

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB No 1004-0137
Expires: July 31, 2010

SUNDRY NOTICES AND REPORTS ON WELLS
Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.

OCD-HOBBS
MAY 15 2012
RECEIVED

5 Lease Serial No
LC-055546 **052986**

6 If Indian, Allottee or Tribe Name

SUBMIT IN TRIPLICATE – Other instructions on page 2

1 Type of Well
☐ Oil Well ☐ Gas Well ☒ Other Injector

2. Name of Operator
Resaca Operating Company

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

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

4. Location of Well (Footage, Sec., T, R, M, or Survey Description)
1650 FNL & 330 FEL, Sec. 5, T-25S, R-37E, Unit Letter H

7 If Unit of CA/Agreement, Name and/or No
Langlie Jal Unit- NM 70970A

8 Well Name and No
Langlie Jal Unit #45

9 API Well No.
30-025-11461

10. Field and Pool or Exploratory Area
Langlie Mattix; 7Rivers-Queen-Grayburg

11. Country or Parish, State
Lea County, NM

12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
<input checked="" type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input checked="" type="checkbox"/> Other <u>Test casing & repair</u>
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	<u>if necessary, Run MIT</u>
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

13 Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleat in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has determined that the site is ready for final inspection.)

Objective: This injector is currently injecting into the Langlie Mattix Pool. We intend to test casing, make repairs if necessary, run MIT & pull chart.

- 1.) MIRU Pulling Unit & Above Ground Steel Pit.
- 2.) Pressure Test casing to see if any casing leaks are found.
- 3.) If casing leak is found, locate & cement squeeze with appropriate sacks of cement.
- 4.) Drill out cement & circulate well clean.
- 5.) Pressure test casing to make sure casing repair was successful.
- 6.) Run Mechanical Integrity Test (Notify BLM & NMOCD prior to test) Pull chart for BLM (copy to NMOCD).
- 7.) RDMO Pulling Unit, clean location, clean & dispose of pit fluids.

**SUBJECT TO LIKE
APPROVAL BY STATE**

**SEE ATTACHED FOR
CONDITIONS OF APPROVAL**

14 I hereby certify that the foregoing is true and correct. Name (Printed/Typed)
Melanie Reyes

Title Engineer Assistant

Signature [Signature] Date 02/27/2012

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by _____ Title _____ Date 02/27/2012

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Office _____

APPROVED
MAY 11 2012
WESLEY W. INGRAM
PETROLEUM ENGINEER

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.

(Instructions on page 2)

