Initial Application Part I

Received: **05/01/2019**

This application is placed in file for record. It MAY or MAY NOT have been reviewed to be determined Administratively Complete

MAY 01 2019 AM11:17

Revised March 23, 2017

RECEIVED:	REVIEWER:	TYPE:	APP NO:
05/01/2019			pMAM1912740690

ABOVE THIS TABLE FOR OCD DIVISION USE ONLY

NEW MEXICO OIL CONSERVATION DIVISION
- Geological & 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

Applicant: Percussion Petroleum, LLC **OGRID Number:** 371755
Well Name: Morris Arco 26 No.2 **API:** 30-015-29258
Pool: Proposed: SWD; Cisco-Canyon **Pool Code:** 96186

SUBMIT ACCURATE AND COMPLETE INFORMATION REQUIRED TO PROCESS THE TYPE OF APPLICATION INDICATED BELOW

1) **TYPE OF APPLICATION:** Check those which apply for [A]
A. Location – Spacing Unit – Simultaneous Dedication
☐ NSL ☐ NSP(PROJECT AREA) ☐ NSP(PRORATION UNIT) ☐ SD

B. Check one only for [I] or [II]
[I] Commingling – Storage – Measurement
☐ DHC ☐ CTB ☐ PLC ☐ PC ☐ OLS ☐ OLM
[II] Injection – Disposal – Pressure Increase – Enhanced Oil Recovery
☐ WFX ☐ PMX ■ SWD ☐ IPI ☐ EOR ☐ PPR

FOR OCD ONLY
☐ Notice Complete
☐ Application Content Complete

2) **NOTIFICATION REQUIRED TO:** Check those which apply.
A. ■ Offset operators or lease holders
B. ☐ Royalty, overriding royalty owners, revenue owners
C. ■ Application requires published notice
D. ■ Notification and/or concurrent approval by SLO
E. ■ Notification and/or concurrent approval by BLM
F. ■ Surface owner
G. ■ For all of the above, proof of notification or publication is attached, and/or,
H. ☐ No notice required

3) **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.

Lelan Anders
Print or Type Name

Signature

4/30/2019
Date

281-908-1752
Phone Number

lelan@percussionpetroleum.com
e-mail Address

PERCUSSION PETROLEUM LLC

Percussion Petroleum, LLC

919 Milam Street Suite 2475
Houston, TX 77002

April 11, 2019

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

Attn: Ms. Adrienne Sandoval, Director

Re: Application of Percussion Petroleum, LLC to permit for salt water disposal its Morris Arco 26 Well No.2, located in Section 26, Township 19 South, Range 25 East, NMPM, Eddy County, New Mexico.

Dear Ms. Sandoval,

Please find the enclosed form C-108 Application for Authority to Inject, supporting the above-referenced request to permit for disposal, the Morris Arco 26 No.2; the well will be renamed to the Morris Arco SWD No.1. Percussion selected this well for private disposal of produced water coming from their operations in the area and as a result of information and data presented at a meeting with SLO personnel.

Percussion Petroleum seeks to optimize efficiency, both economically and operationally, of its operations in southeast New Mexico. Approval of this application is consistent with that goal as well as the NMOCD's mission of preventing waste and protection of correlative rights.

Published legal notice ran April 11, 2019 in the Artesia Daily Press and all offset operators and other interested parties have been notified individually. The legal notice affidavit is included in the C-108 package. This application also includes a wellbore schematic, area of review maps, affected party plat and other required information for a complete Form C-108. The well is located on private land and minerals with offsetting state and BLM lands and/ or minerals within the one-half mile radius notice area.

I respectfully request that the approval of this salt water disposal well proceed swiftly and if you or your staff requires additional information or has any questions, please do not hesitate to call or email me.

