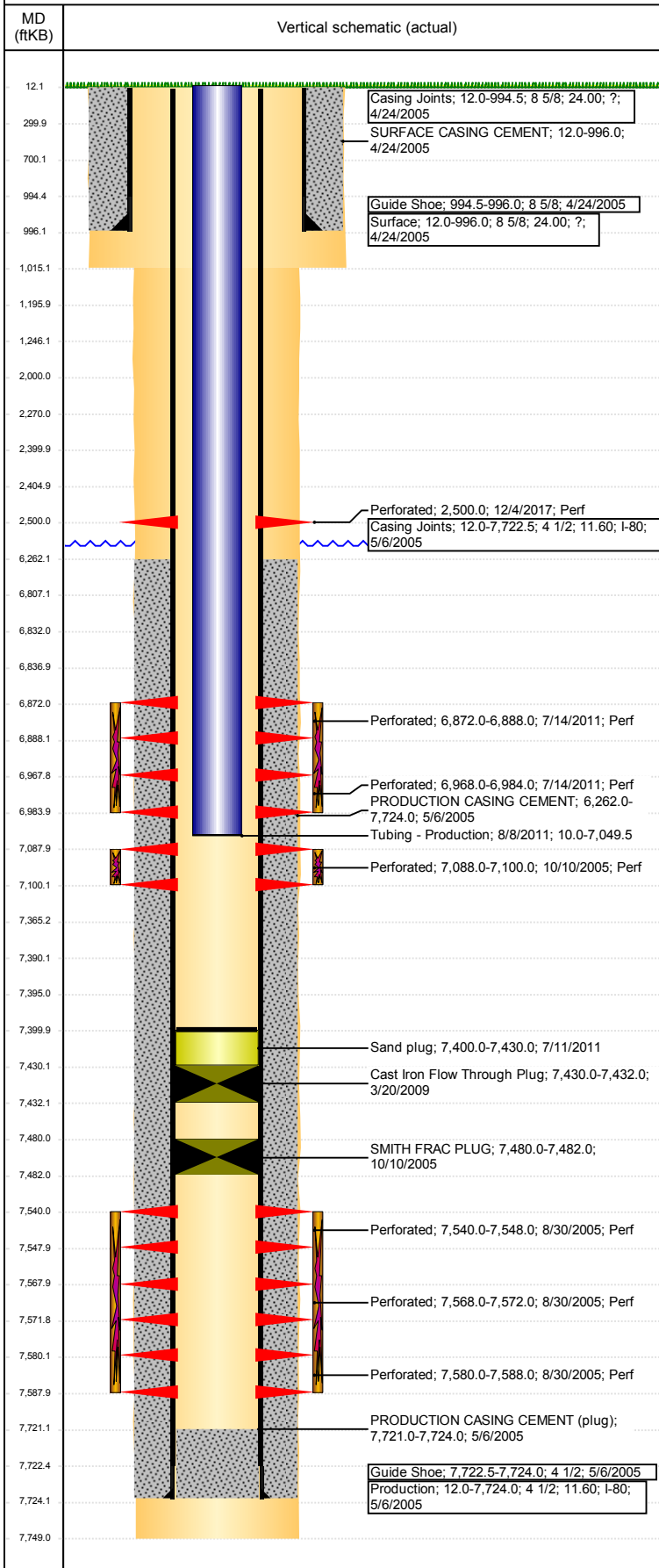


Well Name: WASTE MANAGEMENT 12-11

VERTICAL - ORIGINAL HOLE, 12/21/2017 11:53:37 AM



Well Header

API 05-123-22860	Business Unit DJ BASIN	District 15	Well Config VERTICAL
Original KB Elevation (ft) 4,983	KB - GL / MSL (ftKB) 12.00	Spud Date 4/23/2005	P & A Date

Comment

FLOW THROUGH FRAC PLUG @ 7480' AND 7430'.