MAY 16 2012

WELLBORE SCHEMATIC AND HISTORY

CURRENT COMPLETION SCHEMATIC		LEASE NAME		Langlie Jal Unit		WELL NO		45 WIW										
		STATUS		Inj		Oil		API#										
		LOCATION		1650 FNL & 330 FEL, Sec 5, T - 24S, R - 37E, Lee County, New Mexico		SPUD DATE		01/25/39 TD 3695 KB 3,251'										
		INT COMP DATE		02/24/39 PBTD 3695 GL 3,243' GR		GEOLOGICAL DATA		CORES, DST'S or MUD LOGS.										
<p>Surf Csg Hole Size 15" CSG Size 13 3/8" Set @ 171' Cmt 100 sx Cl C Circ Yes,</p> <p>Inter Csg Hole Size 11 1/4" CSG Size 9 5/8" Set @ 1264' Cmt 300 sx Cl C Circ No,</p> <p>Production Casing Hole Size 8 3/4 in Csg Size 7 in Set @ 3302 R Sxs Cmt. 300 TOC No</p> <p>Liner Hole Size 6 1/8 in Csg Size 4 1/2 in TOL 3228 ft BOL 3695 ft Sxs Cmt 150 Sxs Cmt 75 from TOL</p> <p>PBTD 3695 ft TD 3695 ft</p> <p style="text-align: center;">6 1/8" Open Hole</p>		<p style="text-align: center;">ELECTRIC LOGS.</p> <p style="text-align: center;">HYDROCARBON BEARING ZONE DEPTH TOPS.</p> <p>Yates @ 2775' 7-Rivers @ 2988' Queen @ 3405'</p> <p style="text-align: center;">CASING PROFILE</p> <p>Surf Csg 13 3/8" - 40# K -55 set @ 171' Cmt'd w/100 sxs - TOC - Surface</p> <p>Inter Csg 9 5/8" - 29 3# K -55 set @ 1264' Cmt'd w/300 sxs - TOC - @</p> <p>PROD 7" 24# J-55 set @ 3,302' Cemented with 300 sx Class C TOC - @</p> <p>Liner 4 1/2" 10 5# J-55 set @ TOL 3228' - BOL 3695" Cemented with 150 sx Class C TOC - No</p> <p style="text-align: center;">CURRENT PERFORATION DATA</p> <p>CSG PERFS</p> <p>02-Mar-39 Nitro Shot open hole (3402'-3548') with 270 Quarts Flowed 216 bopd & 54 mcfpd. API = 38 degrees FTP = 850#.</p> <p>12-Aug-75 Drilled new 6 1/8" hole to 3,695'. Logged Well. Ran 4 1/2" liner from 3228'-3695'.</p> <p>28-Aug-75 Perf'd Queen & 7-Rivers f/3431, 35', 39', 43', 47', 51', 73', 77', 81', 85', 89', 93', 97', 3501, 05', 09', 13', 17', 21', 25', 29', 33', 37', 41', 45', 62', 66', 70', 74', 83', 87', 91', 95', 3615', 19', 28', 34', 41', & 3645', 39 holes</p> <p style="text-align: center;">TUBING DETAIL 11/11/2008 ROD DETAIL</p> <table style="width:100%; border-collapse: collapse;"> <tr> <td style="width:33%; text-align: center;">3238 104 2 3/8 IPC Tubing</td> <td style="width:33%;"></td> <td style="width:33%;"></td> </tr> <tr> <td style="text-align: center;">4 1 Uni-Pkr</td> <td></td> <td></td> </tr> <tr> <td style="text-align: center;">3242</td> <td></td> <td style="text-align: center;">0</td> </tr> </table> <p style="text-align: center;">WELL HISTORY SUMMARY</p> <p>02-Mar-39 Nitro Shot open hole (3402'-3548') with 270 Quarts Flowed 216 bopd & 54 mcfpd. API = 38 degrees. FTP = 850#.</p> <p>18-Apr-72 RIH with 7" x 2 3/8" Uni-Pkr on 2 3/8" tubing Set PKR at 3,315'. Convert to Injection.</p> <p>12-Aug-75 POOH with slotted Liner Cleaned out to original TD 3,548" Drilled new 6 1/8" hole to 3,695'. Logged Well. Ran 4 1/2" liner from 3228'-3695'. Cemented w/ 150 sx Class C Cmt TOL with 75 sx Class C Drilled out cement to PBTD @ 3,695'</p> <p>28-Aug-75 Perf'd Queen & 7-R f/3431, 35', 39', 43', 47', 51', 73', 77', 81', 85', 89', 93', 97', 3501, 05', 09', 13', 17', 21', 25', 29', 33', 37', 41', 45', 62', 66', 70', 74', 83', 87', 91', 95', 3615', 19', 28', 34', 41', & 3645', 39 holes Acidized w/ 3,500 gals 15% NE acid RIH w/ Inj string Set Pkr @ 3,248'</p> <p>16-Mar-78 Acidized perfs (3431'-3645') with 2,500 gals 5% HCl Acidized perfs (3431'-3645') with 5,000 gals 20% HCl acid and 3 1/2% HFA, over flush with 5,000 gals injection water RIH with injection PKR, set at 3242'. Injecting 300 bwpd @ 660#</p> <p>01-Sep-85 Acidized with 3,750 gals 7 1/2% HCl and 25% Xylene</p> <p>19-Dec-92 RIH with 1 75 down Blast Nozzle Cleaned out to 3220' to 3695' Recovered iron sulfide</p> <p>19-Jan-11 Tagged fill 3,505', cleaned out 3,634'</p>								3238 104 2 3/8 IPC Tubing			4 1 Uni-Pkr			3242		0
		3238 104 2 3/8 IPC Tubing																
		4 1 Uni-Pkr																
		3242		0														
		<p style="text-align: center;">TOL @ 3228'</p> <p style="text-align: center;">PKR @ 3242'</p> <p style="text-align: center;">Shoe @ 3302'</p> <p style="text-align: center;">Queen @ 3400'</p>																
<p>3431' 3435'</p> <p>3439' 3443'</p> <p>3447' 3451'</p> <p>3473' 3477'</p> <p>3481' 3485'</p> <p>3489' 3493'</p> <p>3497' 3501'</p> <p>3505' 3509'</p> <p>3513' 3517'</p> <p>3521' 3521'</p> <p>3525' 3529'</p> <p>3533' 3537'</p> <p>3541' 3545'</p> <p>3562' 3566'</p> <p>3570' 3574'</p> <p>3583' 3587'</p> <p>3591' 3595'</p> <p>3615' 3619'</p> <p>3628' 3534'</p> <p>3541' 3545'</p>																		
<p style="text-align: center;">Top of Fill at 3,650'</p> <p style="text-align: center;">BOL @ 3695'</p> <p style="text-align: center;">TD @ 3695'</p>																		
		PREPARED BY		Domingo Camzales		UPDATED		26-Sep-11										