Best regards,

Ryan Barber
Petroleum Engineer
Percussion Petroleum Operating, LLC
713-300-1853
ryan@percussionpetroleum.com

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL
RESOURCES DEPARTMENT

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, New Mexico 87505

FORM C-108
Revised June 10, 2003

APPLICATION FOR AUTHORIZATION TO INJECT

I. PURPOSE: ***Salt Water Disposal*** and the application ***QUALIFIES*** for administrative approval.

II. OPERATOR: ***Percussion Petroleum Operating, LLC***
ADDRESS: ***919 Milam, Ste.2475, Houston, TX 77002***

CONTACT PARTY: ***Ryan Barber, Petroleum Engineer: 979-292-6279***

III. WELL DATA: ***All well data and applicable wellbore diagrams are ATTACHED.***

IV. ***This is not an expansion of an existing project.***

V. ***A map is attached*** 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. A tabulation is attached of data on all wells of public record within the area of review which penetrate the proposed injection zone. ***There are NO Wells in the subject AOR which penetrate the target interval.*** The data includes a description of each well's type, construction, date drilled, location, depth, and a schematic of any P&A'd well illustrating all plugging detail.

VII. ***The following data is ATTACHED*** on the proposed operation, including:

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. ***Appropriate geologic data on the CISCO and CANYON formations is ATTACHED*** 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. ***Stimulation program – a conventional acid job may be performed to clean and open the formation.***

*X. Attach appropriate logging and test data on the well. (If well logs have been filed with the Division, they need not be resubmitted). ***Existing well logs are on file with OCD.***

*XI. ***There is 1 domestic water wells within one mile of the proposed salt water disposal well. Analysis is attached.***

XII. ***An affirmative statement is ATTACHED that available geologic and engineering data has been examined and no evidence was found*** of open faults or any other hydrologic connection between the disposal zone and any underground sources of drinking water.

XIII. ***"Proof of Notice" section on the next page of this form has been completed and ATTACHED. There are 12 offset lessees, mineral owners or operators within ½ mile; Well location and minerals are PRIVATE w/ federal and state leases offsetting.***

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: ***Ryan Barber*** TITLE: ***Petroleum Engineer***

SIGNATURE: Ryan _____ DATE: 4/30/19

E-MAIL ADDRESS: ***ryan@percussionpetroleum.com***

XV. 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:

DISTRIBUTION: Original and one copy to Santa Fe with one copy to the appropriate District Office

FORM C-108 – APPLICATION FOR AUTHORIZATION TO INJECT (cont.)

III. WELL DATA – ***The following information and data is included (See ATTACHED Wellbore Schematic):***

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 ***pursuant to the following criteria is ATTACHED.***

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.

C-108 - Items III, IV, V

Item III - Subject Well Data

Wellbore Schematic – CURRENT (Devonian Injection)

Wellbore Schematic – PROPOSED

The well is currently a Devonian injector and will be recompleted to the Cisco/ Canyon.

Item IV – Tabulation of AOR Wells

Tabulation includes all wells within a one-half mile radius of the subject well.

NO wells penetrate the proposed interval.

Item V – Area of Review Maps

1. Two Mile AOR Map with One-Mile Fresh Water Well Radius

2. One-Half Mile AOR Map

All Above Exhibits follow this page.

PERCUSSION PETROLEUM LLC

WELL SCHEMATIC - CURRENT

API #	30-015-29258	**Morris Arco 26 #2**	County, ST	Eddy County, NM
Operator	Percussion Petroleum		Sec-Twn-Rng	26-19S-25E
Field	SWD; Canyon		Footage	990' FNL and 1650' FEL
Spud Date	11/19/1996		Survey	32.6362457,-104.4521484

Formation (MD)	
San Andres	825'
Glorieta	2393'
Yeso	
Bone Spring	4222'
Wolfcamp	6381'
Canyon	7781'
Strawn	8290'
Atoka	
Morrow	9017'

RKB	3431'
GL	3418'

Hole Size	12-1/4"
TOC	surf
Method	circ returns

Csg Depth	1100'
Size	9-5/8"
Weight	36ppf
Grade	J55
Connections	LTC
Cement	700sx

Hole Size	8-3/4"
TOC	5631'
Method	Temp survey

Csg Depth	8025'
Size	7"
Weight	23/26ppf
Grade	K55/L80
Connections	BTC/LTC
Cement	1400sx

(100sx, 500sx, 800sx)

Tubing Detail				
Jts	Size	Depth	Length	Detail
304	2-7/8"	10,217	10217	Major Pack 6.5#, EUE L-80
	5-1/2"	10224	7	Tryton Mech Set Double grip pkr
	2-1/4"	10231	7	2.25" TR EUE 8md Landing Nipple
	2-7/8"	10231.5	0.5	2-7/8" WL Re-entry Guide