Directions To Well

WCR 34 & WCR 53 EAST 1.2 MILES, SOUTH 5.3 MILES, EAST 0.5 MILES, SOUTH 0.3 MILES, EAST 0.1 INTO (GATE #1993)

Congressional Location

Quarter 3 SW	Quarter 4 NW	Section 11	Township 2	Twntshp N/S Dir N	Range 64	Range E/W Dir W
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Bottom Hole Location

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

Date	Depth (ftKB)	Method	Com
5/6/2005	7,721.0	CASED HOLE LOG	DEPTH LOGGER
3/18/2009	7,480.0	TUBING TALLY	FILL - TUBING TALLY
8/8/2011	7,400.0	TAG	MOST RECENT CLEANOUT TO TOP OF SAND PL...

Wellbore Sections

Section Des	Size (in)	Act Top, MD (ftKB)	Act Btm, MD (ftKB)
SURFACE	12 1/4	12	1,015
PRODUCTION	7 7/8	1015	7,749

Zone Statuses

Zone Name	Status Date	Status	Fluid Type	Job	Prod Method
J SAND	9/19/2005	PR	Water	DRILLING/CO...	Flowing
J SAND	3/20/2009	SI		RE-FRAC, 3/18...	
J SAND	3/14/2011	PR			
J SAND	5/9/2017	SI			
CODELL	10/26/2005	PR	Water	RECOMPLETI...	Flowing
CODELL	4/8/2009	PR		RE-FRAC, 3/18...	
CODELL	3/14/2011	PR			
NIOBRARA	3/14/2011	PR			
NIOBRARA	8/25/2011	PR	Water	RECOMPLETI...	Flowing
NIOBRARA	5/9/2017	SI			

Casing Strings

Surface, 996.0ftKB

Casing Description	Run Date	OD (in)	Wt/Len (l...)	Grade	Top, MD (ft...)	MD (ftKB)
Surface	4/24/2005	8 5/8	24.00	?	12.0	996.0

Production, 7,724.0ftKB

Casing Description	Run Date	OD (in)	Wt/Len (l...)	Grade	Top, MD (ft...)	MD (ftKB)
Production	5/6/2005	4 1/2	11.60	I-80	12.0	7,724.0

