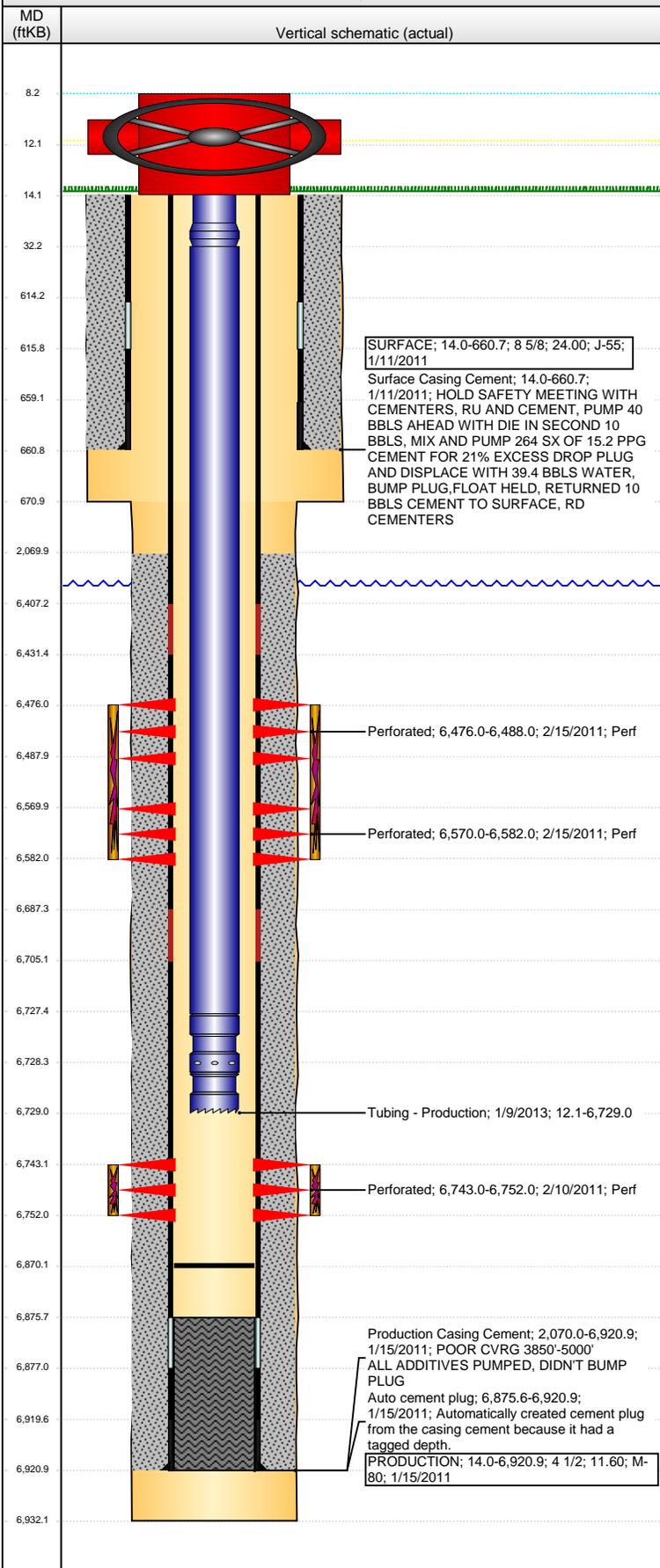


**Well Name: WELLS RANCH AA24-03X**