Hole Size	6-1/8"
TOC	6550'
Method	Temp Log

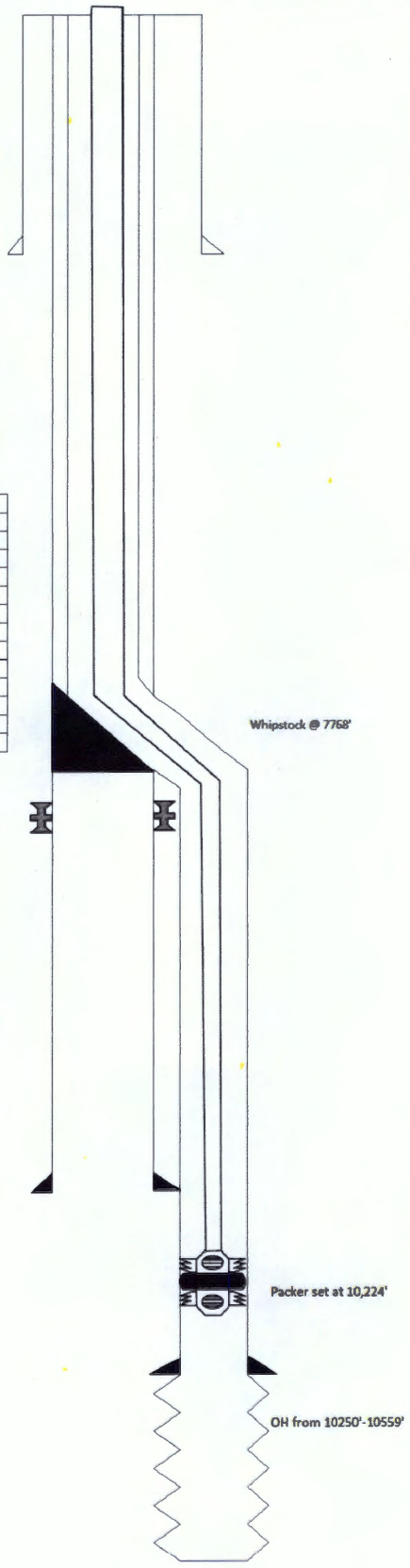
Csg Depth	10,250'
Size	5-1/2"
Weight	17 ppf
Grade	N-80
Connections	DTS4
Cement	150 sx

Hole Size	4-3/4"

OH to 10,559'

PBTD	10559'
TD MD	10559'
TD TVD	10559'

Last Update	12/17/2018
By	Kenny Norton



Well History

12/9/1996 DST #1 in Cisco/Canyon from 7780'-7819'.
12/11/1996 DST #2 in Cisco/Canyon from 7820'-7856'.
2/17/1997 Pickle tbg w/ 7bbl xylene and 7bbl 15% acid. Spot 48bbl 15% NEFE acid. Perf Cisco/Canyon from 7781'-7812'.
2/18/1997 Spot 45bbl 20% NEFE acid. Acidize perfs w/ 50bbl 20% NEFE acid. Pump 50bbl 20% NEFE acid.
2/19/1997 Set ESP.
5/8/1997 Squeeze Cisco/Canyon perfs 7781'-7812' w/o success.
5/13/1997 Squeeze Cisco/Canyon perfs 7781'-7812'.
5/19/1997 Perf Cisco/Canyon from 7781'-7790'.
5/20/1997 Acidize Cisco/Canyon perfs 7781'-7790' w/ 24bbl 15% HCL.
9/27/1997 Drill to test Morrow.
10/14/1997 P&A well.
7/9/2018 Add Perfs
9/24/2015 Convert to SWD
10/22/2018 Build battery

WELL SCHEMATIC - PROPOSED

Morris Arco SWD Well No.1

PERCUSSION PETROLEUM LLC

API #	30-015-29258	**Morris Arco 26 #2**	County, ST	Eddy County, NM
Operator	Percussion Petroleum		Sec-Twn-Rng	26-19S-25E
Field	SWD; Canyon		Footage	990' FNL and 1650' FEL
Spud Date	11/19/1996		Survey	32.6362457,-104.4521484

Formation (MD)	
San Andres	825'
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Yeso	
Bone Spring	4222'
Wolfcamp	6381'
Canyon	7781'
Strawn	8290'
Atoka	
Morrow	9017'

