

ABOVE THIS LINE FOR DIVISION USE ONLY

PMX

NEW MEXICO OIL CONSERVATION DIVISION
 - Engineering Bureau -
 1220 South St. Francis Drive, Santa Fe, NM 87505



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 Intermittent gas injection

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

- [A] Working, Royalty or Overriding Royalty Interest Owners
- [B] X 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

North Lusk 29 Federal #1
 30-025-34673
 Chevron USA Inc

[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.

Scott M. Ingram
 Print or Type Name

Scott M. Ingram
 Signature

Consulting Earth Scientist
 Title

8/19/13
 8/15/13
 Date

scottingram@chevron.com
 e-mail Address



Scott M. Ingram
Consulting Earth Scientist

Chevron USA, Inc.
15 Smith Road,
Midland, Texas 79705
Tel 432 687-7212
Fax 432 687-7871
smin@chevron.com

August 19, 2013

New Mexico Oil Conservation Division
1220 South St Francis Drive
Santa Fe, NM 87505

Attention: Mr. Richard Ezeanyim

Re: C-108 Application for Gas Injection, Lusk '29' Federal #1 API 30-025-34673

Dear Mr. Ezeanyim,

Chevron desires to renew its C-108 application for gas injection into the subject well which was initially submitted to the Division on March 21, 2013 (copy attached). As you may know or recall, that effort was tabled shortly thereafter as we learned the gas sales line would be completed before we could implement the reinjection. Since that time we have been selling gas, however, due to high drilling activity in the area, which is projected to continue for years, and resulting high sales line pressures beyond Chevron's control, as well as occasionally having an H2S or N2 content above pipeline specs, we find ourselves periodically forced to flare produced gas from the Cross Bones 2 29 #1H and the 1-29 #2H wells, in order to continue to produce liquid hydrocarbons from these two wells. Our most recent gas analyses for each of the two Cross Bones wells, which are representative of recent sampling, are now included in the attached C-108.

To better protect the environment and save and later recover the value of the gas, we desire the Division's approval to inject this produced gas stream into the current Strawn completion of the Lusk 29 Federal #1 (identical MI & RI ownership) as needed, and then to reverse this process and send the combined gas stream to sales when conditions allow. We propose that the injection volume will be metered so that reservoir source volumes will be clear and that all royalties would be paid at the time of sales.

Therefore, please reinstate your review of the subject application as quickly as possible. Other than the addition of the referenced gas analyses, no material circumstances have changed since the original filing of this C-108.

Sincerely,

Scott M. Ingram

Ezeanyim, Richard, EMNRD

From: Ingram, Scott (ScottIngram) <ScottIngram@chevron.com>
Sent: Wednesday, October 16, 2013 2:51 PM
To: Ezeanyim, Richard, EMNRD
Subject: Chevron's Lusk 29 Fed #1 C-108 Application - Amended Item XII Response
Attachments: Chevron Lusk 29 Fed #1 C-108 Item XII.pdf

Thank you Richard for allowing me to amend my incorrect response to Item XII of our referenced C-108 application. I appreciate it very much.

Sincerely, Scott

Scott M. Ingram

Consulting Earth Scientist
Mid-Continent Business Unit
Chevron North America E & P
15 Smith Road, Midland, Tx. 79705
432-687-7212 office 432-238-3479 mobile
scottingram@chevron.com

God Bless America

CONFIDENTIALITY NOTICE: This message may be confidential and privileged. If you believe this email has been sent to you in error, please reply to the sender that you received the message then please destroy this email.



Scott M. Ingram
Consulting Earth Scientist

Chevron USA, Inc.
15 Smith Road,
Midland, Texas 79705
Tel 432 687-7212
Fax 432 687-7871
smin@chevron.com

Date 10/16/2013

Mr. Richard Ezeanyim
Bureau Chief
Engineering & Geological Services Bureau
New Mexico Oil Conservation Division

**Re: Chevron's C-108 Application For Authority To Inject
Lusk 29 Federal #1**

Dear Mr. Ezeanyim,

Thank you for bringing to my attention my oversight in responding to Item XII on the referenced C-108 Application, "Not Applicable" was not a correct response to this requirement.

In response to Item XII, I can affirmatively state that we have examined all available geologic and engineering data and find no evidence of open faults or any other hydrologic connection between this disposal zone and any underground sources of drinking water. This disposal zone is an isolated Strawn biohermal mound which occurs at a depth in excess of 11,300' and has limited areal and vertical extent, imaged and confirmed with 3D seismic. There are no known faults, or other hydrologic conditions, in the immediate area that would connect it to any fresh water source.

Please excuse my oversight and accept this document as a replacement response to Item XII. Also, please contact me if you have any additional questions regarding this application.

Sincerely,

A handwritten signature in black ink that reads "Scott M. Ingram". The signature is written in a cursive, flowing style.

Scott M. Ingram

APPLICATION FOR AUTHORIZATION TO INJECT

- I. PURPOSE: NA Secondary Recovery NA Pressure Maintenance NA Disposal NA Storage X Temporary Gas Injection
Application qualifies for administrative approval? XX Yes No
- II. OPERATOR: Chevron U.S.A.
ADDRESS: 15 Smith Road, Midland, Tx 79705
CONTACT PARTY: Scott Ingram PHONE: 432-687-7212
- 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 X No
If yes, give the Division order number authorizing the project:
- 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.
- 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.
- VII. Attach data on the proposed operation, including: **See attached document.**
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. **No incremental stimulation will be needed or utilized.**
- *X. Attach appropriate logging and test data on the well. (If well logs have been filed with the Division, they need not be resubmitted). **Logs have been filed with the Division.**
- *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. **No fresh water wells with a 1 mile radius.**
- 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.
- 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: Scott M. Ingram TITLE: Consulting Earth Scientist
SIGNATURE: Scott M. Ingram DATE: 3/20/13
E-MAIL ADDRESS: scottingram@chevron.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:

III. WELL DATA

A. The following well data must be submitted for each injection well covered by this application. The data must be both in tabular and schematic form and shall include:

- (1) Lease name; Well No.; Location by Section, Township and Range; and footage location within the section.
- (2) Each casing string used with its size, setting depth, sacks of cement used, hole size, top of cement, and how such top was determined.
- (3) A description of the tubing to be used including its size, lining material, and setting depth.
- (4) The name, model, and setting depth of the packer used or a description of any other seal system or assembly used.

Division District Offices have supplies of Well Data Sheets which may be used or which may be used as models for this purpose. Applicants for several identical wells may submit a "typical data sheet" rather than submitting the data for each well.

B. The following must be submitted for each injection well covered by this application. All items must be addressed for the initial well. Responses for additional wells need be shown only when different. Information shown on schematics need not be repeated.

- (1) The name of the injection formation and, if applicable, the field or pool name.
- (2) The injection interval and whether it is perforated or open-hole.
- (3) State if the well was drilled for injection or, if not, the original purpose of the well.
- (4) Give the depths of any other perforated intervals and detail on the sacks of cement or bridge plugs used to seal off such perforations.
- (5) Give the depth to and the name of the next higher and next lower oil or gas zone in the area of the well, if any.

XIV. PROOF OF NOTICE

All applicants must furnish proof that a copy of the application has been furnished, by certified or registered mail, to the owner of the surface of the land on which the well is to be located and to each leasehold operator within one-half mile of the well location.

Where an application is subject to administrative approval, a proof of publication must be submitted. Such proof shall consist of a copy of the legal advertisement which was published in the county in which the well is located. The contents of such advertisement must include:

- (1) The name, address, phone number, and contact party for the applicant;
- (2) The intended purpose of the injection well; with the exact location of single wells or the Section, Township, and Range location of multiple wells;
- (3) The formation name and depth with expected maximum injection rates and pressures; and,
- (4) A notation that interested parties must file objections or requests for hearing with the Oil Conservation Division, 1220 South St. Francis Dr., Santa Fe, New Mexico 87505, within 15 days.

