

DATE IN 6.9.11	SUSPENSE	ENGINEER TW	LOGGED IN 6.9.11	TYPE WFX	APP NO 116057074
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ABOVE THIS LINE FOR DIVISION USE ONLY

NEW MEXICO OIL CONSERVATION DIVISION

- Engineering Bureau -

1220 South St. Francis Drive, Santa Fe, NM 87505



Resaca
263848

7 wells

ADMINISTRATIVE APPLICATION CHECKLIST

THIS CHECKLIST IS MANDATORY FOR ALL ADMINISTRATIVE APPLICATIONS FOR EXCEPTIONS TO DIVISION RULES AND REGULATIONS WHICH REQUIRE PROCESSING AT THE DIVISION LEVEL IN SANTA FE

Application Acronyms:

[NSL-Non-Standard Location] [NSP-Non-Standard Proration Unit] [SD-Simultaneous Dedication]
 [DHC-Downhole Commingling] [CTB-Lease Commingling] [PLC-Pool/Lease Commingling]
 [PC-Pool Commingling] [OLS - Off-Lease Storage] [OLM-Off-Lease Measurement]
 [WFX-Waterflood Expansion] [PMX-Pressure Maintenance Expansion]
 [SWD-Salt Water Disposal] [IPI-Injection Pressure Increase]
 [EOR-Qualified Enhanced Oil Recovery Certification] [PPR-Positive Production Response]

[1] TYPE OF APPLICATION - Check Those Which Apply for [A]

- [A] Location - Spacing Unit - Simultaneous Dedication
☐ NSL ☐ NSP ☐ SD

Check One Only for [B] or [C]

- [B] Commingling - Storage - Measurement
☐ DHC ☐ CTB ☐ PLC ☐ PC ☐ OLS ☐ OLM

- [C] Injection - Disposal - Pressure Increase - Enhanced Oil Recovery
☒ WFX ☐ PMX ☐ SWD ☐ IPI ☐ EOR ☐ PPR

- [D] Other: Specify _____

[2] NOTIFICATION REQUIRED TO: - Check Those Which Apply, or Does Not Apply

- [A] ☒ Working, Royalty or Overriding Royalty Interest Owners
 [B] ☒ Offset Operators, Leaseholders or Surface Owner
 [C] ☒ Application is One Which Requires Published Legal Notice
 [D] ☒ Notification and/or Concurrent Approval by BLM or SLO
U.S. Bureau of Land Management - Commissioner of Public Lands, State Land Office
 [E] ☒ For all of the above, Proof of Notification or Publication is Attached, and/or,
 [F] ☐ Waivers are Attached

[3] SUBMIT ACCURATE AND COMPLETE INFORMATION REQUIRED TO PROCESS THE TYPE OF APPLICATION INDICATED ABOVE.

[4] **CERTIFICATION:** I hereby certify that the information submitted with this application for administrative approval is **accurate** and **complete** to the best of my knowledge. I also understand that **no action** will be taken on this application until the required information and notifications are submitted to the Division.

Note: Statement must be completed by an individual with managerial and/or supervisory capacity.

Keith B. Masters, P.E.

Print or Type Name

Signature

Consultant

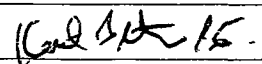
Title

04/15/11

Date

k_b_masters@mastersconsultingllc.com
 e-mail Address

APPLICATION FOR AUTHORIZATION TO INJECT

- I. PURPOSE: ☒ Secondary Recovery ☐ Pressure Maintenance ☐ Disposal ☐ Storage
Application qualifies for administrative approval? ☒ Yes ☐ No
- II. OPERATOR: Resaca Operating Company
ADDRESS: 1331 Lamar Street, Ste. 1450; Houston, TX 77010
CONTACT PARTY: Keith B. Masters, P.E. PHONE: (512) 906-2016
- III. WELL DATA: Complete the data required on the reverse side of this form for each well proposed for injection.
Additional sheets may be attached if necessary.
- IV. Is this an expansion of an existing project? ☒ Yes ☐ No
If yes, give the Division order number authorizing the project: R-4019, R-4020
- V. Attach a map that identifies all wells and leases within two miles of any proposed injection well with a one-half mile radius circle drawn around each proposed injection well. This circle identifies the well's area of review. attached
- VI. Attach a tabulation of data on all wells of public record within the area of review which penetrate the proposed injection zone. Such data shall include a description of each well's type, construction, date drilled, location, depth, record of completion, and a schematic of any plugged well illustrating all plugging detail. attached
- VII. Attach data on the proposed operation, including: attached
1. Proposed average and maximum daily rate and volume of fluids to be injected;
 2. Whether the system is open or closed;
 3. Proposed average and maximum injection pressure;
 4. Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and,
 5. If injection is for disposal purposes into a zone not productive of oil or gas at or within one mile of the proposed well, attach a chemical analysis of the disposal zone formation water (may be measured or inferred from existing literature, studies, nearby wells, etc.).
- *VIII. Attach appropriate geologic data on the injection zone including appropriate lithologic detail, geologic name, thickness, and depth. Give the geologic name, and depth to bottom of all underground sources of drinking water (aquifers containing waters with total dissolved solids concentrations of 10,000 mg/l or less) overlying the proposed injection zone as well as any such sources known to be immediately underlying the injection interval.
- IX. Describe the proposed stimulation program, if any. attached
- *X. Attach appropriate logging and test data on the well. (If well logs have been filed with the Division, they need not be resubmitted).
- *XI. Attach a chemical analysis of fresh water from two or more fresh water wells (if available and producing) within one mile of any injection or disposal well showing location of wells and dates samples were taken.
- XII. Applicants for disposal wells must make an affirmative statement that they have examined available geologic and engineering data and find no evidence of open faults or any other hydrologic connection between the disposal zone and any underground sources of drinking water. not applicable
- XIII. Applicants must complete the "Proof of Notice" section on the reverse side of this form. attached
- XIV. Certification: I hereby certify that the information submitted with this application is true and correct to the best of my knowledge and belief.
- NAME: Keith B. Masters, P.E. TITLE: Consultant
SIGNATURE:  DATE: 04/15/11
E-MAIL ADDRESS: k_b_masters@mastersconsultingllc.com
- * If the information required under Sections VI, VIII, X, and XI above has been previously submitted, it need not be resubmitted.
Please show the date and circumstances of the earlier submittal: Case 4303, Case 4304, WFX-647, WFX-657, WFX-671

ATTACHMENT TO FORM C-108

Resaca Operating Co.

Cooper Jal Unit

Item III – Proposed Injection Wells**Wells with existing Injection Authority**

CJU # 105	active injector	Jalmat and Langlie Mattix Pools
CJU # 116	active injector	Jalmat and Langlie Mattix Pools
CJU # 118	active injector	Jalmat and Langlie Mattix Pools
CJU # 120	active injector	Jalmat and Langlie Mattix Pools
CJU # 122	active injector	Jalmat and Langlie Mattix Pools
CJU # 124	TA	Langlie Mattix Pool only
CJU # 126	active injector	Jalmat and Langlie Mattix Pools
CJU # 132	active injector	Jalmat and Langlie Mattix Pools
CJU # 133	active injector	Jalmat and Langlie Mattix Pools
CJU # 134	active injector	Jalmat and Langlie Mattix Pools
CJU # 135	active injector	Jalmat and Langlie Mattix Pools
CJU # 145	active injector	Langlie Mattix Pool only
CJU # 146	active injector	Jalmat and Langlie Mattix Pools
CJU # 151	active injector	Langlie Mattix Pool only
CJU # 153	active injector	Jalmat and Langlie Mattix Pools
CJU # 201	active injector	Jalmat Pool Only
CJU # 203	active injector	Jalmat Pool Only
CJU # 205	active injector	Jalmat and Langlie Mattix Pools
CJU # 211	active injector	Jalmat and Langlie Mattix Pools
CJU # 216	active injector	Jalmat Pool Only
CJU # 218	active injector	Jalmat Pool Only
CJU # 220	active injector	Jalmat and Langlie Mattix Pools
CJU # 224	active injector	Jalmat Pool Only
CJU # 226	active injector	Jalmat and Langlie Mattix Pools
CJU # 228	active injector	Jalmat Pool Only
CJU # 234	active injector	Jalmat Pool Only
CJU # 238	active injector	Jalmat Pool Only
CJU # 239	active injector	Jalmat Pool Only
CJU # 241	active injector	Jalmat Pool Only
CJU # 242	active injector	Jalmat Pool Only
CJU # 244	active injector	Jalmat and Langlie Mattix Pools

Wells for which Injection Authority is requested

CJU # 108	P&A	Jalmat and Langlie Mattix Pools
CJU # 109	P&A	Jalmat Pool Only
CJU # 114	P&A	Jalmat and Langlie Mattix Pools
CJU # 148	P&A	Jalmat and Langlie Mattix Pools
CJU # 206	TA	Jalmat Pool Only
CJU # 213	P&A	Jalmat and Langlie Mattix Pools
CJU # 230	P&A	Jalmat Pool Only

Warnell, Terry G, EMNRD

From: wingram@blm.gov
Sent: Wednesday, June 08, 2011 8:58 AM
To: Warnell, Terry G, EMNRD
Subject: Resaca Operating Company Waterflood Expansion

WFX

Terry,

The BLM met with Resaca Exploitation, Inc. on June 7, 2011 to discuss their proposal to expand the waterflood project by re-entering 7 plugged wells.