RKB	3431'
GL	3418'

Hole Size	12-1/4"
TOC	surf
Method	circ returns

Csg Depth	1100'
Size	9-5/8"
Weight	36ppf
Grade	J55
Connections	LTC
Cement	700sx

Hole Size	8-3/4"
TOC	5631'
Method	Temp survey

Csg Depth	8025'
Size	7"
Weight	23/26ppf
Grade	K55/L80
Connections	BTC/LTC
Cement	1400sx

(100sx, 500sx, 800sx)

Tubing Detail				
Jts	Size	Depth	Length	Detail
304	2-7/8"	7763	7763	Major Pack 6.5#, EUE L-80, IPC Tubing
	5-1/2"	7770	7	Tryton Mech Set Double grip pkr

Hole Size	6-1/8"
TOC	6550'
Method	Temp Log

Csg Depth	10,250'
Size	5-1/2"
Weight	17 ppf
Grade	N-80
Connections	DTS4
Cement	150 sx

Hole Size	4-3/4"

OH to 10,559'

PBTD	10559'
TD MD	10559'
TD TVD	10559'

Last Update	12/17/2018
By	Kenny Norton

Well History

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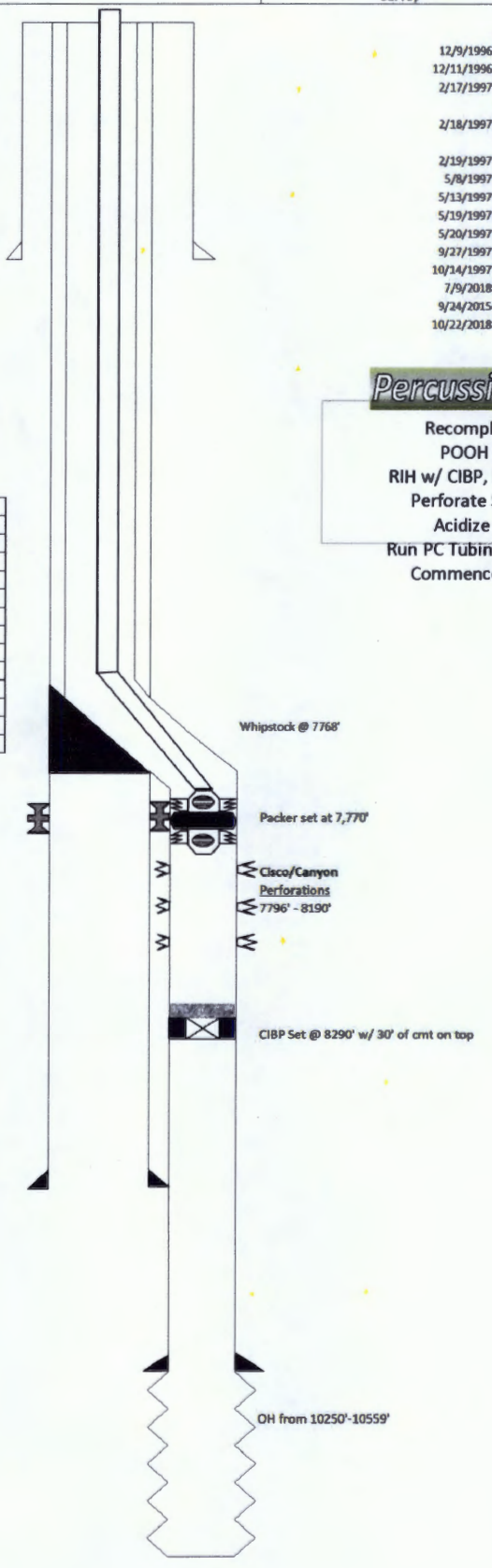
9/27/1997 Drill to test Morrow.
10/14/1997 P&A well.
7/9/2018 Add Perfs
9/24/2015 Convert to SWD
10/22/2018 Build battery

Percussion Petroleum

Recomplete to Cisco/Canyon
POOH w/ PKR and Tubing
RIH w/ CIBP, Dump 30 ft of cmt on top
Perforate Specific Intervals TBD.
Acidize perfs w/ 15% NEFE
Run PC Tubing and PKR - Conduct MIT.
Commence Disposal Operations.