NO ACTION WILL BE TAKEN ON THE APPLICATION UNTIL PROPER PROOF OF NOTICE HAS BEEN SUBMITTED.

NOTICE: Surface owners or offset operators must file any objections or requests for hearing of administrative applications within 15 days from the date this application was mailed to them.

Lusk 29 Fed #1 C-108

Section VII & VIII Data

Proposed Operation: Chevron proposes the temporary gas injection of produced sweet hydrocarbon gas from the Cross Bones 2-29 #1H (API 30-025-40706) and the Cross Bones 1-29 #2H (API 30-025-40711), into the Strawn completion interval of the Lusk 29 Fed #1 wellbore (API 30-025-34673). ✓

VII #1 - A maximum daily injection rate of 3,000 MCFPD and an average daily rate 1,000 MCFPD is anticipated.

VII #2 - The system will be a closed system.

VII #3 - The proposed maximum injection pressure will be 1000 psi with an average injection pressure of 500 psi. ✓

VII #4 - The source of the injection fluid (gas) will be from the Cross Bones 2-29 #1H (API 30-025-40706) and the Cross Bones 1-29 #2H (API 30-025-40711). Since both the Bone Spring gas stream and the Strawn gas reservoir are sweet gasses (gas analyses provided) the gasses are compatible.

VII #5 - Not applicable.

VIII - The injection zone will be into a locally isolated Strawn biohermal mound, of limestone lithology, which is 300' thick in this well occurring at depths from 11,395' to 11,694' in this wellbore.

MOBILE ANALYTICAL LABORATORIES, INC.

P.O. BOX 69210
 ODESSA, TEXAS 79769
 PHONE (432) 337-4744

15228

GAS ANALYSIS REPORT

COMPANY . . . CHEVRON U.S.A.
 LEASE/PLANT CROSS BONES 2-29 1-H
 OPERATOR . . . CHEVRON U.S.A.
 CYLINDER . . . 598
 H2S PPM . . . 0.0

STATION
 PRESS. PSIG 2
 TEMP. DEG. F 70
 SAMPLED / RECEIVED 03/06/13
 SAMPLED BY SR

FRACTIONAL ANALYSIS

COMPONENT	MOL %	GPM C2+	GPM C5+
NITROGEN	2.459	0.000	0.000
CARBON DIOXIDE	0.288	0.000	0.000
METHANE	64.942	0.000	0.000
ETHANE	16.950	4.529	0.000
PROPANE	9.680	2.665	0.000
ISO-BUTANE	1.132	0.370	0.000
N-BUTANE	2.603	0.820	0.000
ISO-PENTANE	0.545	0.199	0.199
N-PENTANE	0.497	0.180	0.180
HEXANES PLUS	0.904	0.394	0.394
H2S	0.000	0.000	0.000
TOTALS	100.000	9.157	0.773

CALC. SP.GRAVITY 0.845

BTU/CU. FT. (14.650 PSIA, 60 DEG. F)

CALC. GROSS WET 1388
 CALC. GROSS DRY 1412

24 ✓

DISTRIBUTION:
 MR. LARRY WORMINGTON

NOTES:

REPORT DATE: 03/07/13



www.permianls.com

575.397.3713 2609 W Marland Hobbs NM 88240

For: Chevron USA
Attention: Larry Wormington
59 Texas Camp Road
Lovington, New Mexico 88260

Sample: Casing Gas
Identification: Crossbones-12H
Company: Chevron USA
Lease:
Plant:

1-29 # 2H

Sample Data: Date Sampled 7/16/2013 2:42 PM
Analysis Date 7/17/2013
Pressure-PSIA
Sample Temp F
Atmos Temp F 74

Sampled by: Logan McIlroy
Analysis by: Vicki McDaniel

H2S = 11 PPM

Component Analysis

		Mol Percent	GPM
Hydrogen Sulfide	H2S	0.001	
Nitrogen	N2	2.696	
Carbon Dioxide	CO2	0.798	
Methane	C1	79.096	
Ethane	C2	9.899	2.641
Propane	C3	4.601	1.264
I-Butane	IC4	0.503	0.164
N-Butane	NC4	1.265	0.398
I-Pentane	IC5	0.287	0.105
N-Pentane	NC5	0.353	0.128
Hexanes Plus	C6+	0.501	0.217
		100.000	4.916

REAL BTU/CU.FT.

At 14.65 DRY 1199.0
At 14.65 WET 1178.1
At 14.696 DRY 1202.8
At 14.696 WET 1182.3
At 14.73 DRY 1205.5
At 14.73 Wet 1184.7

Specific Gravity

Calculated 0.7167

Molecular Weight 20.7573



LABORATORY SERVICES

PERMIAN BASIN ANALYTICAL

www.permianls.com

575 397.3713 2609 W Marland Hobbs NM 88240

For: Chevron USA
Attention: Larry Wormington
59 Texas Camp Road
Lovington, New Mexico 88260

Sample: Casing Gas
Identification: Crossbones-24H
Company: Chevron USA
Lease:
Plant:

2-29#1H

Sample Data. Date Sampled 7/16/2013 2:21 PM
Analysis Date 7/17/2013
Pressure-PSIA
Sample Temp F
Atmos Temp F 74

Sampled by: Logan McIlroy
Analysis by: Vicki McDaniel

H2S = 0

Component Analysis

		Mol Percent	GPM
Hydrogen Sulfide	H2S	0.000	
Nitrogen	N2	4.072	
Carbon Dioxide	CO2	0.250	
Methane	C1	77.040	
Ethane	C2	10.991	2.932
Propane	C3	4.810	1.322
I-Butane	IC4	0.521	0.170
N-Butane	NC4	1.217	0.383
I-Pentane	IC5	0.288	0.105
N-Pentane	NC5	0.283	0.102
Hexanes Plus	C6+	0.528	0.229
		100.000	5.242

REAL BTU/CU.FT

At 14.65 DRY 1200.5
 At 14.65 WET 1179.5
 At 14.696 DRY 1204.2
 At 14.696 WET 1183.7
 At 14.73 DRY 1207.0
 At 14.73 Wet 1186.2

Specific Gravity

Calculated 0.7233

Molecular Weight 20.9499

MANLEY GAS TESTING, INC.

P.O. DRAWER 193
OFFICE(432)367-3024

FAX(432)367-1166

ODESSA, TEXAS 79760
E-MAIL: MANLEYGAST@AOL.COM

CHARGE..... 150 - 0
REC. NO. 30
TEST NUMBER.. 12031

DATE SAMPLED..... 02-14-13
DATE RUN..... 02-20-13
EFFEC. DATE..... 03-01-13

STATION NO. ... 06065682

PRODUCER CHEVRON

SAMPLE NAME.... N. LUSK #29 FED #1

TYPE: SPOT

RECEIVED FROM.. FRONTIER FIELD SERVICES LLC - MALJAMAR

FLOWING PRESSURE 54.1 PSIA

FLOWING TEMPERATURE 59 F

SAMPLED BY: EBK

CYLINDER NO. ... 005

FRACTIONAL ANALYSIS
CALCULATED @ 14.650 PSIA AND 60F

	MOL%	GPM (REAL)
HYDROGEN SULFIDE...	0.000	
NITROGEN.....	1.745	
CARBON DIOXIDE.....	1.293	
METHANE.....	56.590	
ETHANE.....	19.237	5.147
PROPANE.....	12.737	3.511
ISO-BUTANE.....	1.458	0.477
NOR-BUTANE.....	3.998	1.261
ISO-PENTANE.....	0.863	0.316
NOR-PENTANE.....	0.970	0.352
HEXANES +.....	1.109	0.484
TOTALS	100.000	11.548

'Z' FACTOR (DRY) = 0.9938
'Z' FACTOR (WET) = 0.9934
CALC. MOL. WT. = 27.06

..CALCULATED SPECIFIC GRAVITIES..

REAL, DRY 0.9400
REAL, WET 0.9348

..CALCULATED GROSS HEATING VALUES..