The BLM is no longer objecting to the waterflood expansion proposal based on the operator's response to how they will monitor the injection wells for down hole problems with the tubing. The operator will install a more elaborate monitoring system on one of the Federal wells. This system is still primarily a manual system with options for automated controls. In addition, if problems are encountered with the casing on these re-entered wells, that are determined too serious, the operator will install a liner and cement to surface. Based on their presentation, the BLM will not require CBLs or remedial cementing on these wells, but will allow the operator to determine if this is necessary or if NMOCD requires these items based on their review.

The BLM will reserve their right to review and potentially object to CO2 operations, if and when that occurs.

Thanks,
Wesley W. Ingram
Supervisory Petroleum Engineer
Bureau of Land Management
575-234-5982
wesley_ingram@nm.blm.gov

reverts
572 *577 9/80* *all*
WFX 876 *11-24-10*

Terry,

The BLM is objecting to the proposal to expand the waterflood due to previous history with projects operated by Range Operating, OXY and Devon where the injection created multiple problems. In addition, the cementing of these wellbores is questionable and it was similar well cement jobs that created the problems with water flows outside of the proposed injection zone for the other operators.

For your information, the operator has submitted Notice of Stakings on the three Federal wells. I do not know the status of the wells on the Fee leases, but it appears that APDs have been submitted. They did list these wells in their 2011 Unit Plan of Development.

If the operator can satisfy our objections on the waterflood expansion, the BLM will require a CBL to determine the actual cement situation behind the production casing with remedial work to be done as needed. In addition, they will be required to run Casing Integrity Tests.

If the diagrams attached to the proposal are accurate, the BLM will not be able to approve CO2 injection as there are too many possibilities for CO2 to impact other formations. Also, these wellbores are probably indicative of the condition of the other wells in the field.

Has NMOCD approved the combination of these pools? I know that was a hearing item, but I don't know the outcome.

Please let me know if you have any questions regarding the objection.

Thanks,
Wesley W. Ingram
Supervisory Petroleum Engineer
Bureau of Land Management
575-234-5982
wesley_ingram@nm.blm.gov

Masters Consulting, LLC

7500 Rialto Blvd.; Ste. 180

Austin, TX 78735

Keith B. Masters, P.E.
President

email: k_b_masters@mastersconsultingllc.com

Phone: (512) 906-2016
Fax: (512) 906-2729

April 16, 2011

Mr. Terry G. Warnell
New Mexico Oil Conservation Division
1220 S. St. Francis Drive
Santa Fe, NM 87505

Re: Application for Authority to Inject
Waterflood Expansion (WFX)
Resaca Operating Company
Jalmat & Langlie Mattix Pools
Cooper Jal Unit
Lea County, NM

RECEIVED OCD
2011 JUN -9 A 10:51

Dear Terry:

Resaca Operating Company ("Resaca") hereby requests authority to inject water into the Jalmat and Langlie Mattix Pools through seven wells located within the Cooper Jal Unit ("the Unit"), Lea County, New Mexico. Form C-108 and supporting documents are attached.

By Order No. R-4018, dated August 25, 1970, the NMOCD approved the Cooper Jal Unit Agreement. A waterflood project and authority to inject into certain wells in the Langlie Mattix Pool underlying the Unit was approved by NMOCD Order R-4019. A waterflood project and authority to inject into certain wells in the Jalmat Pool underlying the Unit was approved by NMOCD Order R-4020. This authority was expanded by Administrative Orders WFX-648, WFX-657, WFX-671, and WFX-876.

There are currently thirty injection wells and seventy producing wells within the Unit. Many of the injection wells and most of the producing wells are completed in both the Jalmat and Langlie Mattix Pools, and under current operations the Unit is effectively operated as a single waterflood project.

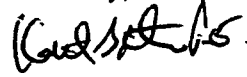
The seven proposed injection wells are all currently temporarily abandoned or plugged and abandoned. Resaca desires to increase injection into both Pools to increase reservoir pressure in preparation for tertiary recovery operations involving injection of carbon dioxide.

Re-entry of the proposed injection wells is currently underway. Accordingly, Resaca respectfully requests that administrative review of this application be expedited to the extent possible.

Mr. Terry G. Warnell
April 16, 2011
Page 2

Thank you for your assistance with regard to this application. Please direct any inquiries regarding this matter to the undersigned.

Sincerely,

A handwritten signature in black ink, appearing to read "Keith B. Masters".

Keith B. Masters, P.E.
for Resaca Operating Company

cc: Bureau of Land Management
Resaca Operating Company

Masters Consulting, LLC
7500 Rialto Blvd.; Ste. 180
Austin, TX 78735

Keith B. Masters, P.E.
President

email: k_b_masters@mastersconsultingllc.com

RECEIVED
Phone: (512) 906-2016
Fax: (512) 906-1129

2011 MAY 18 AM 11:50

May 16, 2011

Mr. Terry G. Warnell
New Mexico Oil Conservation Division
1220 S. St. Francis Drive
Santa Fe, NM 87505

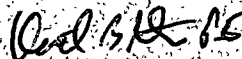
Re: Application for Authority to Inject
Waterflood Expansion (WFX)
Resaca Operating Company
Jalmat and Langlie-Mattix Pools
Cooper Jal Unit
Lea County, NM

Dear Terry,

Enclosed, please find a Supplemental Certificate of Service relative to the above-referenced matter.

Thank you once again for your assistance with regard to this application. Please direct any inquiries regarding this matter to the undersigned.

Sincerely,



Keith B. Masters, P.E.
for Resaca Operating Company

cc: Resaca Operating Company

SUPPLEMENTAL CERTIFICATE OF SERVICE

I hereby certify that completed copies of State of New Mexico Energy, Minerals, and Natural Resources Department, Oil Conservation Division Form C-108 were transmitted with a letter identifying the proposed injection wells and offering to provide a complete copy of the subject administrative application for expansion of the Cooper Jal Unit Waterflood Project in the Jalmat and Langlie Mattix Pools, Lea County New Mexico, by certified mail, return receipt requested, on the dates indicated below, to the following affected parties:

Surface Owners : Louis Q. Thomas
P.O. Box 4377
Huachuca City, AZ 85616

05/24/11

RRR Land & Cattle Company
2001 Barberry Road
Roswell, NM 88201

05/16/11



Keith B. Masters, P.E.

ATTACHMENT TO FORM C-108

Resaca Operating Co.

Cooper Jal Unit

CURRENT WELLBORE SCHEMATICS

PLUGGED WELLS

CURRENT WELLBORE SCHEMATIC

Operator: Resaca Operating Co
 Well Name: Cooper Jal #104
 Well Location:
 Calls 1980' FNL, 660' FWL
 Unit E
 Section 18
 Township 24S
 Range 37E

15 sx cmt plug @ surf

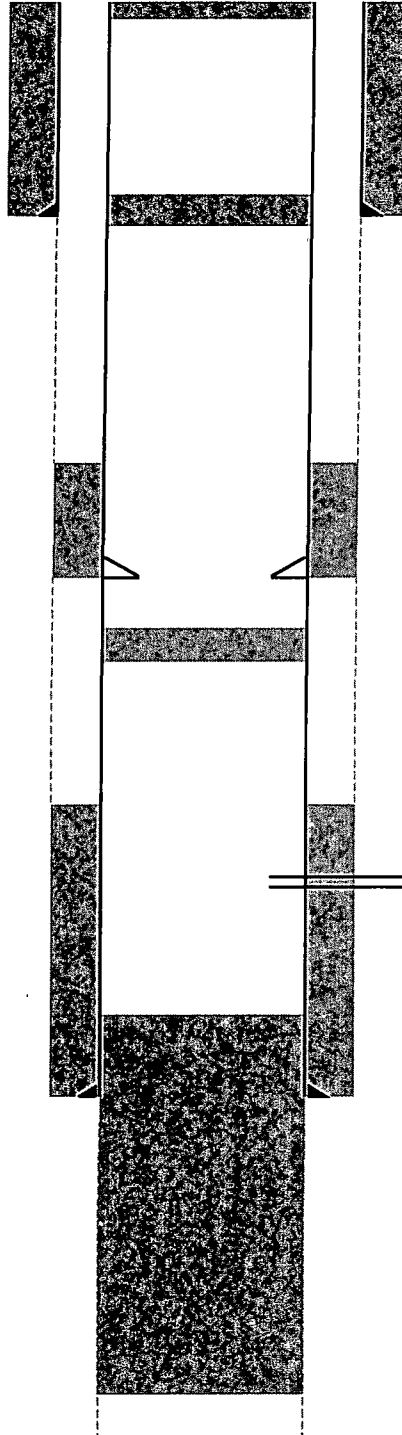
20 sx cmt plug 243' - 350'

TOC inside 5 1/2" tagged @ 243'

20 sx cmt plug 1400' - 1500'

25 sx cmt plug 3387' - 3578'