Conditions of Approval

Resaca Operating Company

Langlie Jal Unit - 45

API 3002511461

May 11, 2012

1. **Should casing be added or altered (replaced), prior BLM approval will be necessary.**
2. **Provide BLM with an electronic copy (Adobe Acrobat Document) cement bond log record from 3228' or below to top of cement. Less than 500' between the proposed top perforation and top of cement or lack of a 500' overlap above next casing shoe may require correction. The CFO BLM on call engineer may be reached at 575-706-2779.**
3. Surface disturbance beyond the existing pad shall have prior approval.
4. A closed loop system is required. The operator shall properly dispose of drilling/circulating contents at an authorized disposal site. Tanks are required for all operations, no excavated pits.
5. Functional H₂S monitoring equipment shall be on location.
6. A 2000 (2M) BOPE to be used. All blowout preventer (BOP) and related equipment (BOPE) shall comply with reasonable well control requirements. A two ram system with a blind ram and a pipe ram designed for the work string shall be adequate. Tapered work strings will require an additional pipe ram. The manifold shall comply with Onshore Oil and Gas Order #2 (attachment 1, 2M diagrams of choke manifold equipment). The accumulator system shall have an immediately available power source to close the rams and retain 200 psi above pre-charge. The pre-charge test shall follow requirements in Onshore Order #2.
7. All waste (i.e. trash, salts, chemicals, sewage, gray water, etc.) created as a result of work over operations shall be safely contained and disposed of properly at a waste disposal facility. No waste material or fluid shall be disposed of on the well location or surrounding area. Porto-johns and trash containers will be on-location during fracturing operations or any other crew-intensive operations.
8. Workover approval is good for 90 days (completion to be within 90 days of approval). A legitimate request is necessary for extension of that date.

Well with a Packer – Operations

- 1) Conduct a Mechanical Integrity Test of the tubing/casing annulus after a tubing, packer or casing seal is established. Repair that seal any time more than five barrels of packer fluid is replaced within 30 days.
- 2) The minimum test pressure should be 500 psig for 30 minutes or 300 psig for 60 minutes, with 200 psig differentials between tubing and casing pressure (at test time) but no more than 70% of casing burst pressure as described by Onshore Order 2.III.B.1.h. (The tubing or reservoir pressure may need to be reduced). An alternate method for a BLM approved MIT is to have the fluid filled system open to atmospheric pressure and have a loss of less than five barrels in 30 days witnessed by a BLM authorized officer.
- 3) Document the pressure test on a calibrated recorder chart registering within 25 to 85 per cent of its full range. Greater than 10% pressure leakoff will be viewed as a failed MIT. Less than 10% pressure leakoff will be evaluated site specifically and may restrict injection approval.
- 4) At least 24 hours before the test: In Lea County email Andy Cortez acortez@blm.gov, (phone 575-393-3612 or 575-631-5801). Note the contact notification method, time, & date in your subsequent report.
- 5) Submit a subsequent Sundry Form 3160-5 relating the MIT activity. Include a copy of the recorded MIT pressure chart. List the name of the BLM witness, or the notified person and date of notification. NMOCD is to retain the original recorded MIT chart.
- 6) Use of tubing internal protection, tubing on/off equipment just above the packer, a profile nipple, and an in line tubing check valve below the packer or between the on/off tool and packer is a “Best Management Practice”. The setting depths and descriptions of each are to be included in the subsequent sundry. List (by date) descriptions of daily activity of any previously unreported wellbore workover.
- 7) **Submit the original subsequent sundry with three copies to BLM Carlsbad.**
- 8) 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. Submit a subsequent report (Sundry Form 3160-5) describing the installed automation equipment within 30 days.
- 9) Unexplained significant variations of rate or pressure to be reported within 5 days of notice.
- 10) The casing/tubing annulus is required to be monitored for communication with injection fluid or loss of casing integrity. A BLM inspector may request verification of the annular fluid level at any time.