BTU/CF - REAL, DRY 1546
BTU/CF - REAL, WET 1519

DISTRIBUTION AND REMARKS:

CHEVRON

ANALYZED BY: JT
** R **

APPROVED: 

INJECTION WELL DATA SHEET

OPERATOR: Chevron USA

WELL NAME & NUMBER: North Lusk 29 Fed #1

WELL LOCATION:	<u>330' FSL & 2005' FWL</u>	<u>N</u>	<u>29</u>	<u>18S</u>	<u>32E</u>
	FOOTAGE LOCATION	UNIT LETTER	SECTION	TOWNSHIP	RANGE

WELLBORE SCHEMATIC

WELL CONSTRUCTION DATA

Surface Casing

Hole Size: 17.5" Casing Size: 13 3/8" @ 517'
 Cemented with: 550 sx. or _____ ft³
 Top of Cement: surface Method Determined: circulation

Intermediate Casing

Hole Size: 12 1/4" Casing Size: 9 5/8" @ 4270'
 Cemented with: 1700 sx. or _____ ft³
 Top of Cement: surface Method Determined: circulation

Production Casing

Hole Size: 8 3/4" Casing Size: 5 1/2" @ 11,851'
 Cemented with: 1960 sx. or _____ ft³
 Top of Cement: 4080' *EF* Method Determined: CBL *Verify*
 Total Depth: 11,860'

Injection Interval

11,422 feet to 11,573' perforated

(Perforated or Open Hole; indicate which)

Perforated

INJECTION WELL DATA SHEET

Tubing Size: 2 7/8" 6.5# L-80 Lining Material: unlined

Type of Packer: Arrow-set 1-X packer

Packer Setting Depth: 11,311'

Other Type of Tubing/Casing Seal (if applicable): _____

Additional Data

1. Is this a new well drilled for injection? _____ Yes X No

If no, for what purpose was the well originally drilled? production

2. Name of the Injection Formation: Strawn

3. Name of Field or Pool (if applicable): North Lusk Strawn

4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail, i.e. sacks of cement or plug(s) used. No

5. Give the name and depths of any oil or gas zones underlying or overlying the proposed injection zone in this area: None underlying the Strawn ✓

Bone Spring - 8000 to 9500' OK
overlying

North Lusk 29 Federal #1 Wellbore Diagram

Created: 05/22/08 By: C. A. Irie
 Updated: _____ By: _____
 Lease: North Lusk 29 Federal
 Field: Lusk North - Strawn
 Surf. Loc.: 330' FSL & 2,005' FWL
 Bot. Loc.: 220' FSL & 1,965' FWL
 County: Lea St.: NM
 Status: Active Gas Well

Well #: 1 Fd./St. #: NM-96855
 API: 30-025-34673
 Surface Tshp/Rng: S-18 & E-32
 Unit Ltr.: N Section: 29
 Bottom hole Tshp/Rng: S-18 & E-32
 Unit Ltr.: N Section: 29
 Cost Code: UCT542800
 Chevno: BW9587

Surface Casing

Size: 13 3/8
 Wt., Grd.: 54.5# K-55
 Depth: 517
 Sxs Cmt: 550
 Circulate: Yes
 TOC: Surface
 Hole Size: 17 1/2

Intermediate Casing

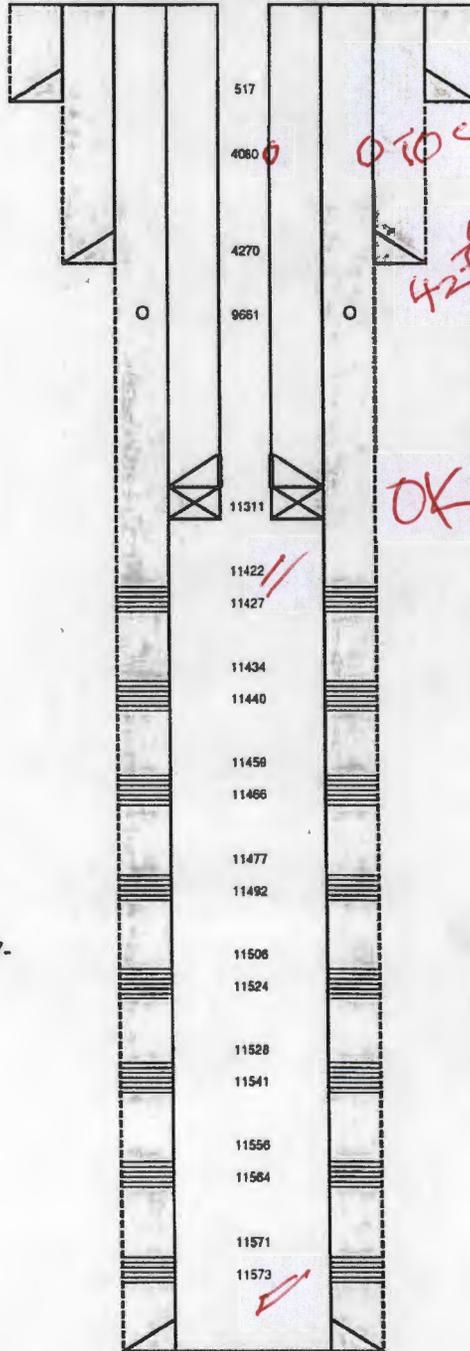
Size: 9 5/8
 Wt., Grd.: 36# K-55
 Depth: 4,270
 Sxs Cmt: 1,700
 Circulate: Yes
 TOC: Surface
 Hole Size: 12 1/4

Production Casing

Size: 5 1/2
 Wt., Grd.: 17# L-80
 Depth: 11,851
 Sxs Cmt: 1,230
 Circulate: No
 TOC: 4,080
 Hole Size: 8 3/4
 DV Tool: 9,661

Perforations

11422-427, 434-440, 459-466, 477-492, 506-524, 528-541, 556-564, 571-573



KB: _____
 DF: _____
 GL: 3,705
 Ini. Spud: 08/17/99
 Ini. Comp.: 09/30/99

History

9/30/99 Ini Comp: Tag 9654, DO DV, tag 11768, CBL TOC 4080, perf Strawn 2 spf 11422-427, 434-440, 459-466, 477-492, 506-524, 528-541, 556-564, 571-573, pkr 11311, acid 5000 gls 15% 222 BS, swab, tag 2500, ball catcher 2500-3000, lost barrel, tapper tap, no luck, 2nd ball catcher, rec 4 BS, swab, no luck, ball catcher 5100, rec 35 BS, ball catcher again, tag 5100, tapper tap 5100, fell free, chase 10000, no tag, no fish, rel pkr, rec fish, pkr 11311, swab tag 5000, ball catcher, rec 123 BS, swab, BP in PN, not set, redress, BP in PN, rel O/O, circ pkr fluid, latch O/O, swab FL, ret BP, swab.
 10/12/05 CT Stim: Tag 11768, acid 4000 gls 15% DAD, N2 blowdown.

Recommendation: Drop soap sticks to see if any fluid unloads, install cap string if necessary.

