

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

OCD-HOBBS

MAY 15 2012

FORM APPROVED
OMB NO 1004-0137
Expires July 31, 2010

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

1a Type of Well ☐ Oil Well ☐ Gas Well ☐ Dry ☒ Other
b Type of Completion ☐ New Well ☐ Work Over ☐ Deepen ☐ Plug Back ☐ Diff Resvr,

Other: ReEntry, put well on DHC Inj. WFX888

2 Name of Operator
Resaca Operating Company

3 Address 1331 Lamar Street, Suite 1450
Houston, TX 77010

3a Phone No (include area code)
(432) 580-8500

4 Location of Well (Report location clearly and in accordance with Federal requirements)*

1980' FSL & 662' FEL, Sec. 24, T-24S, R-36E, Unit Letter I

At surface

same as above

At top prod interval reported below

At total depth same as above

14 Date Spudded
12/29/2011

15 Date T D Reached
02/03/2012

16 Date Completed 02/14/2012
☐ D & A ☐ Ready to Prod

17 Elevations (DF, RKB, RT, GL)*
GL 3306'

18 Total Depth MD 3600'
TVD

19 Plug Back T D MD 3600'
TVD

20 Depth Bridge Plug Set MD
TVD

21 Type Electric & Other Mechanical Logs Run (Submit copy of each)

22 Was well cored? ☒ No ☐ Yes (Submit analysis)
Was DST run? ☒ No ☐ Yes (Submit report)
Directional Survey? ☒ No ☐ Yes (Submit copy)

23 Casing and Liner Record (Report all strings set in well)

Hole Size	Size/Grade	Wt (#/ft)	Top (MD)	Bottom (MD)	Stage Cementer Depth	No of Sks & Type of Cement	Slurry Vol (BBL)	Cement Top*	Amount Pulled
11"	8 5/8"	29.75#	0'	302'		125 sx		Surface	circulated cmt to surf.
7 7/8"	5 1/2"	14#	0'	3003'		400 sx		TOC @ 895'	calculated cmt f/ surf.
5"	4 1/2"	14#	0'	2957'		100 sx		TOC @ surf.	circulated cmt to surf.

24 Tubing Record

Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)
2 3/8"	2939'	2932'						

25 Producing Intervals

Formation	Top	Bottom	Perforated Interval	Size	No Holes	Perf Status
A) Yates (Injection)	3003'	3227'	Open Hole 3003'-3227'			Open
B) 7 Rivers (Injection)	3228'	3589'	Open Hole 3228'-3589'			Open
C) Queen (Injection)	3590'	3600'	Open Hole 3560'-3600'			Open
D)						

27 Acid, Fracture, Treatment, Cement Squeeze, etc

Depth Interval	Amount and Type of Material
OH 3003'-3600'	Acidized OH w/ 18,000 Gals 15% Star Acid (90% Acid, 10% Xylene), 20,000# coarse rock salt

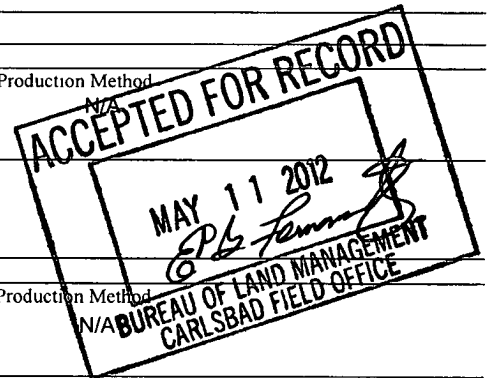
28 Production - Interval A

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr API	Gas Gravity	Production Method
			→						N/A
Choke Size	Tbg. Press. Flwg SI	Csg. Press	24 Hr Rate	Oil BBL	Gas MCF	Water BBL	Gas/Oil Ratio	Well Status	
			→						