TOC tagged @ 3387'



Surface Casing

Hole Size (in).	13
Casing Size (in)	8 5/8
Casing Weight (ppf):	28
Setting Depth (ft).	291
Amount Cement (sx)	125
Top of Cement (ft)	0
TOC Method.	Circulated

DV Tool

Depth (ft):	1257
Amount Cement (sx):	100
Top of Cement (ft):	1074
TOC Method.	Calculated

Perforations

Top (ft):	3015
Bottom (ft):	3225

Production Casing

Hole Size (in).	8
Casing Size (in)	5
Casing Weight (ppf)	12
Setting Depth (ft)	3510
Amount Cement (sx):	125
Top of Cement (ft):	2955
TOC Method	Calculated

Open Hole

Hole Size (in):	4 1/4
Top (ft)	3510
Bottom (ft)	3655

Total Depth (ft). 3655

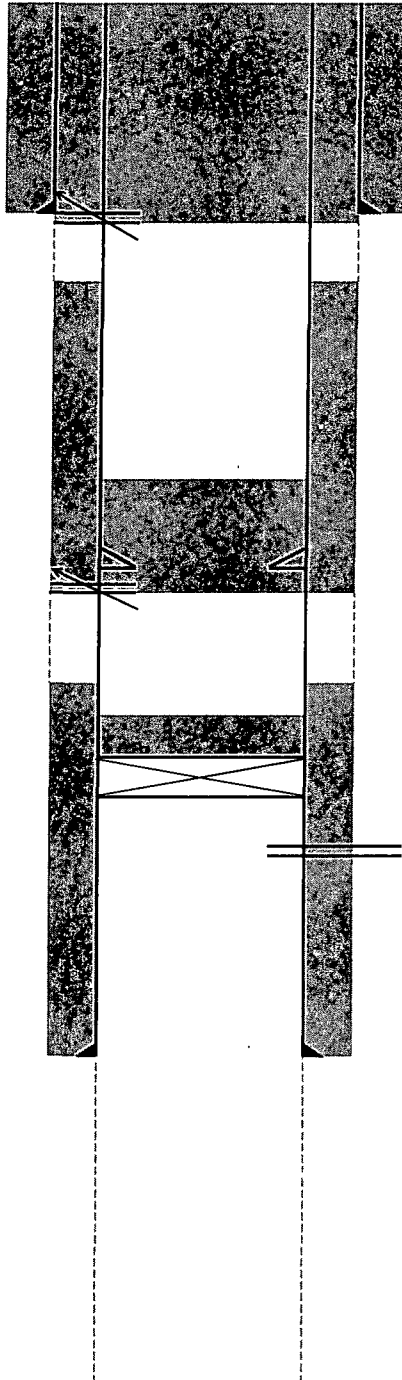
CURRENT WELLBORE SCHEMATIC

Operator: Resaca Operating Co.
Well Name: Cooper Jal #112
Well Location: 330' FSL, 990' FWL
Calls: M
Unit: 13
Section: 24S
Township: 36E
Range:

perf sqz holes @ 300'
sqz 120 sx cmt, circulated to surface

perf sqz holes @ 1300'
sqz 50 sx cmt
TOC inside 5 1/2" tagged @ 1047'

CIBP @ 2950' w/ 25 sx cmt
TOC tagged @ 2660'



Surface Casing

Hole Size (in): 11
Casing Size (in): 8 5/8
Casing Weight (ppf): 28
Setting Depth (ft): 250
Amount Cement (sx): 100
Top of Cement (ft): 0
TOC Method: Circulated

DV Tool

Depth (ft): 1233
Amount Cement (sx): 200
Top of Cement (ft): Unknown
TOC Method: -----

Perforations

Top (ft): 3000
Bottom (ft): 3268

Production Casing

Hole Size (in): 8
Casing Size (in): 5 1/2
Casing Weight (ppf): 14
Setting Depth (ft): 3442
Amount Cement (sx): 200
Top of Cement (ft): 2416
TOC Method: Calculated

Open Hole

Hole Size (in): 4 3/4
Top (ft): 3442
Bottom (ft): 3617

Total Depth (ft): 3617

CURRENT WELLBORE SCHEMATIC

Operator: Resaca Operating Co.
 Well Name: Cooper Jal #123
 Well Location:
 Calls 330' FNL, 990' FWL
 Unit D
 Section 19
 Township 24S
 Range 37E

40 sx cmt plug surf - 350'

csg leak 634' - 664'

sqz 300 sx cmt, circulated to surface

35 sx cmt plug 1020' - 1400'

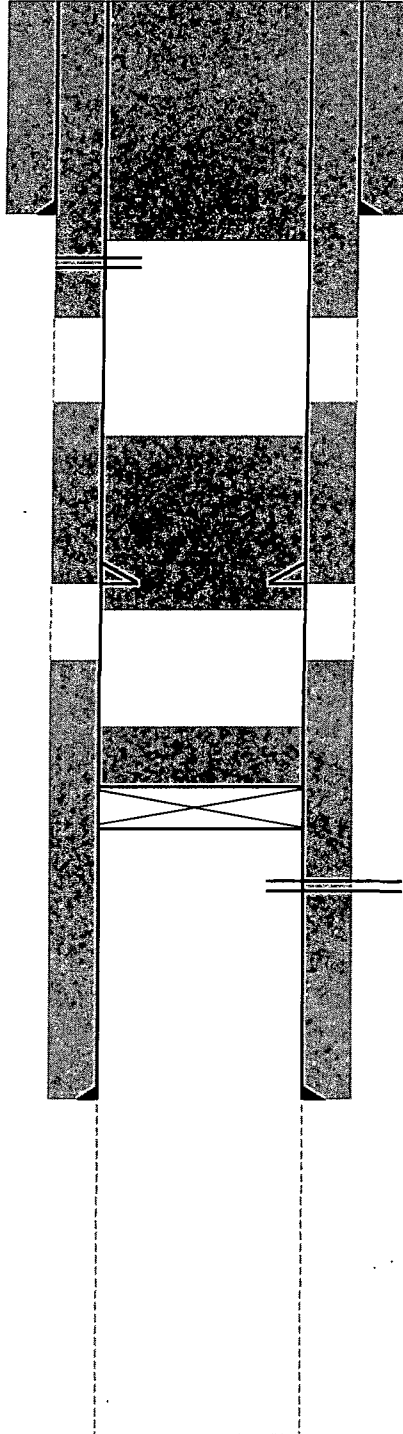
TOC tagged @ 1020'

25 sx cmt plug 2689' - 2889'

TOC tagged @ 2689'

CBP @ 2924' w/ 35 sx cmt

TOC tagged @ 2889



Total Depth (ft). 3650

Surface Casing

Hole Size (in): 12 1/2
 Casing Size (in): 9 5/8
 Casing Weight (ppf): 36
 Setting Depth (ft): 290
 Amount Cement (sx): 150
 Top of Cement (ft): 0
 TOC Method: Calculated

DV Tool

Depth (ft): 1357
 Amount Cement (sx): 100
 Top of Cement (ft): 812
 TOC Method: Calculated

Perforations

Top (ft): 2996
 Bottom (ft): 3217

Production Casing

Hole Size (in): 7 7/8
 Casing Size (in): 5 1/2
 Casing Weight (ppf): 17
 Setting Depth (ft): 3342
 Amount Cement (sx): 250
 Top of Cement (ft): 1980
 TOC Method: Calculated

Open Hole

Hole Size (in): 4 3/4
 Top (ft): 3342
 Bottom (ft): 3650

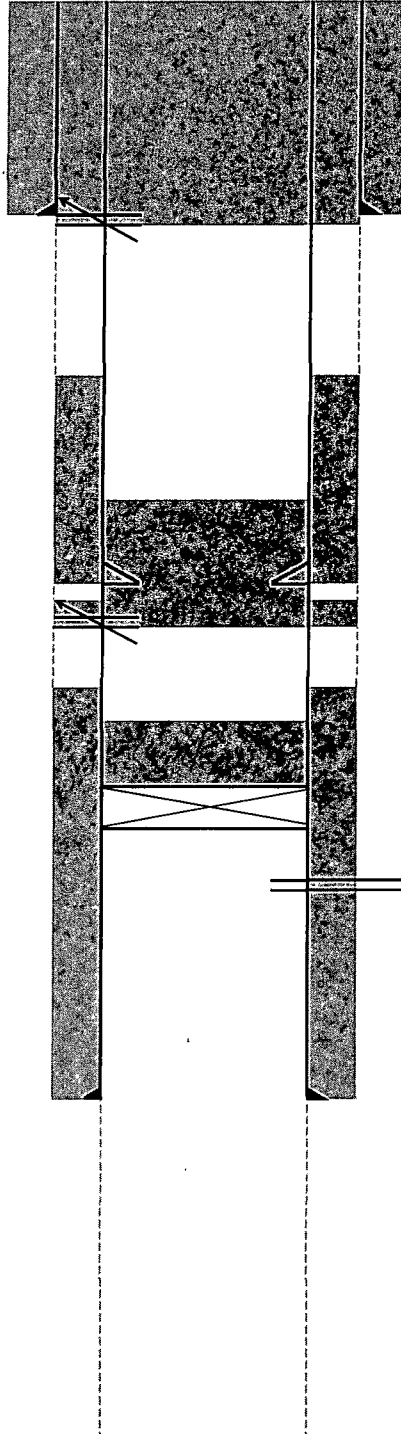
CURRENT WELLBORE SCHEMATIC

Operator. Resaca Operating Co.
Well Name. Cooper Jal #129
Well Location. 1650' FNL, 1587' FWL
Calls F
Unit 19
Section 24S
Township 24S
Range 37E

perf sqz holes @ 400'
sqz 155 sx cmt, circulated to surface

perf sqz holes @ 1300'
sqz 50 sx cmt
TOC inside 5 1/2" tagged @ 1070'