Geology - Tops

Rustler	1,090
San Andres	4,634
Delaware	4,894
Bone Spring	6,830
Wolfcamp	10,240
Strawn	11,344

PBD: 11,768
 TD: 11,860

Cross Bones Commingled Battery
Section 29, T18S, R32E, Lea County, NM

Well	API	Status	Lease	Pool	Pool #	Unit Letter	Sec	Location	Twnshp	Rng	Co	TD	
North Lusk Battery													
N. LUSK "29" Federal # 1	30-025-34673	FL	Lusk North	Strawn	96678	N	29	330' FSL & 2005' FWL	18S	32E	Lea	11,860'	Currently only producing gas
New Wells- 2012													
Cross Bones 1 29 #2 H	30-025-40711	Complete 3-14-13	Lusk North	Bone Spring	41450	L	29	1980' FSL & 990' FWL	T18S	R32E	Lea	12,031'	Proposed TD
Cross Bones 2 29 #1 H	30-025-40706	Complete 2-20-13	Lusk North	Bone Spring	41450	M	29	560' FSL & 660' FWL	T18S	R32E	Lea	13,348'	Proposed TD

Offset Wells within the 1/2 mile radius of the N. Lusk 29 Federal # 1

	Well	API	Operator	Status	Lease	Pool	Pool #	Unit		Location	Township	Rng	Co	TD	PBD
								Letter	Sec						
1	EDL Federal # 001	30-025-35690	COG Operating LLC	Active Oil	Lusk; Bone Springs, North	Bone Springs	41450	A	31	860' FNL & 660' FWL	18S	32E	LEA	12,825'	9550'
2	N. Lusk 32 State # 001	30-025-35747	Devon Energy Prod Co	Active Oil	Lusk; Bone Springs, North	Bone Springs	41450	C	32	330' FNL & 2258' FWL	18S	32E	LEA	11860'	8965'
3	Watkins 32 State # 001	30-025-31735	Devon Energy Prod Co	Active Oil	Lusk; Bone Springs, North	Bone Springs	41450	F	32	1980' FNL & 1650' FWL	18S	32E	LEA	12,922'	9720'
4	Max State # 001	30-025-26754	Devon Energy Prod Co	Active Oil	Lusk; Bone Springs, North	Bone Springs	41450	G	32	1980' FNL & 1780' FEL	18S	32E	LEA	12,980'	9720'

EGL Federal # 1 Wellbore Diagram

Created: 03/15/13 By: CHAY
 Updated: _____ By: _____
 Lease: EGL Federal
 Field: Lusk; Bone Springs, North
 Surf. Loc.: 860' FNL & 660' FEL
 Bot. Loc.: _____
 County: Lea St.: NM
 Status: Active Bone Springs Oil Well

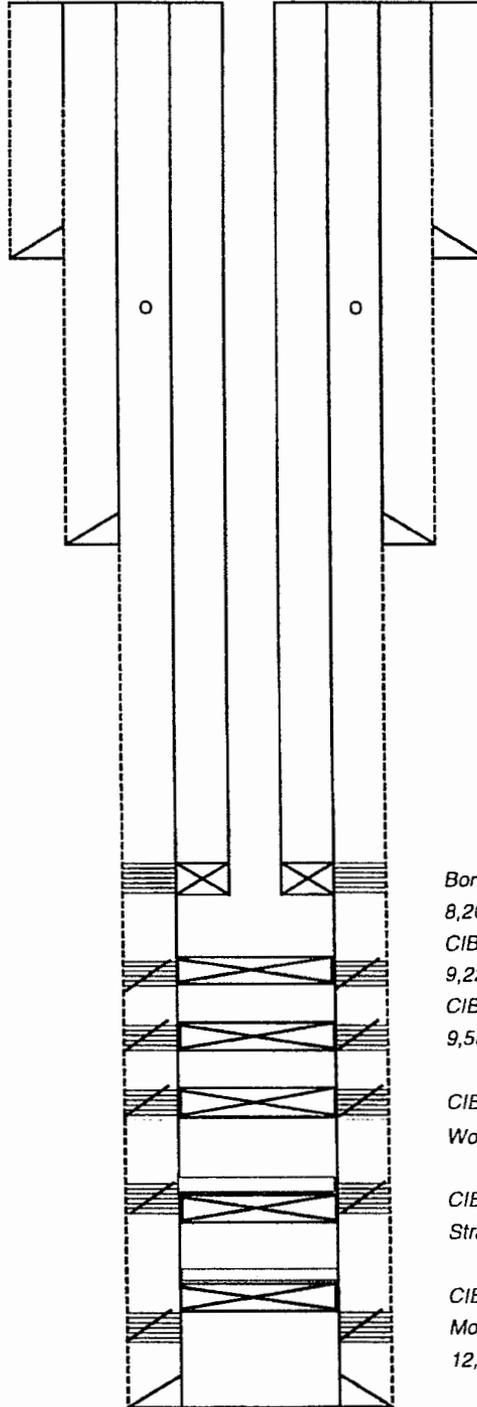
Well #: 1 Fd./St. #: NM-17435A
 API: 30-025-35690
 Surface Tshp/Rng: S-18 & E-32
 Unit Ltr.: A Section: 31
 Bottom hole Tshp/Rng: _____
 Unit Ltr.: _____ Section: _____
 Cost Code: NA
 Operator: COG Operating, LLC

Surface Casing
 Size: 13 3/8
 Wt., Grd.: 48# H-40
 Depth: 1110'
 Sxs Cmt: 950 sxs
 Circulate: Yes, 308 sxs
 TOC: Surface
 Hole Size: 17 1/2

Intermediate Casing
 Size: 8 5/8
 Wt., Grd.: 32# J-55
 Depth: 4,500'
 Sxs Cmt: 1,990 sxs
 Circulate: Yes, 205 sxs
 TOC: Surface
 Hole Size: 12 1/4

Production Casing
 Size: 5 1/2
 Wt., Grd.: 17# P110
 Depth: 12,820'
 Sxs Cmt: 1,760 sxs
 Circulate: No
 TOC: 2,000' TS
 Hole Size: 7-7/8"
 DV Tool: 9,661

Formation Tops	
Yates	3,006'
Queen	3,704'
Grayburg	4,174'
Delaware	4,514'
Bone Spring	6,840'
Wolfcamp	10,400'
Strawn	11,266'
Atoka	11,708'
Morrow	12,343'
Lower Morrow	12,577'



KB: 3716'
 DF: _____
 GL: 3697'
 Ini. Spud: 10/01/01
 Ini. Comp.: 11/28/01

History

Original Completion:
 Lower Morrow perms: 12, 648' - 12,635'.
 CIPB @ 12,340', Top w/35' cmt..
 Strawn Perfs: 11392' - 11618', CIBP @
 11350', Top w/35' cmt.
 Wolfcamp Perfs: 10,279'-10,482', CIBP
 @ 10240'.
 Bone Springs Perfs: 9580' - 9583', CIBP
 @ 9550'.
 Bone Spring Perfs: 9,223'-9,288'. CIBP
 @ 9200'.
 Bone Springs Perfs: 8202'-8510', Active-
 3/15/2013

Bone Springs Perfs-open
 8,202' - 8,510' - 17 shots
 CIBP @ 9,200'
 9,223' - 9,288'
 CIBP @ 9,550'
 9,580' - 9,583'

CIBP @ 10240'
 Wolfcamp Perfs 10279' - 10482'
 CIBP @ 11,350', Top w/35' cmt
 Strawn Perfs: 11392' - 11618'

CIBP @ 12,340', Top w/35' cmt
 Morrow Perforations-Abandoned
 12,648 - 12,635'

Orig PBTD: 12,770'
 TD: 12,825'

N Lusk 32 State # 1 Wellbore Diagram

Created: 03/18/13 By: CHAY
 Updated: _____ By: _____
 Lease: N. Lusk 32 State # 001
 Field: Lusk Bone Springs, North
 Surf. Loc.: 330' FNL & 2258' FWL
 Bot. Loc.: 375' FNL & 2147' FWL
 County: Lea St.: NM
 Status: Active Bone Springs Oil Well

Well #: 1 Fd./St. #: LG-7655
 API: 30-025-35747
 Surface Tshp/Rng: S-18 & E-32
 Unit Ltr.: C Section: 32
 Bottom hole Tshp/Rng: _____
 Unit Ltr.: _____ Section: _____
 Cost Code: NA
 Operator: Devon Energy Production

Surface Casing

Size: 13 3/8
 Wt., Grd.: 54.4#
 Depth: 472'
 Sxs Cmt: 500 sxs
 Circulate: Yes
 TOC: Surface
 Hole Size: 17 1/2