- 11) A “Best Management Practice” is to maintain the annulus full of packer fluid at atmospheric pressure. Equipment that will display on site, continuous open to the air fluid level is necessary to achieve this goal.
- 12) Loss of packer fluid above five barrels per month indicates a developing problem. Notify BLM Carlsbad Field Office, Petroleum Engineering within 5 days.
- 13) A suggested format for monthly records documenting that the casing annulus is fluid filled is available from the BLM Carlsbad Field Office.
- 14) Gain of annular fluid requires notification within 24 hours. Cease injection and maintain a production casing pressure of 0psia. Notify the BLM’s authorized officer (“Paul R. Swartz” <pswartz@blm.gov>, cell phone 575-200-7902). If there is no response phone 575-361-2822.
- 15) Submit a (Sundry Form 3160-5) subsequent report (daily reports) describing all wellbore activity and Mechanical Integrity Test as per item 1) above. Include the date(s) of the well work, and the setting depths of equipment: internally corrosive protected tubing, tubing on/off equipment just above the packer, and an in line tubing check valve below the packer or between the on/off tool and packer. The setting depths and descriptions of each are to be included in the subsequent sundry. List (by date) descriptions of daily activity of any previously unreported wellbore workover.

NM Fed Regs & Forms - http://www.blm.gov/nm/st/en/prog/energy/oil_and_gas.html

Use of Form 3160-5 “Sundry Notices and Reports on Wells”

§ 43 CFR 3162.3-2 Subsequent Well Operations.

- a) A proposal for further well operations shall be submitted by the operator on Form 3160–5 for approval by the authorized officer prior to commencing operations to redrill, deepen, perform casing repairs, plug-back, alter casing, perform nonroutine fracturing jobs, recompleting in a different interval, perform water shut off, commingling production between intervals and/or conversion to injection. If there is additional surface disturbance, the proposal shall include a surface use plan of operations. A subsequent report on these operations also will be filed on Form 3160–5. The authorized officer may prescribe that each proposal contain all or a portion of the information set forth in §3162.3–1 of this title.
- (b) Unless additional surface disturbance is involved and if the operations conform to the standard of prudent operating practice, prior approval is not required for routine fracturing or acidizing jobs, or recompletion in the same interval; however, a subsequent report on these operations must be filed on Form 3160–5.

(c) No prior approval or a subsequent report is required for well cleanout work, routine well maintenance, or bottom hole pressure surveys.

[47 FR 47765, Oct. 27, 1982. Redesignated and amended at 48 FR 36583–36586, Aug. 12, 1983, further amended at 52 FR 5391, Feb. 20, 1987; 53 FR 17363, May 16, 1988; 53 FR 22847, June 17, 1988]

§ 43 CFR 3160.0-9 (c)(1) Information collection.

(c)(1) The information collection requirements contained in part 3160 have been approved by the Office of Management and Budget under 44 U.S.C. 3507 and assigned the following Clearance Numbers:

Operating Forms

Form No.	Name and filing date	OMB No.
3160-3	Application for Permit to Drill, Deepen, or Plug Back—Filed 30 days prior to planned action	1004-0136
3160-4	With Completion of Recompletion Report and Log—Due 30 days after well completion	1004-0137
3160-5	Sundry Notice and Reports on Wells—Subsequent report due 30 days after operations completed	1004-0135

The information will be used to manage Federal and Indian oil and gas leases. It will be used to allow evaluation of the technical, safety, and environmental factors involved with drilling and producing oil and gas on Federal and Indian oil and gas leases. Response is mandatory only if the operator elects to initiate drilling, completion, or subsequent operations on an oil and gas well, in accordance with 30 U.S.C. 181 *et seq.*

§ 3162.4-1 (c) Well records and reports.

Not later than the 5th business day after any well begins production on which royalty is due anywhere on a lease site or allocated to a lease site, or resumes production in the case of a well which has been off production for more than 90 days, the operator shall notify the authorized officer by letter or sundry notice, Form 3160-5, or orally to be followed by a letter or sundry notice, of the date on which such production has begun or resumed.