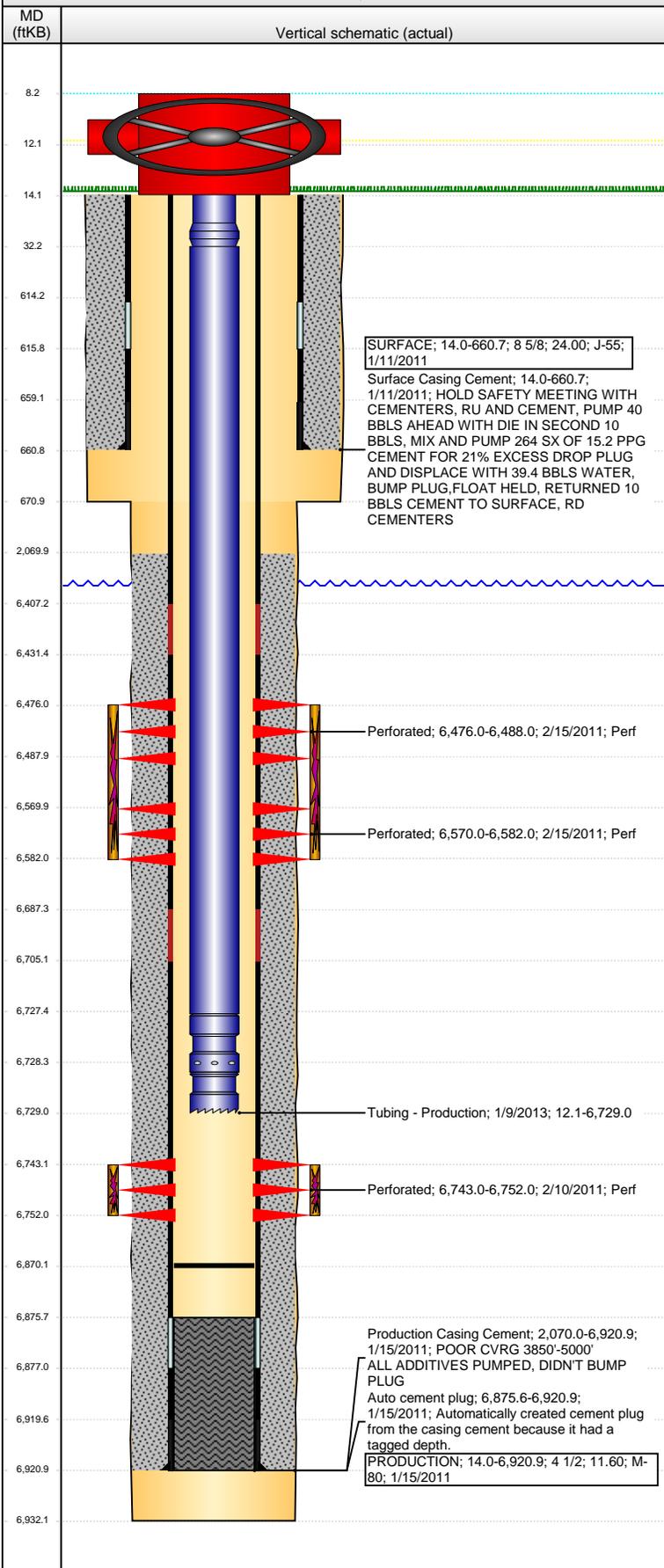
VERTICAL - ORIGINAL HOLE, 4/22/2016 8:55:29 AM