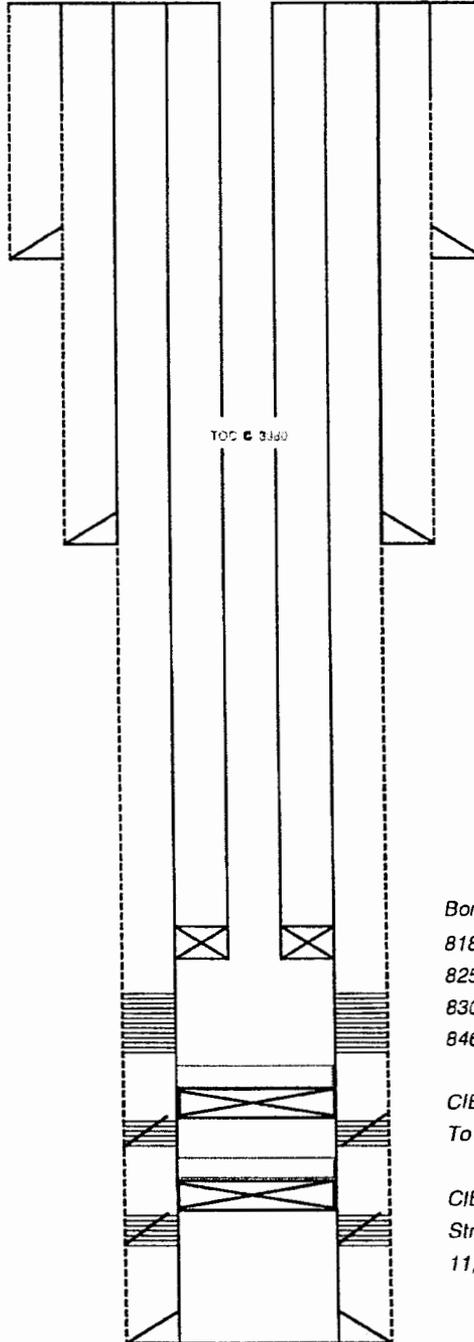
Intermediate Casing

Size: 9 5/8
 Wt., Grd.: 36 #
 Depth: 4,280'
 Sxs Cmt: 1635 sxs
 Circulate: Yes
 TOC: Surface
 Hole Size: 12 1/4

Production Casing

Size: 5 1/2
 Wt., Grd.: 15.5#
 Depth: 11,860'
 Sxs Cmt: 1,950 sxs
 Circulate: No
 TOC: 3980' by Calc
 Hole Size: 8-3/4"
 DV Tool: _____

Formation Tops	
Yates	3070'
Queen	3737'
Grayburg	4220'
Bone Spring	8216'
Bone Spring	8791'
Bone Spring	9776'
Wolfcamp	10,220'
Strawn	11,245'



KB: _____
 DF: _____
 GL: 3703'
 Ini. Spud: 11/17/01
 Ini. Comp.: 02/06/02

History

Original Completion:
 Perfs: Strawn 11,616' - 11,712',
 2 JHPF

Perfs: Bone Springs Perfs:
 8185' - 8554' - 62 holes

- Active-3/18/2013

Bone Springs Perfs-open

8185'-88, 8224'-26, 8232'-36,
 8254'-64, 8268'-72, 8277'-80,
 8306'-10, 8358'-62, 8450'-51',
 8468'-74, 8540'-45, 8550'-54'

CIBP @ 9,000' Top w/35' cmt

To isolate upper perfs and leaks in Strawn pay

CIBP @ 11,580' Top w/35' cmt

Strawn Perfs-Abn'd
 11,616' - 11,712'

PBD: 8965'
 TD: 11860'

Watkins 32 State # 1 Wellbore Diagram

Created: 03/18/13 By: CHAY
 Updated: _____ By: _____
 Lease: Watkins 32 State # 001
 Field: Lusk Bone Springs, North
 Surf. Loc.: 1980' FNL & 1650' FWL
 Bot. Loc.: _____
 County: Lea St.: NM
 Status: Active Bone Springs Oil Well

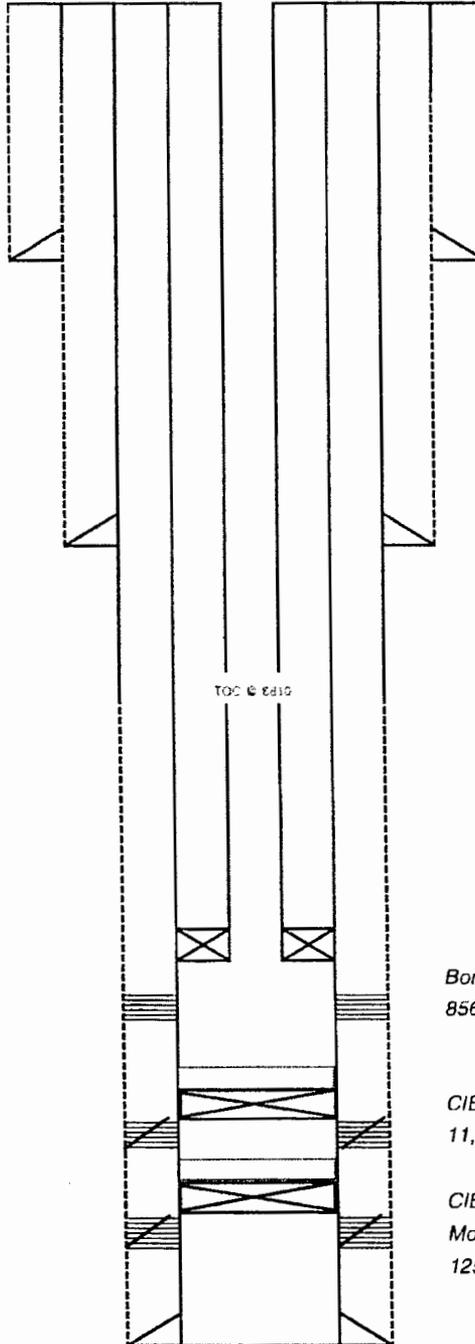
Well #: 1 Fd./St. #: LG-7655
 API: 30-025-31735
 Surface Tshp/Rng: S-18 & E-32
 Unit Ltr.: F Section: 32
 Bottom hole Tshp/Rng: _____
 Unit Ltr.: _____ Section: _____
 Cost Code: NA
 Operator: Devon Energy Production

Surface Casing
 Size: 13 3/8
 Wt., Grd.: 48#
 Depth: 473'
 Sxs Cmt: 500 sxs
 Circulate: Yes, 60 sxs
 TOC: Surface
 Hole Size: 17 1/2

Intermediate Casing
 Size: 8 5/8
 Wt., Grd.: 28 #
 Depth: 4,206'
 Sxs Cmt: 2900 sxs
 Circulate: Yes, 480 sxs
 TOC: Surface
 Hole Size: 12 1/4

Production Casing
 Size: 5 1/2
 Wt., Grd.: 17#
 Depth: 12, 921'
 Sxs Cmt: 1,630 sxs
 Circulate: No
 TOC: 6810' by TS
 Hole Size: 7-7/8"
 DV Tool: 7995'

Formation Tops	
Yates	2773'
Queen	3753'
Grayburg	4440'
Bone Spring	6889'
Wolfcamp	10262'
Strawn	11392'
Atoka	11709'
Morrow	12110'



KB: 3707'
 DF: _____
 GL: 3961'
 Ini. Spud: 04/05/80
 Ini. Comp.: 05/30/80

History

Original Completion:
 Perfs: Morrow 12521' - 12533', 9 holes -
 Abn'd
 Perfs: 11833' - 11,845', 13 holes - Abn'd.
 Bone Springs Perfs: 8566' - 8594' -
 29 holes added.