28a Production - Interval B

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr API	Gas Gravity	Production Method
			→						
Choke Size	Tbg. Press. Flwg SI	Csg. Press	24 Hr Rate	Oil BBL	Gas MCF	Water BBL	Gas/Oil Ratio	Well Status	
			→						

*(See instructions and spaces for additional data on page 2)



See ATTACHED for
Conditions of Acceptance

WFX-888
APPROVAL BY STATE

MAY 21 2012

28b Production - Interval C									
Date First Produced	Test Date	Hours Tested	Test Production ➔	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr API	Gas Gravity	Production Method N/A
Choke Size	Tbg Press Flwg SI	Csg Press	24 Hr Rate ➔	Oil BBL	Gas MCF	Water BBL	Gas/Oil Ratio	Well Status	

28c Production - Interval D									
Date First Produced	Test Date	Hours Tested	Test Production ➔	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr API	Gas Gravity	Production Method N/A
Choke Size	Tbg Press Flwg SI	Csg Press	24 Hr Rate ➔	Oil BBL	Gas MCF	Water BBL	Gas/Oil Ratio	Well Status	

29 Disposition of Gas (Solid, used for fuel, vented, etc.)

N/A

30 Summary of Porous Zones (Include Aquifers)

Show all important zones of porosity and contents thereof Cored intervals and all drill-stem tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures and recoveries

31 Formation (Log) Markers

Formation	Top	Bottom	Descriptions, Contents, etc	Name	Top
					Meas Depth
Alluvium	0'	139'	Sand, Caliche		0'
Ogalalla	140'	1146'	Red Beds		140'
Rustler	1147'	1247'	Anhydrite		1147'
Salado	1248'	2912'	Salt		1248'
Tansill	2913'	3002'	Anhydrite, Dolomite		2913'
Yates	3003'	3227'	Sandstone, Dolomite		3003'
7 Rivers Queen	3228' 3590'	3590'	Sandstone, Dolomite Sandstone, Dolomite		3228' 3590'

32 Additional remarks (include plugging procedure)

33 Indicate which items have been attached by placing a check in the appropriate boxes

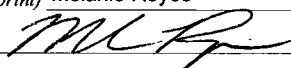
- ☐ Electrical/Mechanical Logs (1 full set req'd)
 ☐ Geologic Report
 ☐ DST Report
 ☐ Directional Survey
☐ Sundry Notice for plugging and cement verification
 ☐ Core Analysis
 ☐ Other

34 I hereby certify that the foregoing and attached information is complete and correct as determined from all available records (see attached instructions)*