CIBP @ 2975' w/ 30 sx cmt



Total Depth (ft): 3670

Surface Casing

Hole Size (in). Unknown
Casing Size (in). 8 5/8
Casing Weight (ppf). Unknown
Setting Depth (ft). 330
Amount Cement (sx). 175
Top of Cement (ft). Unknown
TOC Method. -----

DV Tool

Depth (ft). Unknown
Amount Cement (sx). 100
Top of Cement (ft). Unknown
TOC Method. -----

Perforations

Top (ft). 3018
Bottom (ft). 3215

Production Casing

Hole Size (in). Unknown
Casing Size (in). 5 1/2
Casing Weight (ppf). Unknown
Setting Depth (ft). 3336
Amount Cement (sx). 200
Top of Cement (ft). Unknown
TOC Method. -----

Open Hole

Hole Size (in). Unknown
Top (ft). 3336
Bottom (ft). 3670

CURRENT WELLBORE SCHEMATIC

Operator: Resaca Operating Co.
 Well Name: Cooper Jal #137
 Well Location:
 Calls 990' FNL, 330' FWL
 Unit D
 Section 25
 Township 24S
 Range 36E

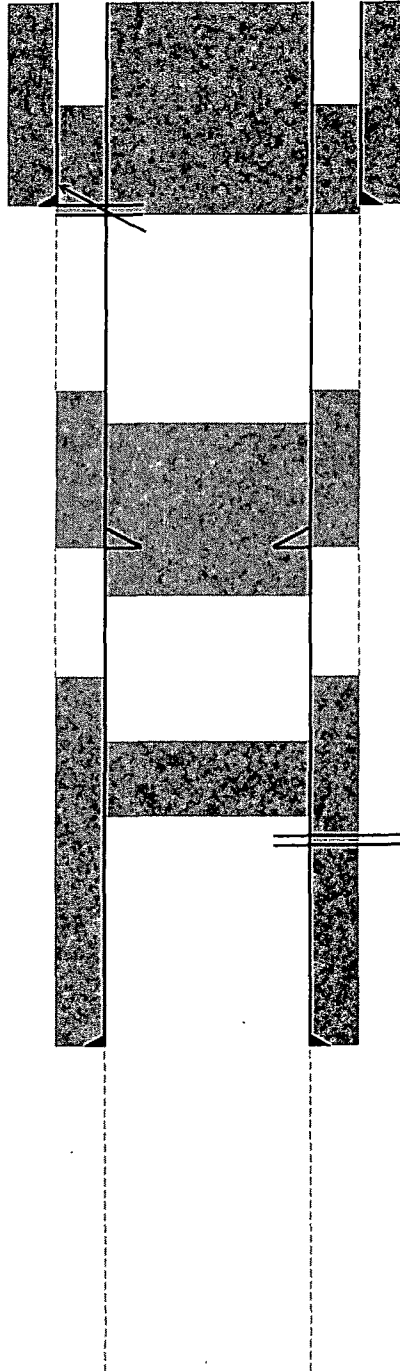
20 sx cmt plug surf - 170'

cut csg & perf sqz holes @ 339'
 sqz 40 sx cmt
 TOC inside 5 1/2" tagged @ 170'

cut csg @ 453' & 461'
 (not free)

55 sx cmt plug 1072' - 1615'

35 sx cmt plug 2830' - 3195'
 TOC tagged @ 2830'



Total Depth (ft). 3560

Surface Casing

Hole Size (in) 12 1/4
 Casing Size (in) 8 5/8
 Casing Weight (ppf). 24
 Setting Depth (ft) 289
 Amount Cement (sx). 150
 Top of Cement (ft) 0
 TOC Method. Circulated

DV Tool

Depth (ft) 1186
 Amount Cement (sx) 100
 Top of Cement (ft). 641
 TOC Method. Calculated

Perforations

Top (ft). 3219
 Bottom (ft). 3412

Production Casing

Hole Size (in) 7 7/8
 Casing Size (in) 5 1/2
 Casing Weight (ppf). 15.5
 Setting Depth (ft). 3463
 Amount Cement (sx) 200
 Top of Cement (ft) 2373
 TOC Method. Calculated

Open Hole

Hole Size (in): 4 3/4
 Top (ft): 3463
 Bottom (ft): 3560

CURRENT WELLBORE SCHEMATIC

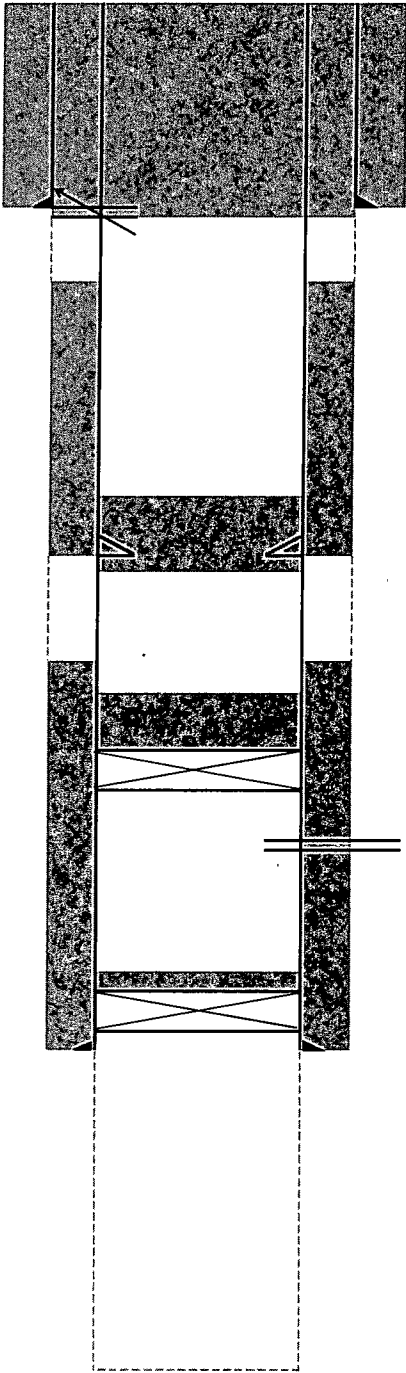
Operator: Resaca Operating Co.
Well Name: Cooper Jal #143
Well Location:
Calls: 2310' FNL, 1650' FWL
Unit: F
Section: 25
Township: 24S
Range: 36E

perf sqz holes @ 350'
sqz 100 sx cmt

25 sx cmt plug 1080' - 1300'
TOC tagged @ 1080'

CIBP @ 2900' w/ 25 sx cmt
TOC tagged @ 2658'

CIBP @ 3350' w/ 10' cmt



Total Depth (ft) 3550

Surface Casing
Hole Size (in): 12 1/4
Casing Size (in): 8 5/8
Casing Weight (ppf): 24
Setting Depth (ft): 280
Amount Cement (sx): 150
Top of Cement (ft): 0
TOC Method: Circulated

DV Tool
Depth (ft): 1199
Amount Cement (sx): 100
Top of Cement (ft): 654
TOC Method: Calculated

Perforations
Top (ft): 2996
Bottom (ft): 3205

Production Casing
Hole Size (in): 7 7/8
Casing Size (in): 5 1/2
Casing Weight (ppf): 14
Setting Depth (ft): 3450
Amount Cement (sx): 200
Top of Cement (ft): 2570
TOC Method: CBL