- Active-3/18/2013

Bone Springs Perfs-open
 8566' - 8594' 29 holes

CIBP @ 10,700' Top w/35' cmt
 11,833' - 11,845', Abn'd

CIBP @ 12,450' Top w/35' cmt
 Morrow Perfs
 12521' - 12533' , Abn'd

PBTD: 9720'
 TD: 12,922'

Max State # 1 Wellbore Diagram

Created: 03/15/13 By: CHAY
 Updated: _____ By: _____
 Lease: Max State # 001
 Field: Lusk Bone Springs, North
 Surf. Loc.: 1980' FNL & 1780' FEL
 Bot. Loc.: _____
 County: Lea St.: NM
 Status: Active Bone Springs Oil Well

Well #: 1 Fd./St. #: LG-7655
 API: 30-025-26754
 Surface Tshp/Rng: S-18 & E-32
 Unit Ltr.: G Section: 32
 Bottom hole Tshp/Rng: _____
 Unit Ltr.: _____ Section: _____
 Cost Code: NA
 Operator: Devon Energy Production

Surface Casing

Size: 13 3/8
 Wt., Grd.: 48#
 Depth: 408'
 Sxs Cmt: 425 sxs
 Circulate: Yes, 80 sxs
 TOC: Surface
 Hole Size: 17 1/2

Intermediate Casing

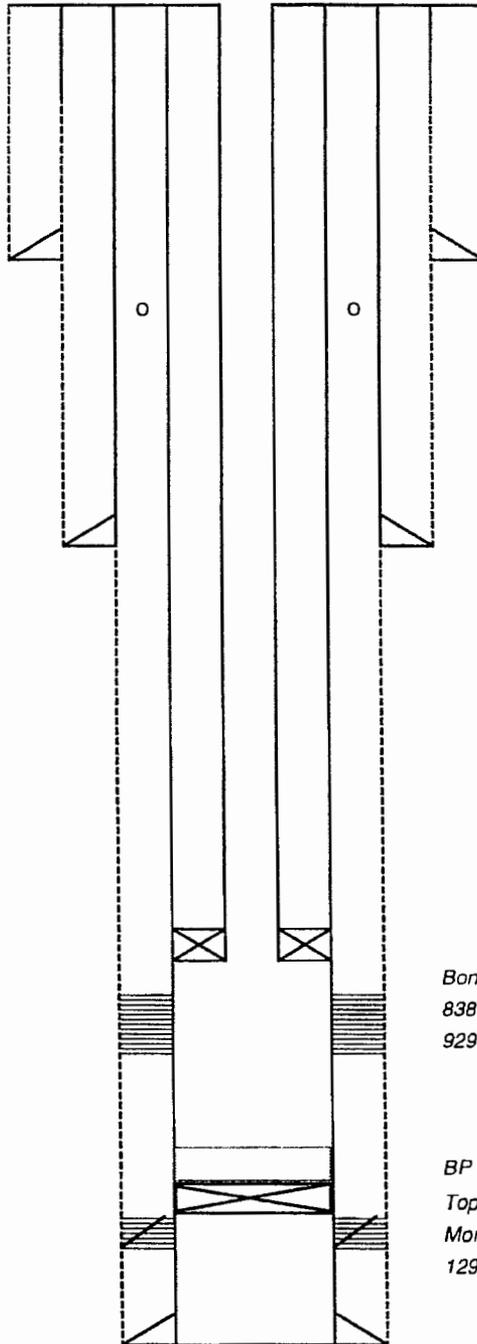
Size: 8 5/8
 Wt., Grd.: 48 & 68#
 Depth: 4,281'
 Sxs Cmt: 2950 sxs
 Circulate: Yes
 TOC: Surface
 Hole Size: 12 1/4

Production Casing

Size: 5 1/2
 Wt., Grd.: 17# & 30#
 Depth: 12,980'
 Sxs Cmt: 1,760 sxs
 Circulate: No
 TOC: 2,000' TS
 Hole Size: 7-7/8"
 DV Tool: 10,512'

Formation Tops

Yates	2790'
Queen	3975'
San Andres	4725'
Bone Spring	6969'
Wolfcamp	10,290'
Strawn	11,515'
Atoka	11,850'
Morrow	12,217'



KB: 3707'
 DF: _____
 GL: 3961'
 Ini. Spud: 04/05/80
 Ini. Comp.: 05/30/80

History

Original Completion: Perfs: Morrow
 12909' - 12950', Abn'd
 Bone Springs Perfs: 9,298'-9,392', &
 8388' - 8456' 10 holes added in 1997.

- Active-3/15/2013

Bone Springs Perfs-open
 8388' - 8456' 10 holes
 9298' - 9392' 15 holes

BP @ 9720'
 Top w/100 sxs cmt
 Morrow Perfs
 12909' - 12950', Abn'd Zone

PBTD: 9720'
 TD: 12,980'



Carolyn Haynie
Petroleum Engineering
Technical Assistant

MidContinent/Alaska SBU
Chevron North America
Exploration and Production
Company
15 Smith Road
Midland, TX 79705
Tel 432-687-7261
Fax 432-687-7703
chay@chevron.com

August 19, 2013

Intermittent Gas Injection
LEA COUNTY, NEW MEXICO

Offset Operators:

For your information, as an offset operator, Chevron U.S.A., Inc. has requested NMOCD and BLM administrative approval to Intermittently inject the gas production from Cross Bones 1 29 # 2H, and the Cross Bones 2 29 # 1H into the N. Lusk 29 Federal # 1, located 330' FSL & 2005' FWL, Unit Letter N, Sec. 29, T18S, R32E, Lea County, New Mexico.

Attached is an OCD form C-108 and the information relative to the proposed Injection Request. A copy of the legal notice posted in the Hobbs News-Sun is included. The enclosed map highlights the location of the referenced well in relation to your offset operations.

If additional information is required, please contact Scott Ingram at (432-687-7212), or the project engineer, Paul Brown, at (432-687-7351).

Interested parties must file objections with the Oil Conservations Division, 1220 South St. Francis Dr., Santa Fe, New Mexico, 87505, within 15 days.

Sincerely,

A handwritten signature in cursive script that reads "Carolyn Haynie".

Carolyn Haynie
NM PE Technical Assistant

Enclosure

OFFSET OPERATORS

COG OPERATING, LLC
550 W. TEXAS AVE. # 100
MIDLAND, TEXAS 79701-4287

DEVON ENERGY PRODUCTION COMPANY, L.P.
20 NORTH BROADWAY
SUITE 1500
OKLAHOMA CITY, OK 73102-8202

ATTACHMENT I

LAND OWNERSHIP STATUS

PREPARED BY Daniel Pequeno, Landman, CPL/ESA

March 19, 2013

Application of Chevron U.S.A. Inc. for Administrative Approval for C-108, Temporary Gas Injection Permit:

Chevron's N. Lusk 29 Federal No. 1
220' FSL & 1,964' FWL, Unit Letter N
Section 29, T-18-S, R-32E
Lea County, New Mexico

ALL OF SECTION 29, LESS & EXCEPT THE NE/4NE/4 AND NE/4NW/4 -T18S-R32, NMPM - FEDERAL LEASE NM 96855:

Lease Owner - 100% WI

Chevron U.S.A. Inc.
15 Smith Road
Midland, Texas 79705

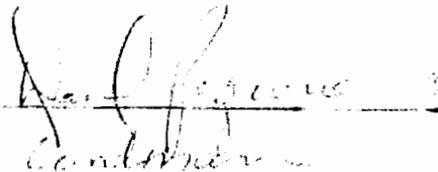
Royalty Owner - 1/8 Royalty

Bureau of Land Management
P. O. Box 27115
Santa Fe, New Mexico 87502-0115

Wells located on the Lease are the North Lusk 29 Federal #1 (API # 30-25-34673) producing from the Strawn Reservoir; Cross bones 1 29-1H (API #30-25-40710), 1 29 2H (API #30-25-40711) & 2 29-1H (API #30-25-40706) to be new drills into the Bone Springs Reservoir.

Surface Owner for Section 29, T18S-R32E:

Bureau of Land Management
Attention: Mr. Jim Stovall
620 East Greene Street
Carlsbad, New Mexico 87220-6292

 3/20/13
Carlsbad, NM

LEGAL NOTICE

August 19, 2013

Notice is hereby given of the
application of

CHEVRON U.S.A, INC.