Name (please print) Melanie Reyes

Title Engineer Assistant

Signature



Date 03/09/2012

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction

WELLBORE SCHEMATIC AND HISTORY

CURRENT COMPLETION SCHEMATIC		LEASE NAME Cooper Jal Unit		WELL NO 213 WIW
		P&A'd (4-20-95)	Water Injector	API# 30-025-09623
<div style="display: flex; justify-content: space-between;"> <div style="width: 25%;"> <p>Surface Csg</p> <p>Hole Size 11 in</p> <p>Csg Size 8 5/8 in</p> <p>Set @ 302 ft</p> <p>Sxs Cmt 125</p> <p>Circ Yes</p> <p>TOC @ surf</p> <p>TOC by circ</p> </div> <div style="width: 75%;"> <p>LOCATION 1980 FSL & 660 FEL, Sec 24, T - 24S, R - 36E, Lee County, New Mexico</p> <p>SPUD DATE TD 3600 KB 3,311' DF</p> <p>INT COMP DATE 03/16/50 PBDT 3600 GL 3,306'</p> </div> </div>				
<div style="display: flex; justify-content: space-between;"> <div><u>ELECTRIC LOGS</u></div> <div><u>GEOLOGICAL DATA</u></div> <div><u>CORES, DST'S or MUD LOGS</u></div> </div>				
<p>GR-N (3-13-50 Lane Wells)</p> <p>Casing Inspection Log (10-7-94 Halliburton)</p> <p style="text-align: center;"><u>HYDROCARBON BEARING ZONE DEPTH TOPS</u></p> <p style="text-align: center;">Yates @ 3003' 7-Rivers @ 3228' Queen @ 3590'</p>				
<u>CASING PROFILE</u>				
<p>SURF 8 5/8" - 29 75# J-55 set@ 302' Cmt'd w/125 sxs - circ cmt to surface.</p> <p>PROD 5 1/2" - 14# J-55 set@ 3003' Cmt'd w/400 sxs - TOC @ 895' from surface by calculation</p> <p>LINER 4 1/2" - 14# J-55 set at 2,957' Cmt'd with 100 sx - TOC at Surf by circulation</p>				
<u>CURRENT PERFORATION DATA</u>				
CSG PERFS		OPEN HOLE		
		3003 - 3600'		
<div style="display: flex; justify-content: space-between;"> <div><u>Liner DETAIL</u></div> <div><u>Tubing DETAIL</u></div> <div>2/10/2012</div> </div>				
<p>2922 87 4 1/2" 11.6# SJ Thread</p> <p>2 1 4 1/2" Float Collar</p> <p>31 1 4 1/2" 11.6# SJ Thread</p> <p>2 1 4 1/2" Float Shoe</p> <p>2957</p>		<p>6 1 2 3/8" J-55 4.7# EUE 8rd IPC Sub</p> <p>2930 92 2 3/8" J-55 4.7# EUE 8rd IPC Tubing</p> <p>3 1 4 1/2" x 2 3/8" Arrow Set Nickle Platted</p> <p>2939 w/ On-Off Tool & w/ 1.78 F Profile</p>		
<p>Holes in csg 389 - 460'</p> <p>cmt sqz'd</p> <p>Holes in csg 689 - 750'</p> <p>Csg Lk at 800'</p> <p>TOC@ 895'</p> <p>By Calc</p> <p>DV Tool at 1,224'</p>				
<u>WELL HISTORY SUMMARY</u>				
<p>16-Mar-50 Initial completion 3003 - 3220' (Yates OH) No stimulation IP=66 bopd, 0 bwppd, & 76 Mcfgpd. (flowing)</p> <p>11-Nov-54 C/O fill to 3220'</p> <p>14-Aug-56 C/O fill to 3220'</p> <p>17-Jul-66 C/O fill to 3220'</p> <p>07-May-71 CONVERTED TO INJECTOR C/O various bridges from 3096 - 3220'</p> <p>17-Jul-87 C/O various bridges f/ 3096 - 3195' & fill (FeSO₄, CaCO₃ & Formation) f/ 3205 - 3220' Returned to injection at 850 bwppd with TP=880 psi.</p> <p>14-Jan-89 Replaced tubing with new cement lined tubing string Returned to injection</p> <p>26-Sep-94 Isolated 5 1/2" csg leak f/389'-421' Cmt sqz'd csg leak w/ 150 sxs circulating cmt out 5 1/2" x 8 5/8" annulus D/O & casing. Bad tst. Spot 50 sxs cmt across 389'-421' & sqz to 800 psi WOC D/O & tst csg Bad tst Ran Casing inspection log which showed holes in casing f/ 400 - 446', 492 - 498', & possible csg part 1225'-1230' Attempt to cmt SQZ'd casing w/ 60 sxs cmt D/O & tst csg Bad test. Set CIBP @ 2,960' on WL. Dumped 50' cmt on top of CIBP WOC Tag TOC @ 2912'. TA'd well.</p> <p>18-Apr-95 Circ well w/ gelled brine Spot 25 sxs cmt from 2400 - 2200' WOC Tagged TOC @ 2160' Spot 35 sxs cmt from 1350'-1013' Spot 90 sxs cmt from 800' to surface. Cut off wellhead & cap casing Installed Dry hole marker & cleaned location NMOCD notified - well P&A'd 4-20-1995.</p> <p>29-Dec-11 Drilled surface cement plug with 4 3/4" bit to 800 feet in 12 days Press test Csg - failed Drilled 2nd plug from 1,027' to 1,365' in 2 days. Drilled 3rd plug from 2,205' to 2,450' Drilled 4th plug from 2,924' to top CIBP @ 2,960' Drilled on CIBP and pushed to 3242'. Drilled CIBP and 5' of new formation. Drilled formation w/ 4 3/4" button bit from 3,247' to 3,433 in 5 days Drilled w/ new 4 3/4" Milled Tooth bit f/ 3,438' to new TD 3,600' in 6 days Logged well w/ GR-CCL & Csg Inspection Log. Set Composite Plug @ 2,958' Test plug to 800 psig - good RIH with 4 1/2" Liner to 2,957'. Pumped 50 sx - stop to mixer Waited on cement. Pumped 100 sx Class C Circulated 29 sxs, 7 bbls cmt to reverse pit RIH with 3 7/8" bit Drilled Floar Collar, float shoe and Comp Plug - tagged at 3,600' RIH with 4 1/2" Arrow Set on 2 3/8" IPC at 2,931'. Performed MIT to 500# - okay Acidized open hole with 18,000 gals 15% Star Acid (90% acid, 10% xylene) AIR= 5.8 bpm ISIP= 1020#. Pmax= 2,921#</p>				
<p>Hole Size 5 in</p> <p>Lin Size 4 1/2 in</p> <p>Set @ 2957 ft</p> <p>Sxs Cmt 100</p> <p>Circ Yes</p> <p>TOC @ Surf f/ surf.</p> <p>TOC by Circ</p> <p>PKR @ 2,931'</p> <p>Shoe @ 2957'</p> <p>Yates @ 3003'</p> <p>Shoe @ 3003'</p> <p><u>OH Interval</u></p> <p>3003 - 3600'</p> <p>7-R @ 3228'</p> <p>Queen @ 3590'</p> <p>PBDT 3600 ft</p> <p>TD 3600 ft</p> <p>OH ID 3.75"</p>				
<p><u>Production Csg.</u></p> <p>Hole Size 7 7/8 in</p> <p>Csg Size 5 1/2 in</p> <p>Set @ 3003 ft</p> <p>Sxs Cmt 400</p> <p>Circ No</p> <p>TOC @ 895 f/ surf</p> <p>TOC by calc</p>				
PREPARED BY:		Larry S Adams		Domingo Carrizales UPDATED 15-Feb-12