Open Hole
Hole Size (in): 4 3/4
Top (ft): 3450
Bottom (ft): 3550

CURRENT WELLBORE SCHEMATIC

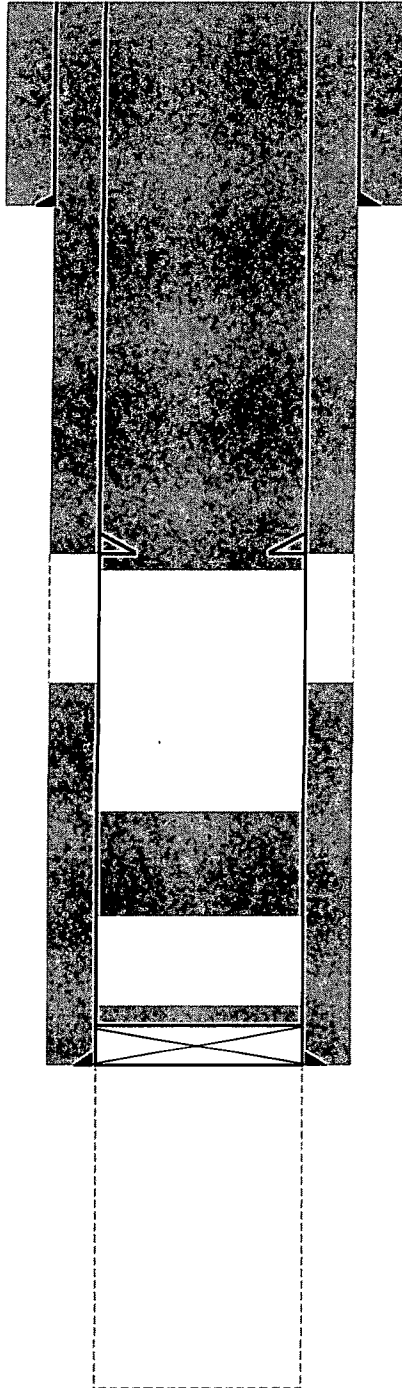
Operator: Resaca Operating Co.
Well Name: Cooper Jal #144
Well Location: 2310' FNL, 990' FEL
Calls: H
Unit: 25
Section: 24S
Township: 36E
Range:

150 sx cmt plug surf - 1255'

csg leak 323' - 750'
sqz multiple times, 1730 sx cmt total
circulated to surface

34 sx cmt plug 2730' - 2990'

ClBP @ 3345' w/ 5 sx cmt



Total Depth (ft): 3490

Surface Casing

Hole Size (in): 12 1/4
Casing Size (in): 8 5/8
Casing Weight (ppf): 32
Setting Depth (ft): 286
Amount Cement (sx): 225
Top of Cement (ft): 0
TOC Method: Circulated

DV Tool

Depth (ft): 1196
Amount Cement (sx): 100
Top of Cement (ft): 651
TOC Method: Calculated

Production Casing

Hole Size (in): 7 7/8
Casing Size (in): 5 1/2
Casing Weight (ppf): 14
Setting Depth (ft): 3389
Amount Cement (sx): 200
Top of Cement (ft): 2299
TOC Method: Calculated

Open Hole

Hole Size (in): 4 3/4
Top (ft): 3389
Bottom (ft): 3490

CURRENT WELLBORE SCHEMATIC

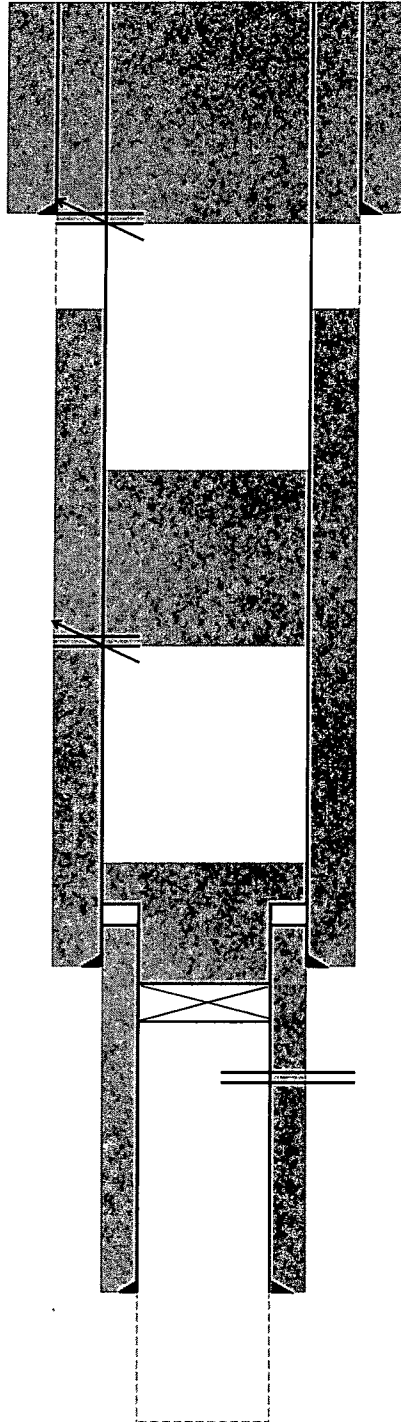
Operator. Resaca Operating Co.
Well Name. Cooper Jal #147
Well Location. 2310' FNL, 330' FWL
Calls E
Unit 19
Section 24S
Township 37E
Range

perf sqz holes @ 300'
sqz 120 sx cmt, circulated to surface

csg leak 649' - 680'
sqz 500 sx cmt

perf sqz holes @ 1200'
sqz 50 sx cmt
TOC inside 7" tagged @ 995'

CIBP @ 2950 w/ 75' cmt
TOC tagged @ 2545'



Total Depth (ft) 3576

Surface Casing

Hole Size (in) 10 3/4
Casing Size (in) 9 5/8
Casing Weight (ppf) 32
Setting Depth (ft) 267
Amount Cement (sx) 75
Top of Cement (ft) 0
TOC Method. Calculated

Production Casing

Hole Size (in) 8 3/4
Casing Size (in) 7
Casing Weight (ppf) 20
Setting Depth (ft) 2975
Amount Cement (sx) 400
Top of Cement (ft) 463
TOC Method. Calculated

Perforations

Top (ft) 3006
Bottom (ft) 3468

Liner

Casing Size (in) 4 1/2
Casing Weight (ppf) 9 5
Liner Top (ft) 2916
Liner Bottom (ft) 3485
Amount Cement (sx) 280
Top of Cement (ft) 2916
TOC Method Circulated

Open Hole

Hole Size (in) 3 7/8
Top (ft) 3485
Bottom (ft) 3576

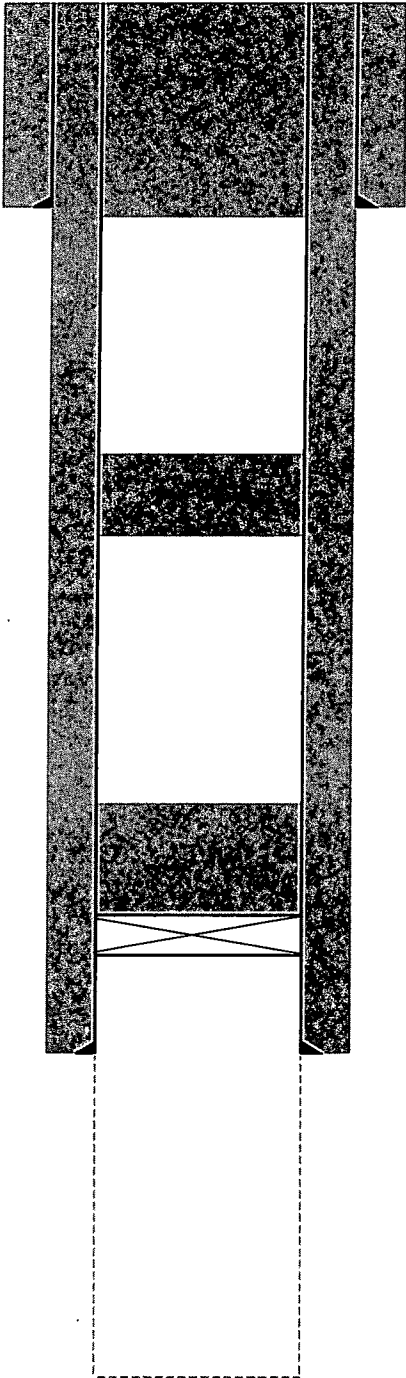
CURRENT WELLBORE SCHEMATIC

Operator: Resaca Operating Co
Well Name: Cooper Jal #204
Well Location:
Calls 1980' FNL, 1980' FWL
Unit F
Section 24
Township 24S
Range 36E

40 sx cmt plug surf - 350'

25 sx cmt plug 1065' - 1300'
TOC tagged @ 1065'

CIBP @ 2980' w/ 30 sx cmt
TOC tagged @ 2655'



Surface Casing

Hole Size (in): 11
Casing Size (in): 8 5/8
Casing Weight (ppf): 29.8
Setting Depth (ft): 313
Amount Cement (sx): 150
Top of Cement (ft): 0
TOC Method: Circulated

Production Casing

Hole Size (in): 7 7/8
Casing Size (in): 5 1/2
Casing Weight (ppf): 14
Setting Depth (ft): 3030
Amount Cement (sx): 700
Top of Cement (ft): 0
TOC Method: Circulated

