

Submit 1 Copy To Appropriate District Office  
District I - (575) 393-6161  
1625 N. French Dr., Hobbs, NM 88240  
District II - (575) 748-1283  
811 S. First St., Artesia, NM 88210  
District III - (505) 334-6178  
1000 Rio Brazos Rd., Aztec, NM 87410  
District IV - (505) 476-3460  
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
Energy, Minerals and Natural Resources

Form C-103  
Revised August 1, 2011

OIL CONSERVATION DIVISION  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

<b>SUNDRY NOTICES AND REPORTS ON WELLS</b> (DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)		WELL API NO. 30-015-24708
1. Type of Well: Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other <input type="checkbox"/>		5. Indicate Type of Lease STATE <input checked="" type="checkbox"/> FEE <input type="checkbox"/>
2. Name of Operator Chevron USA INC		6. State Oil & Gas Lease No.
3. Address of Operator 6301 DEAUVILLE BLVD., MIDLAND, TX 79706		7. Lease Name or Unit Agreement Name Carrasco 18
4. Well Location Unit Letter <u>D</u> : <u>990</u> feet from the <u>North</u> line and <u>990</u> feet from the <u>West</u> line Section <u>18</u> Township <u>23S</u> Range <u>28E</u> NMPM County <u>Eddy</u>		8. Well Number: <u>1</u>
11. Elevation (Show whether DR, RKB, RT, GR, etc.) GR 3,059' & KB 3,077'		9. OGRID Number 4323
		10. Pool name or Wildcat Lovington; Delaware, South

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:	SUBSEQUENT REPORT OF:
PERFORM REMEDIAL WORK <input type="checkbox"/>	REMEDIAL WORK <input type="checkbox"/>
TEMPORARILY ABANDON <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
PULL OR ALTER CASING <input type="checkbox"/>	COMMENCE DRILLING OPNS. <input type="checkbox"/>
DOWNHOLE COMMINGLE <input type="checkbox"/>	P AND A <input type="checkbox"/>
	CASING/CEMENT JOB <input type="checkbox"/>
OTHER: <input type="checkbox"/>	OTHER: <input type="checkbox"/>

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 19.15.7.14 NMAC. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion. 13-3/8" 24# @ 400' TOC surface, 5 1/2" 15.5# @ 4900' TOC surface, perforations 3969'-3972', 3975'-3986'.

Chevron USA INC respectfully request to abandon this well as follows:

1. Call and notify NMOCD 24 hrs before operations begin. Sustained casing pressure exists on surface string.
2. MIRU high pressure low volume pump.
3. Hook up to surface casing valve, and begin squeezing Nano-Sealant down bradenhead until pressure remains steady at 1800 psi.
4. Allow 24-48 hours to setup.
5. Verify zero pressure on all casing strings.
6. Cut wellhead off and install dry hole marker as per NMOCD requirements.

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNATURE [Signature] TITLE Well Abandonment Engineer, Attorney-in-fact DATE 2/4/19

Type or print name Howie Lucas E-mail address: howie.lucas@chevron.com PHONE: (832)-588-4044  
For State Use Only

APPROVED BY: [Signature] TITLE Staff mg. DATE 2/6/19  
Conditions of Approval (if any):