Cement

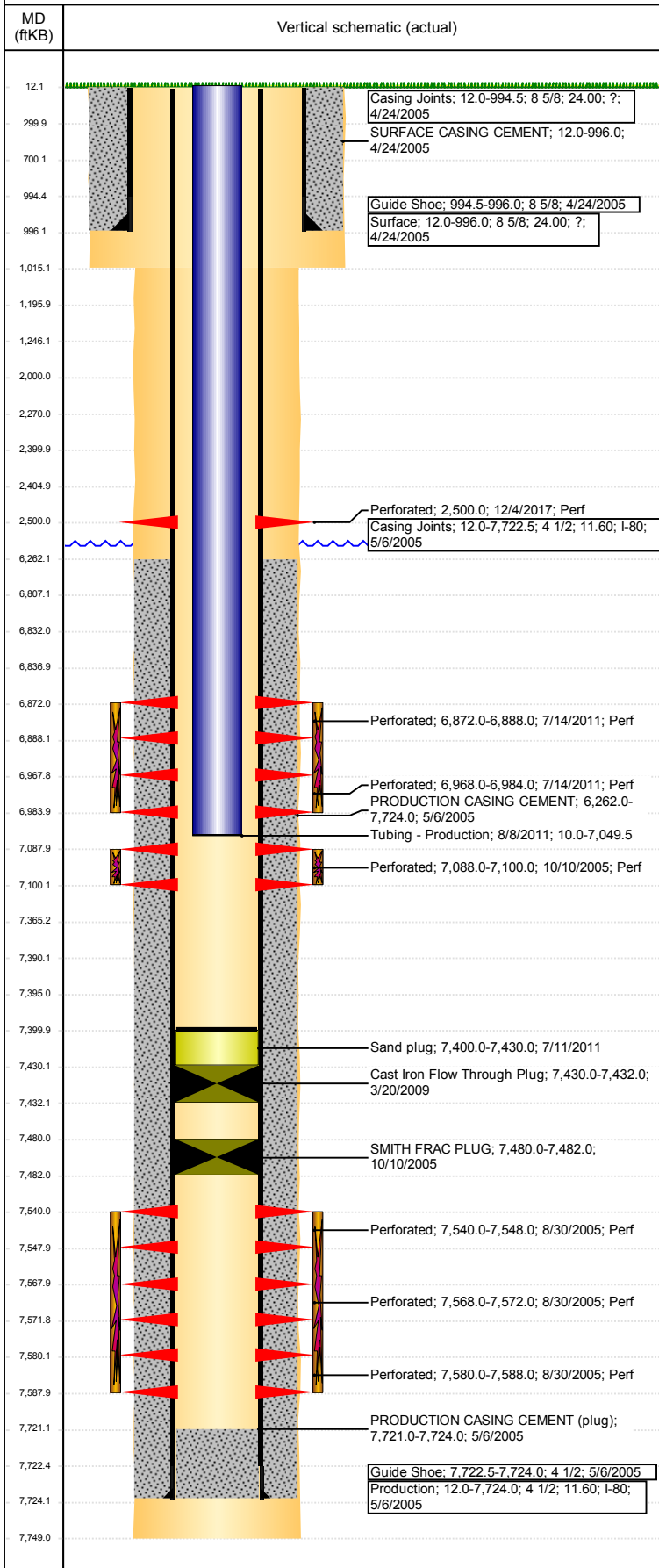
Description	Top Depth (ftKB)	Bottom Depth (ftKB)
SURFACE CASING CEMENT	12.0	996.0
PRODUCTION CASING CEMENT	6,262.0	7,724.0
Dump Bail	7,365.0	7,390.0
Dump Bail	6,807.0	6,832.0
Courtesy Plug	2,000.0	2,500.0
Courtesy Plug	2,270.0	2,400.0
Courtesy Plug	2,405.0	2,500.0
Shoe Plug	1,196.0	1,246.0
Shoe Plug	700.0	1,196.0
Shoe Plug	12.0	300.0

Tubing Strings

Tubing Description	Run Date	String...	ID (in)	Wt (lb/ft)	Grade	Len (ft)	Set De...
Tubing - Production	10/24/2005	2 3/8				7,443.00	

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Tubing Components							
Item Des	OD (in)	Wt (lb/ft)	Grade	Jts	Len (ft)	Btm (ftKB)	Btm (TVD) (ftKB)
Tubing	2 3/8			236	7,443.00	7,455.0	
Tubing Description		Run Date	String...	ID (in)	Wt (lb/ft)	Grade	Len (ft)
Tubing - Production		3/25/2009	2 3/8	2.00	4.70	J-55	7,056.85

Tubing Components							
Item Des	OD (in)	Wt (lb/ft)	Grade	Jts	Len (ft)	Btm (ftKB)	Btm (TVD) (ftKB)
Tubing Pup Joint	2 3/8	4.70	J-55	2	20.00	30.0	
Tubing	2 3/8	4.70	J-55	223	7,035.20	7,065.2	
Pump Seating Nipple	2 3/8	4.70	J-55	1	1.10	7,066.3	
Notched collar	2 3/8	4.70	J-55	1	0.55	7,066.8	
Tubing Description		Run Date	String...	ID (in)	Wt (lb/ft)	Grade	Len (ft)
Tubing - Production		8/8/2011	2 3/8	2.00	4.70	J-55	7,039.52