Open Hole

Hole Size (in): 4 3/4
Top (ft): 3030
Bottom (ft): 3188

Total Depth (ft). 3188

CURRENT WELLBORE SCHEMATIC

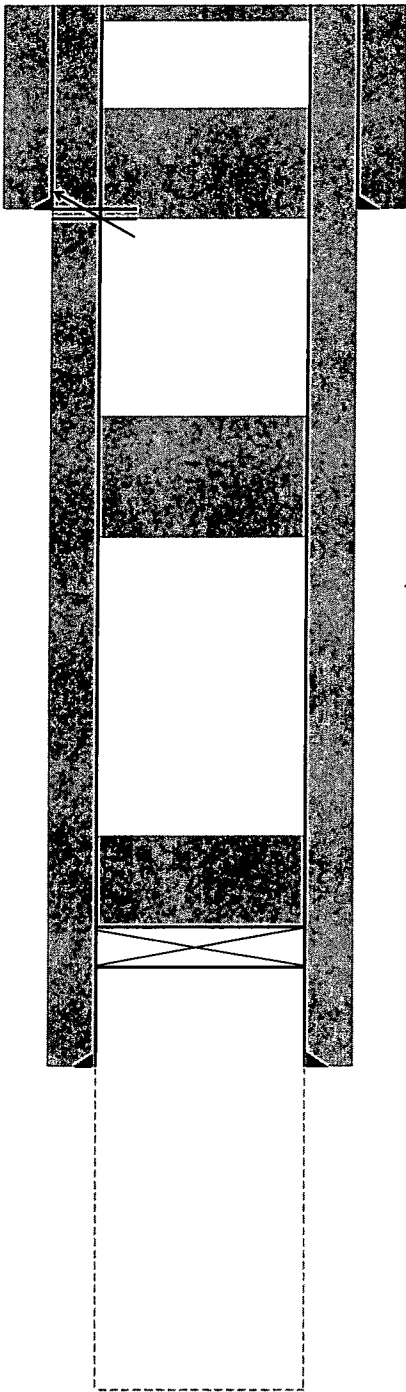
Operator. Resaca Operating Co.
Well Name. Cooper Jal #210
Well Location.
Calls 1980' FSL, 660' FWL
Unit L
Section 24
Township 24S
Range 36E

10 sx cmt plug surf - 30'

perf sqz holes @ 350'
sqz 75 sx cmt
TOC inside 5 1/2" tagged @ 145'

25 sx cmt plug 1050' - 1300'
TOC tagged @ 1050'

CIBP @ 2970' w/ 25 sx cmt
TOC tagged @ 2750'



Surface Casing

Hole Size (in) 11
Casing Size (in) 8 5/8
Casing Weight (ppf) 29
Setting Depth (ft) 293
Amount Cement (sx) 250
Top of Cement (ft) 0
TOC Method. Calculated

Production Casing

Hole Size (in) 7 7/8
Casing Size (in) 5 1/2
Casing Weight (ppf) 17
Setting Depth (ft) 3020
Amount Cement (sx) 900
Top of Cement (ft) 0
TOC Method. Calculated

Open Hole

Hole Size (in) 4 3/4
Top (ft) 3020
Bottom (ft) 3191

Total Depth (ft) 3191

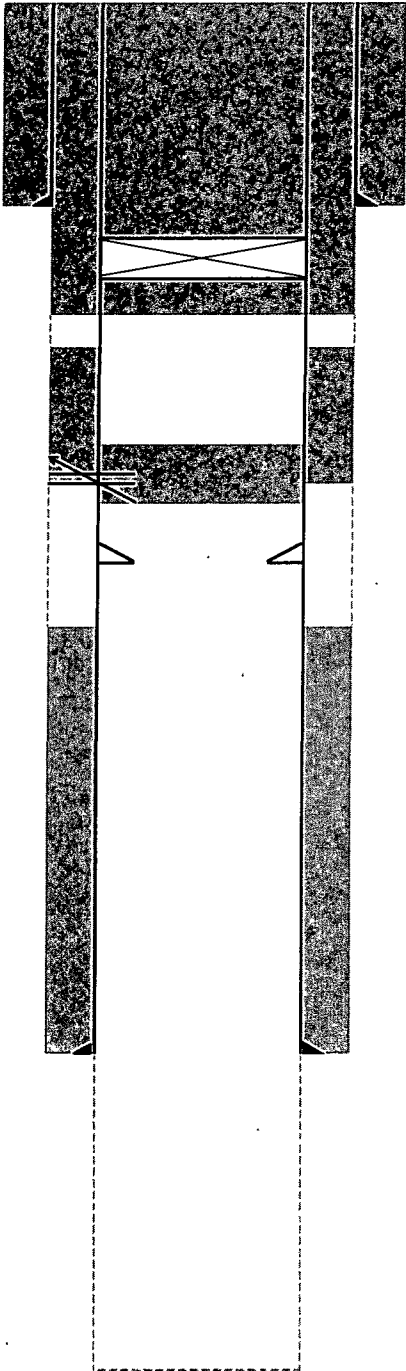
CURRENT WELLBORE SCHEMATIC

Operator: Resaca Operating Co.
Well Name: Cooper Jal #304
Well Location:
 Calls: 1650' FSL, 1650' FEL
 Unit: J
 Section: 13
 Township: 24S
 Range: 36E

40 sx cmt plug @ surf

csg leaks below 442'
cmt retainer @ 442'
sqz 160 sx cmt, circulated to surface

cmt plug tagged @ 1250'
perf sqz holes @ 1264'
sqz 200 sx cmt



Surface Casing

Hole Size (in): 11
Casing Size (in): 8 5/8
Casing Weight (ppf): 28
Setting Depth (ft): 285
Amount Cement (sx): 100
Top of Cement (ft): 0
TOC Method: Circulated

DV Tool

Depth (ft): Unknown
Amount Cement (sx): 0
Top of Cement (ft): -----
TOC Method: -----

Production Casing

Hole Size (in): 8
Casing Size (in): 5 1/2
Casing Weight (ppf): 15.5
Setting Depth (ft): 3021
Amount Cement (sx): 200
Top of Cement (ft): 1995
TOC Method: Calculated

Open Hole

Hole Size (in): 4 3/4
Top (ft): 3021
Bottom (ft): 3211

*Note: additional plugs are believed to exist in this well, however, documentation is not available

Total Depth (ft): 3211

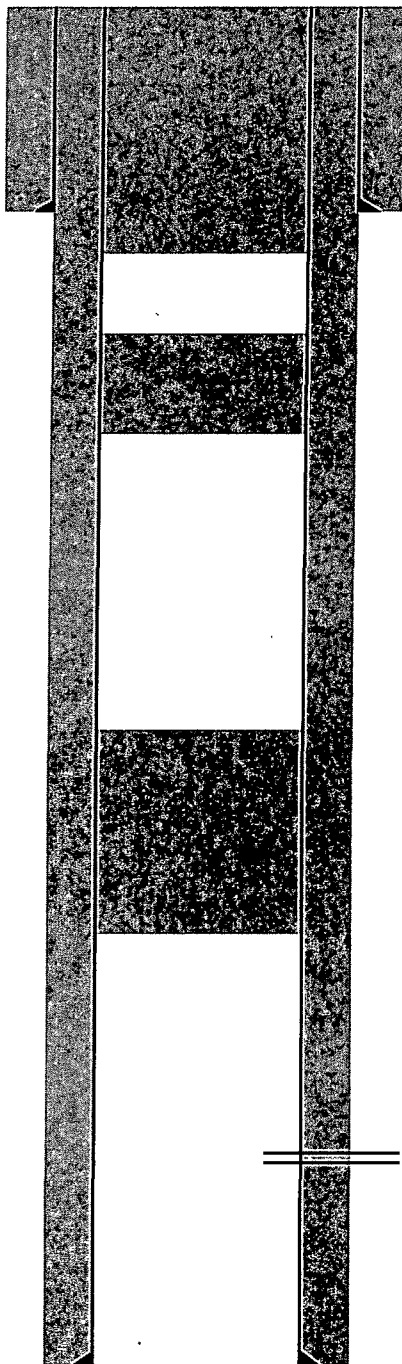
CURRENT WELLBORE SCHEMATIC

Operator. Northeast Loop Gas Company, L P
Well Name: Phillips-Goldstone #2
Well Location. 1674' FSL, 472' FEL
Calls H
Unit H
Section 26
Township 24S
Range 36E

10 sx cmt plug surf - 559'

25 sx cmt plug 872' - 1119'

50 sx cmt plug 2250' - 2954'
TOC tagged @ 2250'



Surface Casing

Hole Size (in). 12 1/4
Casing Size (in). 8 5/8
Casing Weight (ppf). 28
Setting Depth (ft). 486
Amount Cement (sx). 300
Top of Cement (ft). 0
TOC Method. Circulated

Perforations

Top (ft). 3017
Bottom (ft). 3099

Production Casing

Hole Size (in). 7 7/8
Casing Size (in). 5 1/2
Casing Weight (ppf). 17
Setting Depth (ft). 3398
Amount Cement (sx). 700
Top of Cement (ft). 0
TOC Method. Circulated