15 Smith Road, Midland, TX 79705,
to the Oil Conservation of the State
of New Mexico, and the Bureau of
Land Management, for approval to
intermittently inject gas production
from the Cross Bones 1 29 #2H and
the Cross Bones 2 29 #1 into **the N.
Lusk 29 Federal # 1, API # 30-025-
34673, 330' FSL & 2005' FWL,
Unit Letter N, Sec. 29, T18S,
R32E, Lea County, New Mexico.**

This will allow the prevention of
waste from gas flaring and for
liquids production to continue when
either gas sales line pressure in
prohibitively high or the gas stream
does not meet pipeline specs. The
injection interval is through current
perforations in the Strawn formation
from 11,422' – 11,573' and the max
injection rate will be 2,000
MCFGPD, with a maximum
allowable injection pressure of 1000
psi. Interested parties should file
objections or requests for hearing
with the Oil Conservation Division,
1220 South St. Francis Drive, Santa
Fe, New Mexico, 87505 within 15
days. Inquiries regarding this
application should be directed to
Chevron North America, Attn: Scott
Ingram, 15 Smith Rd., Midland TX
79705,

email: scottingram@chevron.com

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB No 1004-0137
Expires: October 31, 2014

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.

5. Lease Serial No.
NM 96855

6. If Indian, Allottee or Tribe Name
NA

SUBMIT IN TRIPLICATE - Other instructions on page 2.

1. Type of Well

Oil Well Gas Well Other

2. Name of Operator
Chevron U.S.A., Inc

3a. Address
15 Smith Road, Midland, tx 79705

3b. Phone No. (include area code)
432-687-7212

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)
330' FSL & 2005' NWL, Section 29, T18S, R32E

7. If Unit of CA/Agreement, Name and/or No.
NA

8. Well Name and No.
North Lusk 29 Federal #1

9. API Well No.
30-025-34673

10. Field and Pool or Exploratory Area
North Lusk Strawn

11. County or Parish, State
Lea County, N.M.

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>intermittent gas injection</u>
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	
	<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 recomplete 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 recompletion 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.)

Chevron U.S.A., Inc respectfully requests BLM administrative approval to intermittently inject the gas production from the Cross Bones 1 29 #2H and the Cross Bones 2-29 #1H into the N. Lusk 29 Fed #1, located 330' FSL & 2005' FWL, Unit Letter N, Section 29, T18S, R32E, Lea County, New Mexico, as needed. This will allow the prevention of waste from gas flaring, and for liquids production to continue when either gas sales line pressure is prohibitively high or the gas stream does not meet pipeline specs. The injection interval is through current perforations in the Strawn formation from 11,422'-11,573 and the maximum injection rate will be 2,000 MCFGPD, with a maximum allowable injection pressure of 1000psi. Then, when conditions allow, the injection into the Lusk 29 #1 will be reversed and the combined gas stream will be sent to sales. The NMOCD has verbally indicated an emergency order granting approval will be approved.

For additional information, please contact Scott Ingram, 15 Smith Road, Midland, Texas, 79705, 432-687-7212, email - scottingram@chevron.com

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

Scott M. Ingram

Title Consulting Earth Scientist

Signature

Scott M. Ingram

Date

8/19/13

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by

Title

Date

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

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)