\*See Attached COAs

ENTERED  
Feb 26 2019

Well: **Carrasco 18-1**

Field: **Lovington North**

Reservoir: **Brushy Canyon, Atoka, Morrow**

**Location:**

990' FNL & 990' FWL

Section: 18

Township: 23S

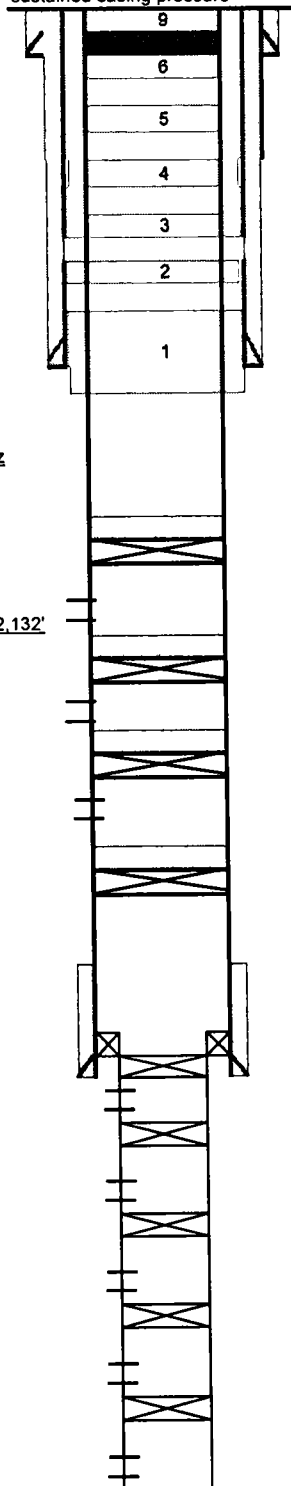
Range: 28E

County: Eddy State: NM

- 9 Well showed zero pressure on all strings, bubble test passed, spotted 236 sx f/ 689' t/ surface
- 8 Placed Zonite f/ 766' t/ 688'
- 7 Perforated f/ 760' t/ 757' w/ roll shot
- 6 Perforated @ 921' and 820'  
Set CICR @ 908' and performed sqz w/ 87 sx gas block, added 61 sx on top of CICR t/ 760', tagged @ 766'
- 5 Perforated @ 1101' and 1000'  
Set CICR @ 1090', squeezed resin cmt and spotted 45 sx cmt t/ 950' tagged @ 954' and upgraded w/ 12 sx tagged w/ wireline @ 925'
- 4 Perforated @ 1171' and 1285'  
Set CICR @ 1265', perform suicide sqz w/ 84 sx gas block, tagged @ 1114'
- 3 Perforated @ 2100' and 1725', set CICR @ 2080', performed suicide squeeze w/ 101 sx gas block cmt spot 244 sx gas block t/ 1330', tagged @ 1381', upgraded w/ 29 sx
- 2 Spotted 100 sx CL "C" cmt f/ 2,435' t/ 2,132' tagged cmt @ 2,100'
- 1 Spotted MLF f/ 5,220' t/ 2,435'

**Current Wellbore Diagram**

9-5/8" X 13-3/8" has 4 psi sustained casing pressure



TD: 12,650'

**Well ID Info:**

API No: 30-025-29092

Spud Date: 2/4/1984

Compl. Date: 7/25/1984

**Elevations:**

GL: 3,059'

KB: 3,077'

Conductor: 20", 94#, J-55

Set: @ 437' w/ 750 sks

Hole Size: 26"

Circ: Yes TOC: Surface

TOC By: Circulated

Surface Csg: 13-3/8", 68#, K-55

Set: @ 2,386' w/ 2,900 sks

Hole Size: 17-1/2"

Circ: Yes TOC: Surface

TOC By: Circulated

Production Csg: 9 5/8", 40#, N-80

Set: @ 10,642' w/ 1,850 sks

Hole Size: 12-1/4"

Circ: No TOC: 8,487'

TOC By: Temp Survey

DV Tool: 5,619

Production Liner: 5 1/2", 20# N-80

Set: @ 10,108'-12,650' w/ 800 sks

Hole Size: 7 7/8"

Circ: No TOC: 10,108'

TOC By: Temperature Survey

**Formation Tops**

Anhydrite	437
Salt	1775
Bone Springs	5850
Wolfcamp	9195
Canyon	10770
Strawn	11060
Morrow	11850

Updated: 5

7/24/2018

By: H Lucas

Well: **Carrasco 18-1**

Field: **Lovington North**

Reservoir: **Brushy Canyon, Atoka, Morrow**

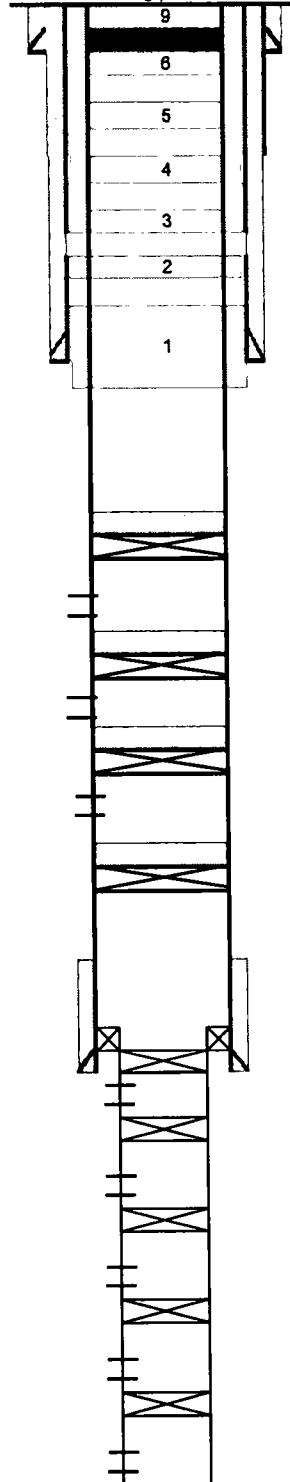
**Location:**

990' FNL & 990' FWL  
Section: 18  
Township: 23S  
Range: 28E  
County: Eddy State: NM