Total Depth (ft). 3400

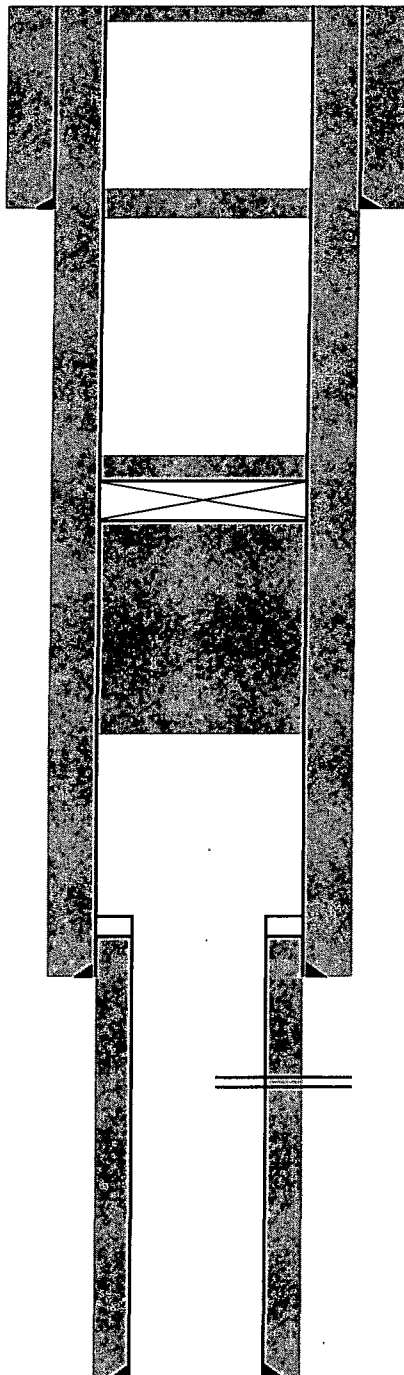
CURRENT WELLBORE SCHEMATIC

Operator Lewis B. Burleson, Inc.
 Well Name: S. W. Harrison #3
 Well Location:
 Calls 1980' FSL, 1980' FWL
 Unit K
 Section 25
 Township 24S
 Range 36E

10 sx cmt plug surf - 96'

15 sx cmt plug 205' - 340'

10 sx cmt plug 1000' - 1100'
 cmt retainer @ 1100'
 sqz 150 sx cmt



Surface Casing

Hole Size (in) 11
 Casing Size (in) 8 5/8
 Casing Weight (ppf) 29.8
 Setting Depth (ft): 309
 Amount Cement (sx). 150
 Top of Cement (ft): 0
 TOC Method: Circulated

Production Casing

Hole Size (in) 7 7/8
 Casing Size (in) 5 1/2
 Casing Weight (ppf) 14
 Setting Depth (ft). 2952
 Amount Cement (sx). 750
 Top of Cement (ft) 0
 TOC Method. Circulated

Perforations

Top (ft) 3397
 Bottom (ft) 3554

Liner

Casing Size (in) 4
 Liner Weight (ppf) 10.5
 Liner Top (ft) 2735
 Liner Bottom (ft) 3594
 Amount Cement (sx). 35
 Top of Cement (ft). 2735
 TOC Method: Circulated

Total Depth (ft) 3594

ATTACHMENT TO FORM C-108

Resaca Operating Co.
Cooper Jal Unit

Item VII – data on the proposed operation

1. The proposed average daily rate of injection is 600 STBD per well. The proposed maximum daily rate of injection is 2,000 STBD per well.
2. The system will be closed.
3. The table below lists the top anticipated perforation and proposed maximum injection pressure for each of the proposed injection wells.

<u>Well</u>	<u>Depth to Top Perforation (ft)</u>	<u>Proposed Maximum Injection Pressure (psi)</u>
CJU # 108	3000	600
CJU # 109	2972	590
CJU # 114	2978	595
CJU # 148	3018	600
CJU # 206	2983	595
CJU # 213	2995	595
CJU # 230	2976	595

API
30-075

4. Currently, all injected water is produced water from the Jalmat and Langlie Mattix Pools. Off-lease make-up water is obtained from several offset operators.
5. Not Applicable.

ATTACHMENT TO FORM C-108

Resaca Operating Co.
Cooper Jal Unit



Item IX – proposed stimulation program

All wells will be acidized, and/or fracture stimulated.

Affidavit of Publication

State of New Mexico,
County of Lea.

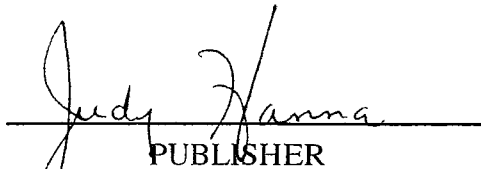
I, JUDY HANNA
PUBLISHER

of the Hobbs News-Sun, a
newspaper published at Hobbs, New
Mexico, do solemnly swear that the
clipping attached hereto was
published in the regular and entire
issue of said newspaper, and not a
supplement thereof for a period

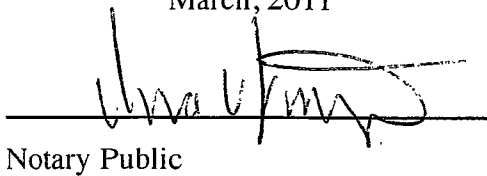
of 1 issue(s).

Beginning with the issue dated
March 16, 2011

and ending with the issue dated
March 16, 2011


PUBLISHER

Sworn and subscribed to before me
this 22nd day of
March, 2011


Notary Public

My commission expires
February 09, 2013
(Seal)



This newspaper is duly qualified to
publish legal notices or
advertisements within the meaning of
Section 3, Chapter 167, Laws of
1937 and payment of fees for said
publication has been made.

LEGAL
March 16, 2011
**NOTICE OF APPLICATION FOR FLUID INJECTION
WELL PERMIT**
Resaca Operating Company
1331 Lamar Street, Suite 1450
Houston, TX 77010
Contact Party: Masters Consulting, LLC
c/o Keith Masters
(512) 908-2016

is applying to the Oil Conservation Division of the Energy
and Minerals Department of the State of New Mexico for a
permit to inject fluid into a formation that is productive of oil
and gas. The applicant proposes to inject fluid into the Jal-
mat and Langille Matix pools in the Cooper Jal Unit, Well
Nos. 103, 109, 114, 148, 206, 213 and 230. The wells are
located 5 miles North of Jal, NM, in Sections 13, 24 and 25,
Township 24S, Range 36E and Section 18, Township 24S,
Range 37E. Fluid will be injected into the subsurface depth
intervals of 2950'-3750' at a maximum rate of 1000 BPD
and a maximum pressure of 600 PSIG.

Requests for a public hearing from persons who can show
that they are adversely affected, or requests for further in-
formation concerning any aspect of the application, should
be submitted, in writing, within fifteen (15) days of publica-
tion, to the Oil Conservation Division, 1220 S. Saint Francis
Drive, Santa Fe, NM 87504 (Telephone (505) 476-3440).
#26429

67106751

00069289

MASTERS CONSULTING, LLC
7500 RIALTO BLVD STE 180
AUSTIN, TX 78735

CERTIFICATE OF SERVICE

I hereby certify that completed copies of State of New Mexico Energy, Minerals, and Natural Resources Department, Oil Conservation Division Form C-108 were transmitted with a letter identifying the proposed injection wells and offering to provide a complete copy of the subject administrative application for expansion of the Cooper Jal Unit Waterflood Project in the Jalmat Pool, Lea County New Mexico, by registered mail, on the date indicated below, to the following affected parties:

Surface Owners : Deep Wells Ranch, Inc.
Star Route 1, Box 244
Jal, NM 88252

Louis Q. Thomas
P.O. Box 4377
Huachuca City, AZ 85616

Lea Partners
P.O. Box 4967
Houston, TX 77210

C.D. Woolworth Trust
Jal Public Library Fund
P.O. Box 178
Lal, NM 88252

James R. Pruett
13120 Turtle Creek Dr.
Oklahoma City, OK 73170

Watkins Scholarship Trust
Attn: Mr. Rusty Phenix
188 S. Main St.
Henderson, TX 75653

RRR Land & Cattle Company
2205 Bedford Drive
Midland, TX 79701

Offset Operators : Apache Corp.
303 Veterans Airpark Lane; Ste. 3000
Midland, TX 79705

Enervest Operating, L.L.C.
1001 Fannin St.; Ste. 800
Houston, TX 77002

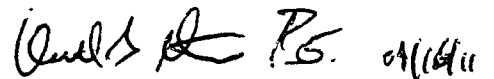
Cameron Oil & Gas, Inc.
P.O. Box 1456
Roswell, NM 88202-1456

Fulfer Oil & Cattle
P.O. Box 1224
Jal, NM 88252

Cimarex Energy Company of Colorado
600 N. Marienfeld St.; Ste. 600
Midland, TX 79701

Range Operating New Mexico, Inc.
100 Throckmorton St.; Ste. 1200
Fort Worth, TX 76102

Others: Bureau of Land Management
Attn: Mr. Wesley J. Ingram
620 E. Greene St.
Carlsbad, NM 88220


Keith B. Masters, P.E.