30

MCCURDY 1-29
29

31

32

NORTH LUSK 29 FEDERAL 1

NORTH LUSK 32 STATE 1

EGL FEDERAL COM 1

FEDERAL-HELBI E 1

WATKINS 32 STATE 1

MAX STATE 1

LUSK 31 FEDERAL 3

NORTH LUSK 32 STATE 1

LEAR STATE SWD 3

LUSK 31 FEDERAL 1

USA-MOLEEN UNIT 1

LUSK-STATE 1

CHEVRON

North Lusk 29 Federal 1

Lee County, New Mexico

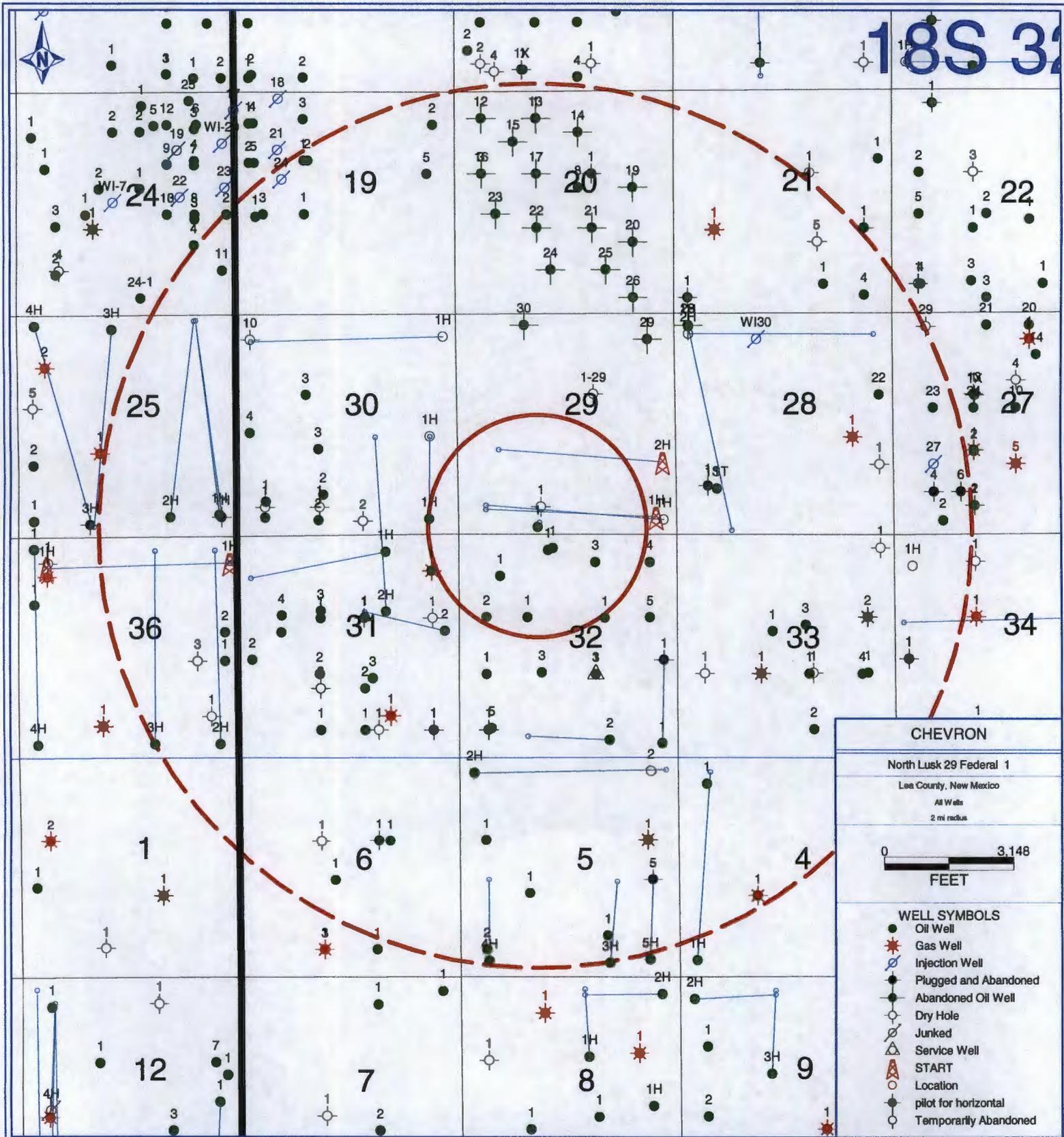
Strain Penetration Wells

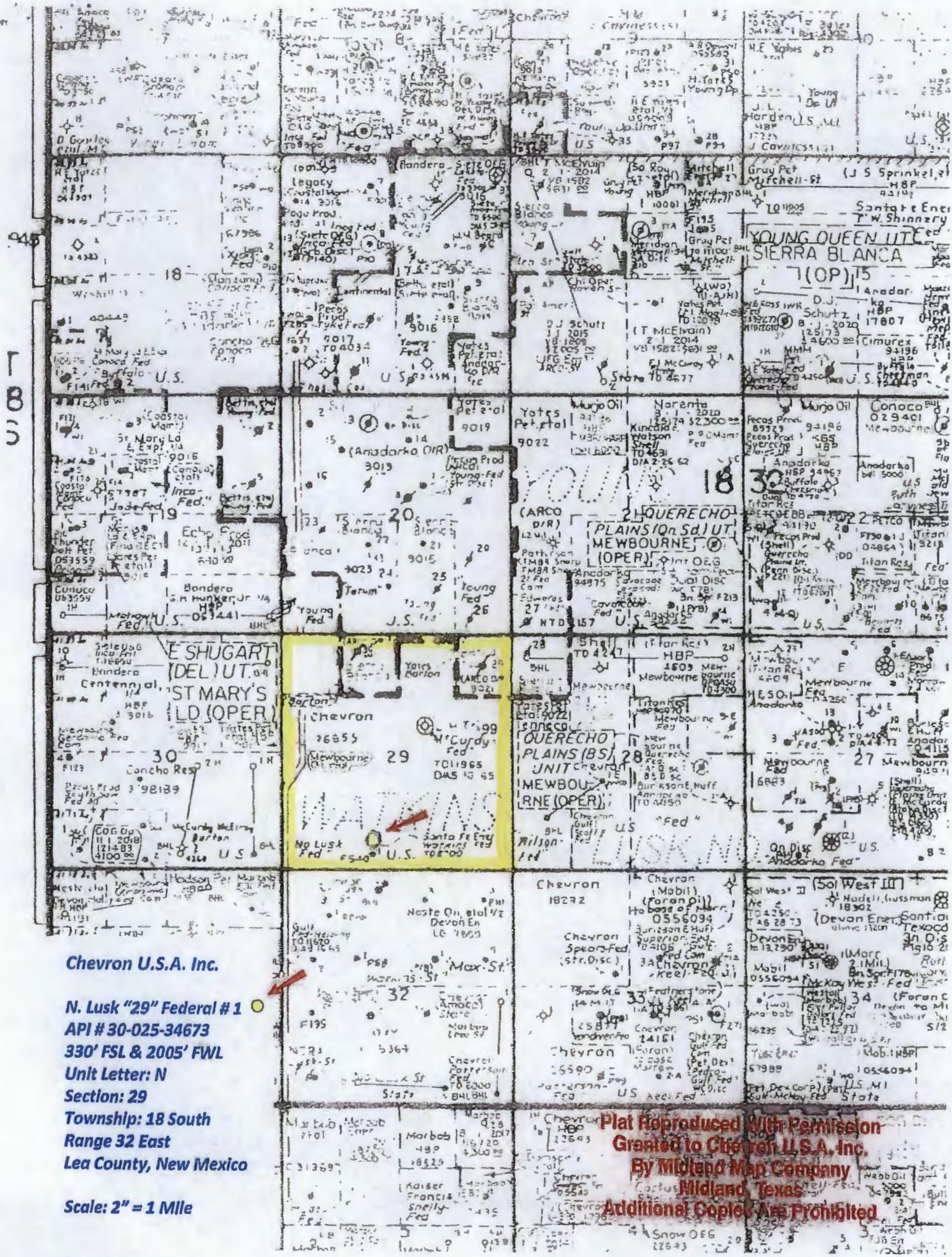
1/2 mi radius



WELL SYMBOLS

- Oil Well
- Gas Well
- Plugged and Abandoned
- Dry Hole
- Service Well

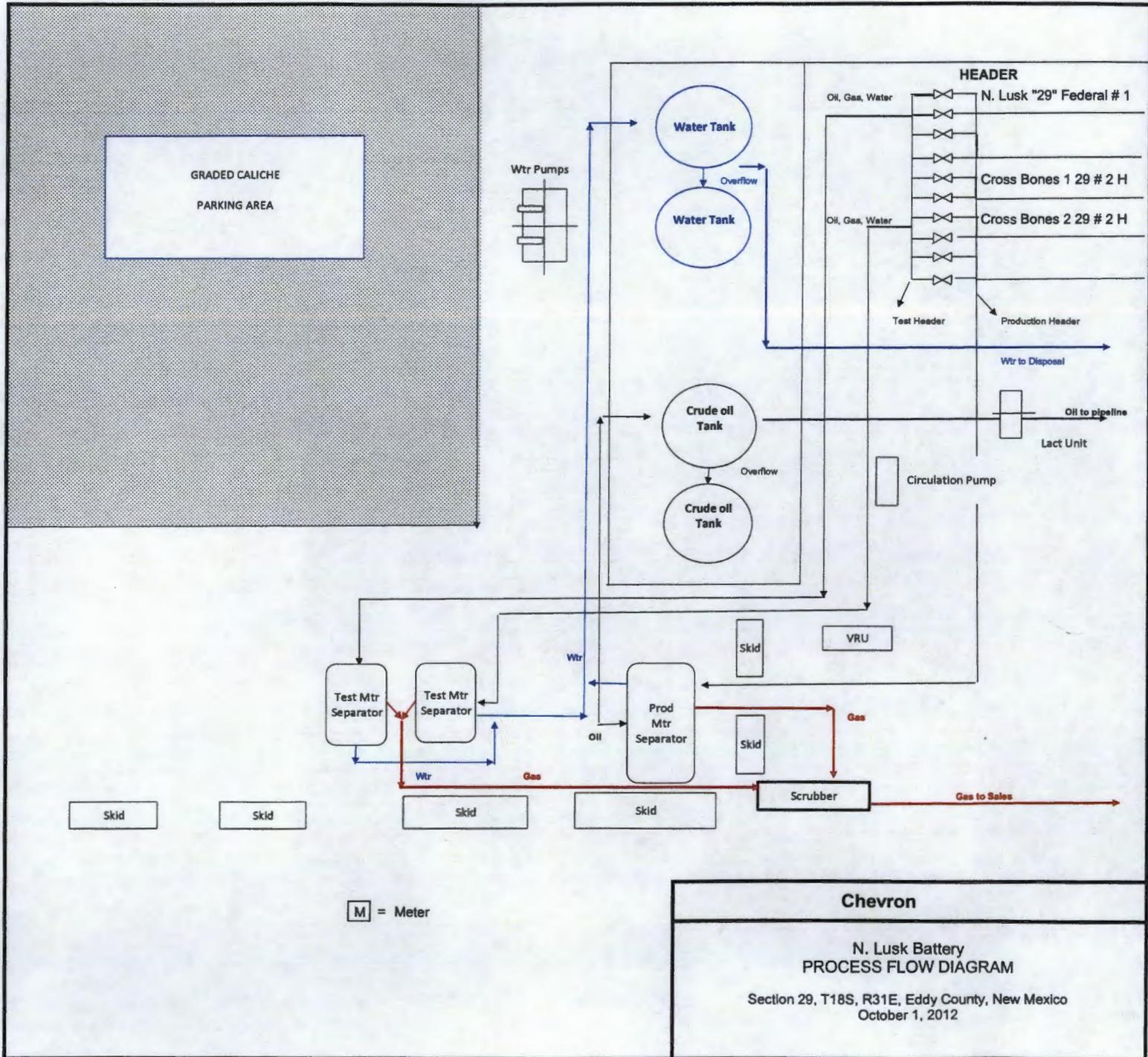




Chevron U.S.A. Inc.

N. Lusk "29" Federal # 1
API # 30-025-34673
330' FSL & 2005' FWL
Unit Letter: N
Section: 29
Township: 18 South
Range 32 East
Lea County, New Mexico
Scale: 2" = 1 Mile

**Plat reproduced with permission
 Granted to Chevron U.S.A. Inc.
 By Midland Map Company
 Midland, Texas
 Additional Copies are Prohibited**



Chevron

**N. Lusk Battery
PROCESS FLOW DIAGRAM**

Section 29, T18S, R31E, Eddy County, New Mexico
October 1, 2012