C-108 - Item VI

Area of Review Well Data Tabulation

TOP OF PROPOSED INJECTION INTERVAL – 7796'

(Summary: 2 wells; 1 Shut-In; NO wells penetrate.)

Listed West to East of Proposed Well (See AOR Map)

1. 30-015-26057 – DOES NOT PENETRATE – TD 3000'

MORRIS 26 E #001

Well Type	Oil
Well Status	Active
ULSTR	E-26-17S-27E
ogrid_name	PERCUSSION PETROLEUM OPERATING, LLC

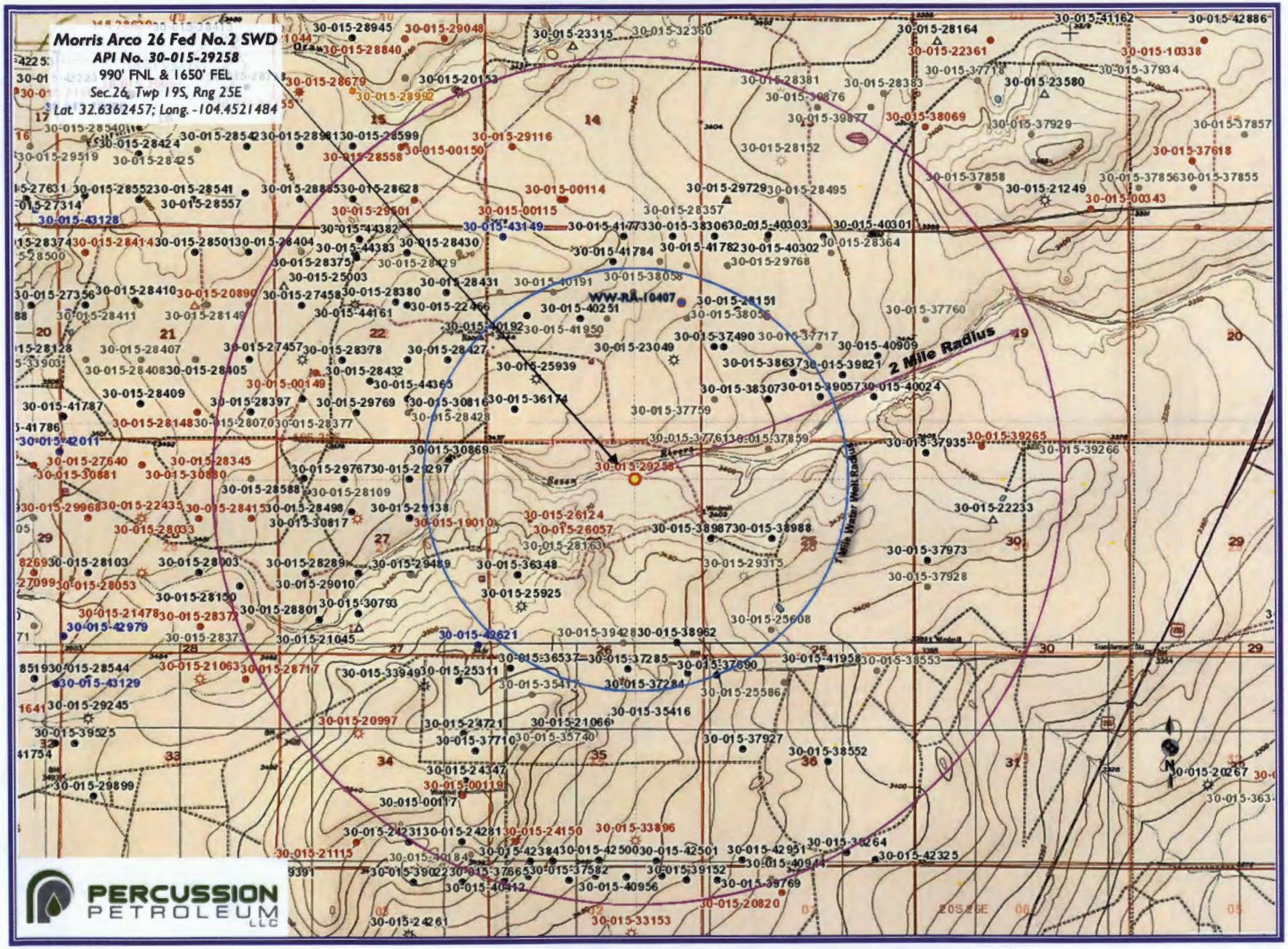
2. 30-015-38987 – DOES NOT PENETRATE – HORIZONTAL LATERAL DEPTH 2730'