Conditions of Acceptance

Cooper Jal Unit 213

30-025-09623

Resaca Operating Company

May 11, 2012

COMPLETION OPERATIONS REQUIREMENTS

1. Note to Operator: **Operator did not follow approved Condition Of Approval to Re-Enter this well.**
 - a. **The required witness of the conducted mechanical integrity test by the BLM was not done.**
 - b. **A required NOI sundry to repair casing was not submitted to the BLM to get prior approval**
 - c. **An unapproved substandard liner was run and cemented to repair production casing – Per Onshore Oil and Gas Order #2(b) – Casing collars shall have a minimum clearance of 0.422 inches on all sides in the hole/casing annulus**
2. **Operator to comply to Written Order to be submitted under separate letterhead**
3. Compliance with a NMOCD Administrative Order is required, submit documentation of that authorization.
 - a. Approved injection pressure compliance is required.
 - b. If injection pressure exceeds the approved pressure you are required to reduce that pressure and notify the BLM within 24 hours.
 - c. When injection pressure is within 50 psig of the maximum pressure, install automation equipment that will prevent exceeding that maximum and submit a subsequent report.
4. **The casing/tubing annulus is required to be monitored for communication with injection fluid or loss of casing integrity.**
5. The annulus is to be maintained full of packer fluid. A BLM inspector may request verification of this fluid level at any time.