- 3 Check pressures on all strings, bubble test and verify zero pressure
- 2 Allow 24-48 hours to set
- 1 Hook up to surface casing valve at surface, begin squeezing Nano-Sealant down bradenhead until squeeze locks up, max pressure no more than 1800 psi

**Current Wellbore Diagram**

9-5/8" X 13-3/8" has 4 psi sustained casing pressure



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**Set:** @ 2,386' w/ 2,900 sks

**Hole Size:** 17-1/2"

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**Production Csg:** 9 5/8", 40#, N-80

**Set:** @ 10,642' w/ 1,850 sks

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**DV Tool:** 5,619

**Production Liner:** 5 1/2", 20# N-80

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<b>Canyon</b>	<b>10770</b>
<b>Strawn</b>	<b>11060</b>
<b>Morrow</b>	<b>11850</b>

Updated: 5

7/24/2018

By: H Lucas

## D264 Nanosealant

High-injectivity, self-diverting leak repair fluid

### APPLICATIONS

- Remediation of sustained casing pressure
- Repair of pinhole leaks in cemented casings

### BENEFITS

- Repairs leaks as small as 20  $\mu\text{m}$  with injectivity comparable with that of water
- Minimizes operation time and number of squeezes by self diverting to plug multiple gaps or cracks of different widths
- Simplifies operations as a single-component fluid requiring no mixing at surface
- Reduces cleanup time

### FEATURES

- Self activation in contact with cement
- Coiled tubing, drillpipe, or surgical placement options
- Ability to withstand high pressure differentials (>1,000 psi/ft [>22.6 MPa/m]) when placed in microleaks
- High drillability

D264 nanosealant is a single-component, self-diverting technology used to repair small cracks and microannuli in a cemented annulus. It is ideal for repairs for which injectivity is too low to pass Portland cement-based systems or microcement systems such as SqueezeCRETE\* remedial cementing solution.

### Plug more leaks in a single squeeze

The D264 nanosealant begins to set only after contact with set cement and hardens in a matter of hours. This property extends the possible squeeze time and combines with the self-diverting property to enable penetration into more leakage paths—as each leak is sealed, the fluid flows into the next gap.

Another advantage of this setting mechanism is that it can be implemented rapidly without laboratory testing of thickening time or curing time, which are required for well cement or other sealants. It also improves postsqueeze cleanup because of the low risk of setting inside tubulars or surface equipment.

This nanosealant is a single-component system; thus, no mixing or blending is required at surface. Because of its low rheology and nanosized particles, injectivity is similar to that of water and has been demonstrated to penetrate leaks as small as 20  $\mu\text{m}$ .

### Choose the best placement for each well

The nanosealant can be placed through conventional tubing, coiled tubing, or with a CHDT\* cased hole dynamics tester. The CHDT tester is a wireline tool that creates a hole in the casing, injects the sealant, and then plugs the hole with a mechanical metal-to-metal seal that can withstand pressure differentials as high as 10,000 psi [69 MPa].

### D264 Nanosealant Specifications

Placement temperature	Up to 250 degF [120 degC]
Maximum exposure temperature	300 degF [150 degC]

## **CONDITIONS FOR PLUGGING AND ABANDONMENT**

### **District II / Artesia N.M.**

The following is a guide or checklist in preparation of a plugging program, this is not all inclusive and care must be exercised in establishing special plugging programs in unique and unusual cases, **Notify NMOCD District Office II at (575)-748-1283 at least 24 hours before beginning work.**