PEACEMAKER 25 FEDERAL COM #001H

Well Type	Oil
Well Status	Active
ULSTR	E-25-17S-27E
ogrid_name	PERCUSSION PETROLEUM OPERATING, LLC

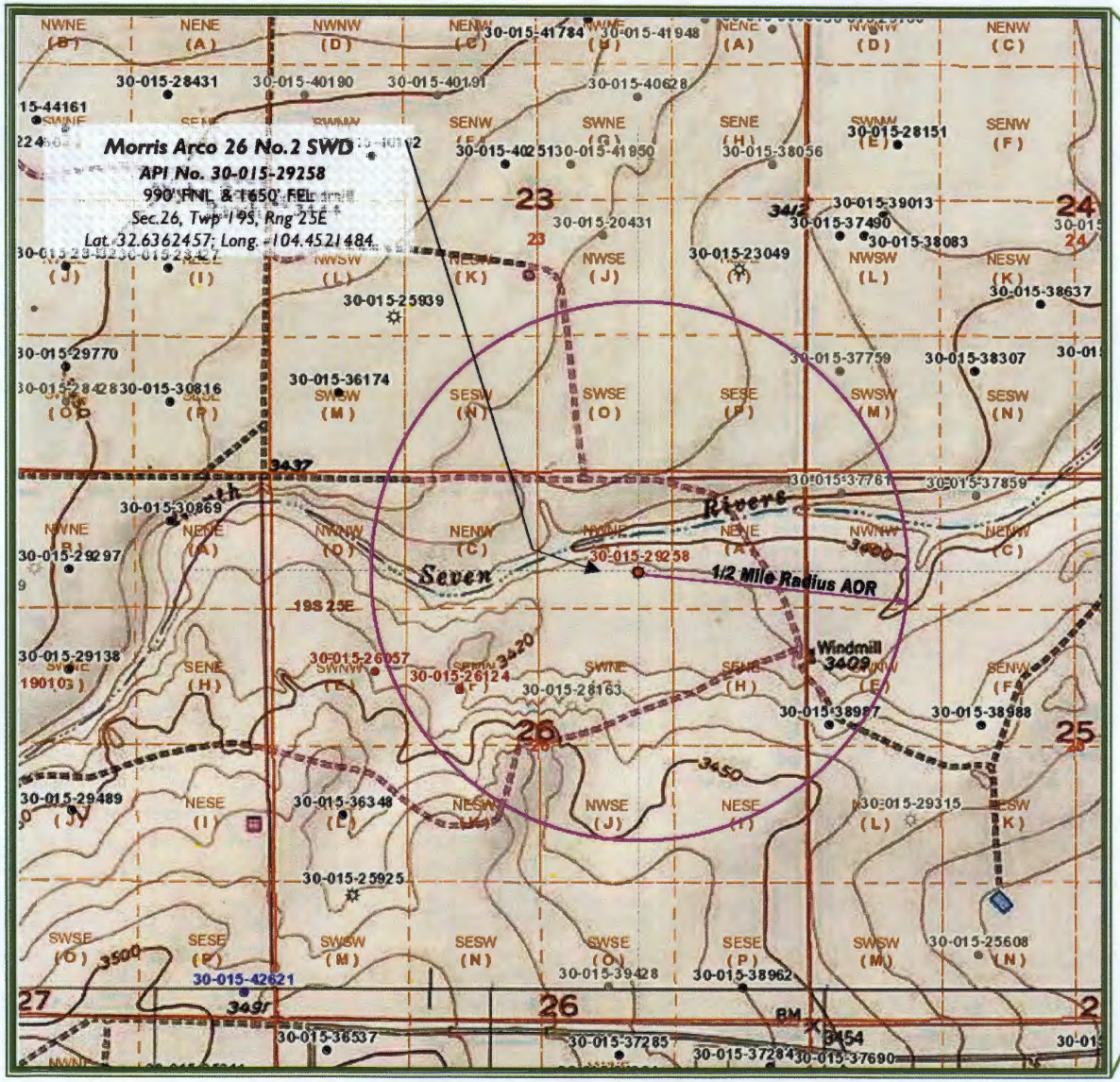
Morris Arco 26 Federal Com No.2 - Area of Review / 2 Miles

(Attachment to NMOCD Form C-108 - Item V)



Morris Arco 26 No.2 SWD Well No.1 - Area of Review / Overview Map

(Attachment to NMOCD Form C-108, Application for Authority to Inject.)