ATTACHMENT TO FORM C-108
Resaca Operating Co.
Cooper Jal Unit

Item VI - area of review well data

										Surface Casing										Production / Intermediate Casing										Production Casing / Internal Liner										Perforations or Open Hole Abandoned Prior to Plugging										Amount		Plugback	Total	Plugging		Status	
API Suffix	Section	Unit	Location	Operator	Original Well Name	Current Well Name	Hole Size (in)	Casing Size (in)	Casing Weight (ppf)	Setting Depth (ft)	Amount Cement (sx)	0.20 TOC	1.18 TOC	Method	Hole Size (in)	Casing Size (in)	Casing Weight (ppf)	Setting Depth (ft)	Amount Cement (sx)	0.20 TOC	1.18 TOC	Method	Date Set	Casing Size (in)	Casing Weight (ppf)	Setting Depth (ft)	Amount Cement (sx)	0.00 TOC	1.18 TOC	Method	Original Completion Date	Conversion Date	Current Completion Date	Perforations or Open Hole		Perforations or Open Hole		Perforations or Open Hole		Date Aband	Top	Bottom	Method	Depth	Amount Cement (sx or ft)	Depth (ft)	Depth (ft)	Plugging Date	Current	Proposed							
																																		Top	Bottom	Top	Bottom	Top	Bottom																		
11145	18	C	660 FNL	1980 FWL	Resaca Operating Co.	Bates #1	Cooper Jal #101	17.000	13.000	40.0	251	250	0	calk	12.000	9.625	47.0	2822	508	1110	calk	11/15/41	7.0	28.0	3440	100	2655	calk	11/20/41	04/21/76	06/04/96	2900	3166	-----	-----	05/17/96	3440	3572	CIBP	3300	35'	3265	3572	-----	-----	Prod	Prod										
11138	18	E	660 FNL	1980 FWL	Tesaco E&P, Inc.	Bates #1	Cooper Jal #104	17.000	8.625	28.0	291	125	0	calk	8.000	5.000	12.0	3510	125 *	2955	calk	07/02/50	08/06/71	07/02/50	06/06/07	08/27/07	3369	3733	3468	3733	08/25/07	3312	3318	LINER	-----	-----	03/08/00	-----	-----	Prod	P&A																
11147	18	F	660 FNL	1980 FWL	Resaca Operating Co.	Bates #3	Cooper Jal #105	11.000	8.625	32.0	1252	550	0	calk	7.875	5.500	17.0	3468	250	2410	TS	08/25/07	3.5	9.2	3353	120	70	ts	07/12/46	06/06/07	08/27/07	3369	3733	3468	3733	08/25/07	3312	3318	LINER	-----	-----	03/08/00	-----	-----	Inj	Inj											
09558	13	K	1650 FSL	1980 FWL	Resaca Operating Co.	Hunter #5	Cooper Jal #107	11.000	8.625	28.0	252	200	0	calk	7.875	5.500	15.5	3426	200	2336	calk	-----	-----	-----	-----	-----	-----	-----	-----	03/26/52	02/20/73	11/10/94	3070	3120	3405	3415	11/02/94	3426	3611	CIBP	3302	35'	3267	3611	-----	-----	Prod	Prod									
11142	18	L	1980 FSL	660 FWL	Resaca Operating Co.	Jack #2	Cooper Jal #108	12.250	9.625	32.0	304	150	0	calk	8.750	7.000	20.0	3411	200 *	2155	calk	-----	-----	-----	-----	-----	-----	-----	-----	03/01/50	-----	-----	3000	3197	04/23/96	3411	3640	CIBP	3350	35'	0	3640	07/28/00	P&A	Inj												
11133	18	K	1980 FSL	1980 FWL	Resaca Operating Co.	Jack #1	Cooper Jal #109	12.250 x	8.625	24.0	284	150	0	calk	8.75 x	5.500	14.0	3345	500	621	calk	10/02/86	3.5	9.3	3306	290	0	calk	10/26/48	09/24/71	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	0	3638	07/26/00	P&A	Inj												
11143	18	I	1980 FSL	660 FEL	Resaca Operating Co.	Russell #1-A	Cooper Jal #110	11.250	8.625	32.0	1200	700	0	calk	7.800	5.500	14.0	3450	250	2168	calk	08/02/05	4.0	-----	3766	0	-----	-----	09/19/46	02/20/73	09/28/96	2994	3770	3450	3587	-----	-----	-----	-----	-----	-----	3728	3770	-----	-----	Prod	Prod										
09557	13	M	330 FSL	990 FWL	Tesaco E&P, Inc.	Hunter #3	Cooper Jal #112	11.000	8.625	28.0	250	100	0	calk	8.000	5.500	14.0	3442	200	2416	calk	-----	-----	-----	-----	-----	-----	-----	-----	02/19/52	07/20/71	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	0	3617	02/15/01	P&A	P&A											
09496	13	N	330 FSL	2310 FWL	Resaca Operating Co.	Hunter #2	Cooper Jal #113	13.000	10.750	40.0	233	125	0	calk	8.250	7.000	17.0	3215	200	1399	calk	11/25/51	5.5	14.0	3436	150	2406	calk	12/02/51	-----	05/26/94	3001	3615	-----	-----	-----	-----	-----	-----	-----	-----	3615	3615	-----	-----	Prod	Prod										
09559	13	O	330 FSL	2310 FEL	Resaca Operating Co.	Maggie Dunn #4	Cooper Jal #114	12.500	8.625	28.0	245	250	0	calk	7.875	5.500	15.5	3440	200 *	2350	calk	-----	-----	-----	-----	-----	-----	-----	-----	09/21/54	07/19/71	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	0	3526	03/23/01	P&A	Inj											
09566	13	P	900 FSL	990 FEL	Resaca Operating Co.	Dunn #1	Cooper Jal #115	12.250	9.625	36.0	1195	550	0	calk	8.750	7.000	20.0	3015	300	1131	calk	04/23/75	4.5	10.5	3668	750	2942	sqz	05/12/47	-----	06/27/95	3100	3153	3015	3505	06/27/95	3221	3518	CIBP	3200	20'	3180	3668	-----	-----	Prod	Prod										
11141	18	M	660 FSL	660 FWL	Resaca Operating Co.	Jack #1	Cooper Jal #116	12.250	9.625	40.0	243	150	0	calk	8.625	7.000	20.0	3410	500	1201	TS	-----	-----	-----	-----	-----	-----	-----	-----	03/01/50	09/23/71	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	3641	3641	-----	-----	Inj	Inj										
11140	18	N	660 FSL	1980 FWL	Resaca Operating Co.	Cooper Jal #117	12.250	8.625	24.0	320	150	0	calk	7.875	5.500	14.0	3350	500	626	calk	-----	-----	-----	-----	-----	-----	-----	-----	-----	11/23/48	04/04/05	2950	3660	3058	3648	-----	-----	-----	-----	-----	-----	3660	3660	-----	-----	Prod	Prod										
11139	18	O	660 FSL	1980 FEL	Resaca Operating Co.	Bates #2	Cooper Jal #118	11.000	8.625	32.0	1148	375	0	calk	7.875	5.500	15.5	3474	250	2112	calk	11/09/07	3.5	9.2	3384	140	0	calk	09/28/46	09/08/71	06/03/08	2970	3628	3465	3628	-----	-----	-----	-----	-----	-----	3628	3628	-----	-----	Inj	Inj										
09631	24	C	660 FNL	1980 FWL	Resaca Operating Co.	Hunter #4	Cooper Jal #120	11.000	8.625	29.8	315	150	0	calk	7.875	5.500	15.5	3000	650	294	TS	12/13/54	4.0	9.5	3604	45	2854	calk	11/10/51	10/07/71	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	3574	3604	-----	-----	Inj	Inj											
09645	24	B	990 FNL	1650 FEL	Resaca Operating Co.	Dunn #2	Cooper Jal #121	12.500	9.625	32.3	1174	550	0	calk	8.750	7.000	20.0	3017	350	819	calk	01/25/75	4.5	10.5	3560	700	2966	sqz	02/15/49	-----	05/03/05	3018	3760	-----	-----	-----	-----	-----	-----	-----	-----	3760	3760	-----	-----	Prod	Prod										
09638	24	A	330 FNL	990 FEL	Resaca Operating Co.	Dunn #6	Cooper Jal #122	12.250	8.625	24.0	280	152	0	calk	7.875	5.500	14.0	3465	200 *	2375	calk	-----	-----	-----	-----	-----	-----	-----	-----	06/17/54	05/17/71	09/02/03	3020	3552	3465	3552	-----	-----	3552	3552	02/05/01	-----	Inj	Inj													
11150	19	D	330 FNL	990 FWL	Resaca Operating Co.	Jack #5	Cooper Jal #123	12.500	9.625	36.0	290	150	0	calk	7.875	5.500	17.0	3342	250 *	1980	calk	-----	-----	-----	-----	-----	-----	-----	-----	05/03/52	-----	-----	-----	-----	-----	2996	3650	-----	-----	3650	3650	02/05/01	-----	P&A	Prod												
11153	19	C	660 FNL	1917 FWL	Resaca Operating Co.	Jack #8	Cooper Jal #124	12.250	9.625	36.0	308	175	0	calk	7.875	5.500	15.5	3528	200 *	2438	calk	-----	-----	-----	-----	-----	-----	-----	-----	03/09/52	07/22/71	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	3225	3535	-----	-----	Prod	Prod										
09632	24	F	1650 FSL	2310 FWL	Resaca Operating Co.	Edna E. Hunter #5	Cooper Jal #125	11.000	8.625	24.0	1184	375	0	calk	7.875	5.500	14.0	3653	680	0	calk	09/05/54	-----	-----	-----	-----	-----	-----	-----	-----	06/26/87	-----	06/26/87	3035	3622	3530	36																				