Well Header			
API	Business Unit	District	Well Config
05-123-32830	DJ BASIN	15	VERTICAL
Original KB Elevation (ft)	KB - GL / MSL (ftKB)	Spud Date	P & A Date
4,818	14.00	1/10/2011	
Comment			
AA24-03X IS REDRILL DUE TO CSG FAILURE /CODELL BEING FAULTED OUT IN AA24-03.			
Directions To Well			
WCR 67 & 68, GO EAST 0.2 MILES, SOUTH 0.2 MILES, EAST 1.9 MILES, NORTHEAST INTO LOCATION.			
Congressional Location			
Quarter 1	Quarter 2	Quarter 3	Quarter 4
		NE	NW
Section	Township	Twnshp N...	Range
24	6	N	63
Rng 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
1/15/2011	6,875.6	CASING TALLY	FLOAT COLLAR
2/3/2011	6,812.0	CASED HOLE LOG	DEPTH LOGGER ON CBL
4/14/2011	6,865.0	TUBING TALLY	DRILL CFTP W/ CUTRITE BIT AND N2. CHASE PL...
1/9/2013	6,870.0	TAG	
Wellbore Sections			
Section Des	Size (in)	Act Top, MD (ftKB)	Act Btm, MD (ftKB)
SURFACE	12 1/4	14.0	671.0
PRODUCTION	7 7/8	671.0	6,932.0
Zone Statuses			
Zone Name	Status Date	Status	Fluid Type
NIOBRARA	2/17/2011	PR	
CODELL	2/17/2011	PR	
Job	DRILLING/CO...		
Prod Method	DRILLING/CO...		
Casing Strings			
SURFACE, 660.7ftKB			
Casing Description	Run Date	OD (in)	Wt/Len (l...)
SURFACE	1/11/2011	8 5/8	24.00
Grade	Top, MD (ft...)	MD (ftKB)	
J-55	14.0	660.7	
PRODUCTION, 6,920.9ftKB			
Casing Description	Run Date	OD (in)	Wt/Len (l...)
PRODUCTION	1/15/2011	4 1/2	11.60
Grade	Top, MD (ft...)	MD (ftKB)	
M-80	14.0	6,920.9	
Cement			
Description	Top Depth (ftKB)	Bottom Depth (ftKB)	
Surface Casing Cement	14.0	660.7	
Description	Top Depth (ftKB)	Bottom Depth (ftKB)	
Production Casing Cement	2,070.0	6,920.9	
Tubing Strings			
Tubing Description	Run Date	String...	ID (in)
Tubing - Production	4/14/2011	2 3/8	1.995
Wt (lb/ft)	Grade	Len (ft)	Set De...
4.70	J-55	6,717.20	6,728.00
Tubing Description	Run Date	String...	ID (in)
Tubing - Production	1/9/2013	2 3/8	1.995
Wt (lb/ft)	Grade	Len (ft)	Set De...
4.60	J-55	6,716.95	6,727.80
Tubing Components			
Item Des	OD (in)	Wt (lb/ft)	Grade
Pup Joint	2 3/8		N-80
Jts	Len (ft)	Btm (ftKB)	Btm (TVD) (ftKB)
2	20.00	32.1	
Tubing	2 3/8	4.60	J-55
218	6,695.35	6,727.4	
Pump Seating	2 3/8	1.10	
1	1.10	6,728.5	6,727.3
Nipple			
Notched collar	2 3/8		
1	0.50	6,729.0	6,727.8
Perforation Data			
Zone	Bnch/St g	Entered Shot Total	Top (ftKB)
NIOBRARA, ORIGINAL HOLE	A	24	6,476.00
NIOBRARA, ORIGINAL HOLE	B	24	6,570.00
CODELL, ORIGINAL HOLE		36	6,743.00
			Btm (ftKB)
			6,488.00
			6,582.00
			6,752.00
			Date
			2/15/2011
			2/15/2011
			2/10/2011

**Well Name: WELLS RANCH AA24-03X**

VERTICAL - ORIGINAL HOLE, 4/22/2016 8:55:32 AM



### Stimulations & Treatments

Date	Zone	Primary Job Type
2/15/2011	CODELL, ORIGINAL HOLE	DRILLING/COMPLETION - ORIGINAL
Technical Result	Tech Result Details	Tech Result Note
Success	According to Plan	

**Comment**  
 (CODELL): PRE JOB ISDP = 2827 PSI, PRE 5 MIN = 2310 PSI. REVERSE STEP RATE RESULTS - OPEN: 20, PERF: 108, NWB: 333, WB: 253, TOTAL: 694. BASED ON PRE 5 MIN, INCREASED RATE TO 22 BPM. DURING THE 3 PSA STAGE, THE CAT 3 PUMP WASN'T FULLY LOADED AND RAN ERRATIC. OTHERWISE, JOB WENT WELL WITH NO ISSUES TO REPORT. AVERAGES - VISC = 27.5 CP, TEMP = 60.1 DEG, PH = 10.15, NOLTE = +0.06.

Date	Zone	Primary Job Type
2/15/2011	NIOBRARA, ORIGINAL HOLE	DRILLING/COMPLETION - ORIGINAL
Technical Result	Tech Result Details	Tech Result Note
Success	According to Plan	

**Comment**  
 (NIOBRARA AB): PRE JOB ISDP = 3029 PSI. LOST 2 FRAC PUMPS AND COULD NOT MAINTAIN DESIGNED RATE. PUMPED JOB AT 40 BPM. POST 5 MIN = 2940 PSI. AVERAGES - VISC = 25.3 CP, TEMP = 64.8 DEG, PH = 10.22.

### Other In Hole

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

### Logs

Date	Type	Top, MD (ftKB)	Btm, MD (ftKB)
1/15/2011	SPECTRAL DENSITY/Pe/DSN NEUTRON/SP/ARRAY COMPENSATED TRUE RESISTIVITY/SONIC (BSAT)	661.0	6,917.0
1/15/2011	SPECTRAL GAMMA RAY	661.0	6,917.0
2/3/2011	CBL/CCL/GR	1,930.0	6,805.0
2/24/2012	GYRO	14.0	6,700.0