Tubing Components							
Item Des	OD (in)	Wt (lb/ft)	Grade	Jts	Len (ft)	Btm (ftKB)	Btm (TVD) (ftKB)
EUE 8rd Tubing	2 3/8	4.70	J-55	223	7,038.02	7,048.0	
Pump Seating Nipple	2 3/8	4.70	J-55	1	1.00	7,049.0	
Notched collar	2 3/8	4.70	J-55	1	0.50	7,049.5	

Other In Hole				
Run Date	Des	OD (in)	Top (ftKB)	Btm (ftKB)
10/10/2005	SMITH FRAC PLUG	3.99	7,480.0	7,482.0
3/20/2009	Cast Iron Flow Through Plug	3.99	7,430.0	7,432.0
7/11/2011	Sand plug	3.99	7,400.0	7,430.0
12/4/2017	Cast Iron Bridge Plug	4	7,390.0	7,395.0
12/4/2017	Cast Iron Bridge Plug	4	6,832.0	6,837.0
12/4/2017	Cement Retainer	4	2,400.0	2,405.0

Logs			
Date	Type	Top, MD (ftKB)	Btm, MD (ftKB)
5/6/2005	COMPENSATED DENSITY COMPENSATED NEUTRON	996.0	7,749.0
5/17/2005	CBL/CCL/GR	6,070.0	7,716.0

Perforation Data					
Linked Zone	Bnch/St g	Sum of Entered Shot Total	Top (ftKB)	Btm (ftKB)	Date
NIOBRARA, ORIGINAL HOLE	B	0	2,500.00	2,500.00	12/4/2017
NIOBRARA, ORIGINAL HOLE	C	32	6,872.00	6,888.00	7/14/2011
CODELL, ORIGINAL HOLE		32	6,968.00	6,984.00	7/14/2011
J SAND, ORIGINAL HOLE		48	7,088.00	7,100.00	10/10/2005
J SAND, ORIGINAL HOLE		32	7,540.00	7,548.00	8/30/2005
J SAND, ORIGINAL HOLE		32	7,568.00	7,572.00	8/30/2005
J SAND, ORIGINAL HOLE		32	7,580.00	7,588.00	8/30/2005

Total (Sum) 208

Stimulation Intervals		
Start Date	Primary Job Type	
8/31/2005	DRILLING/COMPLETION - ORIGINAL	
Technical Result	Tech Result Details	Tech Result Note
Comment		
NO MENTION THAT FRAC PLUG @ 7480' WAS REMOVED		
Start Date	Primary Job Type	
10/18/2005	RECOMPLETION	
Technical Result	Tech Result Details	Tech Result Note
Comment		

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Stimulation Intervals

Start Date 4/7/2009	Primary Job Type RE-FRAC	
Technical Result Success	Tech Result Details According to Plan	Tech Result Note
Comment (CODELL RF DS): VISCOSITY DROPPED TO 18 CPS AT THE START OF THE JOB, HAD TO INCREASE LOADED TO KEEP DESIRED VISOCOSITY FOR THE REMAINDER OF THE JOB. JOB WENT WELL WITH NO OTHER ISSUES TO REPORT.		
Start Date 8/2/2011	Primary Job Type RECOMPLETION	
Technical Result Failure	Tech Result Details Formation	Tech Result Note
Comment (NIO): STARTED ONE HOUR LATE. WENT TO 4 PSA 20/40 STAGE AND LOST PADDLES FOR BLENDER TUB WHICH IN TURN SANDED OFF BLENDER TUB. THE PRESSURE HAD BEEN CLIMBING THROUGHOUT THE 3 PSA 20/40 STAGE. WE TRIED TO GET BACK INTO SAND BUT PRESSURE KEPT CLIMBING. WENT TO FLUSH WE PUMPED 198,500 LBS OF 20/40 SAND. AVG VISC 16.7 CPS, AVG TEMP 76.9F, AVG PH 10.4, AVG PRESS 4364 PSI, AVG RATE 38.7 BPM.		