1. A notice of intent to plug and abandon a wellbore is required to be approved before plugging operations are conducted. A cement evaluation tool is required in order to ensure isolation of producing formations, protection of water and correlative rights. A cement bond log or other accepted cement evaluation tool is to be provided to the division for evaluation if one has not been previously run or if the well did not have cement circulated to surface during the original casing cementing job or subsequent cementing jobs.
2. Closed loop system is to be used for entire plugging operation. Upon completion, contents of steel pits are to be hauled to a permitted disposal location.
3. Trucking companies being used to haul oilfield waste fluids to a disposal – commercial or private – shall have an approved NMOCD C-133 permit. A copy of this permit shall be available in each truck used to haul waste products. It is the responsibility of the operator as well as the contractor, to verify that this permit is in place prior to performing work. Drivers shall be able to produce a copy upon request of an NMOCD Field inspector.
4. Filing a subsequent C-103 will serve as notification that the well has been plugged.
5. A final C-103 shall be filed (and a site inspection by NMOCD Inspector to determine if the location is satisfactorily cleaned, all equipment, electric poles and trash has been removed to Meet NMOCD standards) before bonding can be released.
6. If the well is not plugged within 1
7. If work has not begun within 1 Year of the approval of this procedure, an extension request must be file stating the reason the well has not been plugged.
8. **Squeeze pressures are not to exceed 500 psi, unless approval is given by NMOCD.**
9. Produced water **will not** be used during any part of the plugging operation.
10. Mud laden fluids must be placed between all cement plugs mixed at 25 sacks per 100 bbls of water.
11. All cement plugs will be a minimum of 100' in length or a minimum of 25 sacks of cement, whichever is greater. 50' of calculated cement excess required for inside casing plugs and 100% calculated cement excess required on outside casing plugs.
12. **Class 'C' cement will be used above 7500 feet.**
13. **Class 'H' cement will be used below 7500 feet.**
14. **A cement plug is required to be set 50' above and 50' below, casing stubs, DV tools, attempted casing cut offs, cement tops outside casing, salt sections and anywhere the casing is perforated, these plugs require a 4 hour WOC and then will be tagged**
15. **All Casing Shoes Will Be Perforated 50' below shoe depth and Attempted to be Squeezed, cement needs to be 50' above and 50' Below Casing Shoe inside the Production Casing**

16. When setting the top out cement plug in production, intermediate and surface casing, wellbores should remain full at least 30 minutes after plugs are set
17. **A CIBP is to be set within 100' of production perforations, capped with 100' of cement, WOC 4 hours and tag.**
18. A CIBP with 35' of cement may be used in lieu of the 100' plug if set with a bailer. This plug will be placed within 100' of the top perforation, **(WOC 4 hrs and tag).**
19. **No more than 3000' is allowed between cement plugs in cased hole and 2000' in open hole.**
20. Some of the Formations to be isolated with cement plugs are: These plugs to be set to isolate formation tops
  - A) Fusselman
  - B) Devonian
  - C) Morrow
  - D) Wolfcamp
  - E) Bone Springs
  - F) Delaware
  - G) Any salt sections
  - H) Abo
  - I) Glorieta
  - J) Yates.
  - K) **Potash---** (In the R-111-P Area (Potash Mine Area), a solid cement plug must be set across the salt section. Fluid used to mix the cement shall be saturated with the salts that are common to the section penetrated and in suitable proportions, not more than 3% calcium chloride (by weight of cement) will be considered the desired mixture whenever possible, **WOC 4 hours and tag, this plug will be 50' below the bottom and 50' above the top of the Formation.**
21. **If cement does not exist behind casing strings at recommended formation depths, the casing can be cut and pulled with plugs set at recommended depths. If casing is not pulled, perforations will be shot and cement squeezed behind casing, WOC and tagged. These plugs will be set 50' below formation bottom to 50' above formation top inside the casing**

#### **DRY HOLE MARKER REQUIREMENTS**

The operator shall mark the exact location of the plugged and abandoned well with a steel marker not less than four inches in diameter, 3' below ground level with a plate of at least ¼" welded to the top of the casing and the dry hole marker welded on the plate with the following information welded on the dry hole marker:

**1. Operator name 2. Lease and Well Number 3.API Number 4. Unit Letter 5. Quarter Section (feet from the North, South, East or West) 6. Section, Township and Range 7. Plugging Date 8. County (SPECIAL CASES)-----AGRICULTURE OR PRARIE CHICKEN BREEDING AREAS**

In these areas, a below ground marker is required with all pertinent information mentioned above on a plate, set 3' below ground level, a picture of the plate will be supplied to NMOCD for record, the exact location of the marker (longitude and latitude by GPS) will be provided to NMOCD (We typically require a current survey to verify the GPS)