2008	DIL/GR/SP/Caliper	581.0	6,924.0
7/31/2008	CBL/CCL/GR	1,260.0	6,876.0
3/27/2013	GYRO	13.0	6,700.0