14.4 miles S/SW of Artesia, NM

Eddy County, New Mexico

PERCUSSION PETROLEUM LLC

C-108 ITEM X – LOGS and AVAILABLE TEST DATA

A log strip from subject well is attached.

LOG STRIP FOLLOWS

PAGE 1
HEADER

COMPANY: Nearburg Producing Co.

WELL: Morris Arco "26" No. 2

FIELD: Cemetery-Morrow CONFIDENTIAL

COUNTY: Eddy STATE: New Mexico

COUNTY: Eddy
Field: Cemetery-Morrow
Location: 990' FNL & 1650' FEL
Well: Morris Arco "26" No 2
Company: Nearburg Producing Co.

011499142

Schlumberger

PLATFORM EXPRESS 883
Compensated Neutron/Three-Detector LithoDensity

LOCATION
990' FNL & 1650' FEL
of Sec. 26, T-19S, R-25E

Elev.: K.B. 3444 F
G.L. 3431 F
D.F. 3443 F

Permanent Datum: Ground Level Elev.: 3431 F
Log Measured From: Kelly Bushing 13.0 F above Perm. Datum
Drilling Measured From: Kelly Bushing

API Serial No.	SECTION	TOWNSHIP	RANGE
30-015-29258	26	T-19S	R-25E

	Run 1	Run 2	Run 3	Run 4
Logging Date	12-OCT-1997			
Run Number	One}			
Depth Driller	9810 F			
Schlumberger Depth	9807 F			
Bottom Log Interval	9589 F			
Top Log Interval	7900 F			
Casing Driller Size @ Depth	7.000 IN @ 8023 F	@	@	@
Casing Schlumberger	8016 F			
Bit Size	6.125 IN			
MUD Type Fluid In Hole	Salt Gel/Barite			
MUD Density / Viscosity	10.9 LB/G 53 S			
MUD Fluid Loss / PH	5 C3 8.5			
MUD Source Of Sample	Circulation Tank			
RM @ Measured Temperature	0.086 OHMM @ 90 DEGF	@	@	@
RMF @ Measured Temperature	0.065 OHMM @ 90 DEGF	@	@	@
RMC @ Measured Temperature	@	@	@	@
Source RMF / RMC	Calculated			
RM @ MRT / RMF @ MRT	0.055 @ 145 0.041 @ 145	@ @	@ @	@ @
Maximum Recorded Temperatures	145 DEGF			
Circulation Stopped / Time	12-OCT-1997 8:45			
Logger On Bottom / Time	12-OCT-1997 14:18			
Unit Number / Location	3043 Hobbs, NM			
Recorded By	T. Bradley			
Witnessed By	K. Billings/B. Calobreves			

CONFIDENTIAL

FINAL PRINT

OCT RECEIVED DEC - WICHITA

ALL INTERPRETATIONS ARE OPINIONS BASED ON INFERENCES FROM ELECTRICAL OR OTHER MEASUREMENTS AND WE CANNOT, AND DO NOT GUARANTEE THE ACCURACY OR CORRECTNESS OF ANY INTERPRETATIONS, AND WE SHALL NOT, EXCEPT IN THE CASE OF GROSS OR WILLFUL NEGLIGENCE ON OUR PART, BE LIABLE OR RESPONSIBLE FOR ANY LOSS, COSTS, DAMAGES OR EXPENSES INCURRED OR SUSTAINED BY ANYONE RESULTING FROM ANY INTERPRETATION MADE BY ANY OF OUR OFFICERS, AGENTS OR EMPLOYEES. THESE INTERPRETATIONS ARE ALSO SUBJECT TO CLAUSE 4 OF OUR GENERAL TERMS AND CONDITIONS AS SET OUT IN OUR CURRENT PRICE SCHEDULE

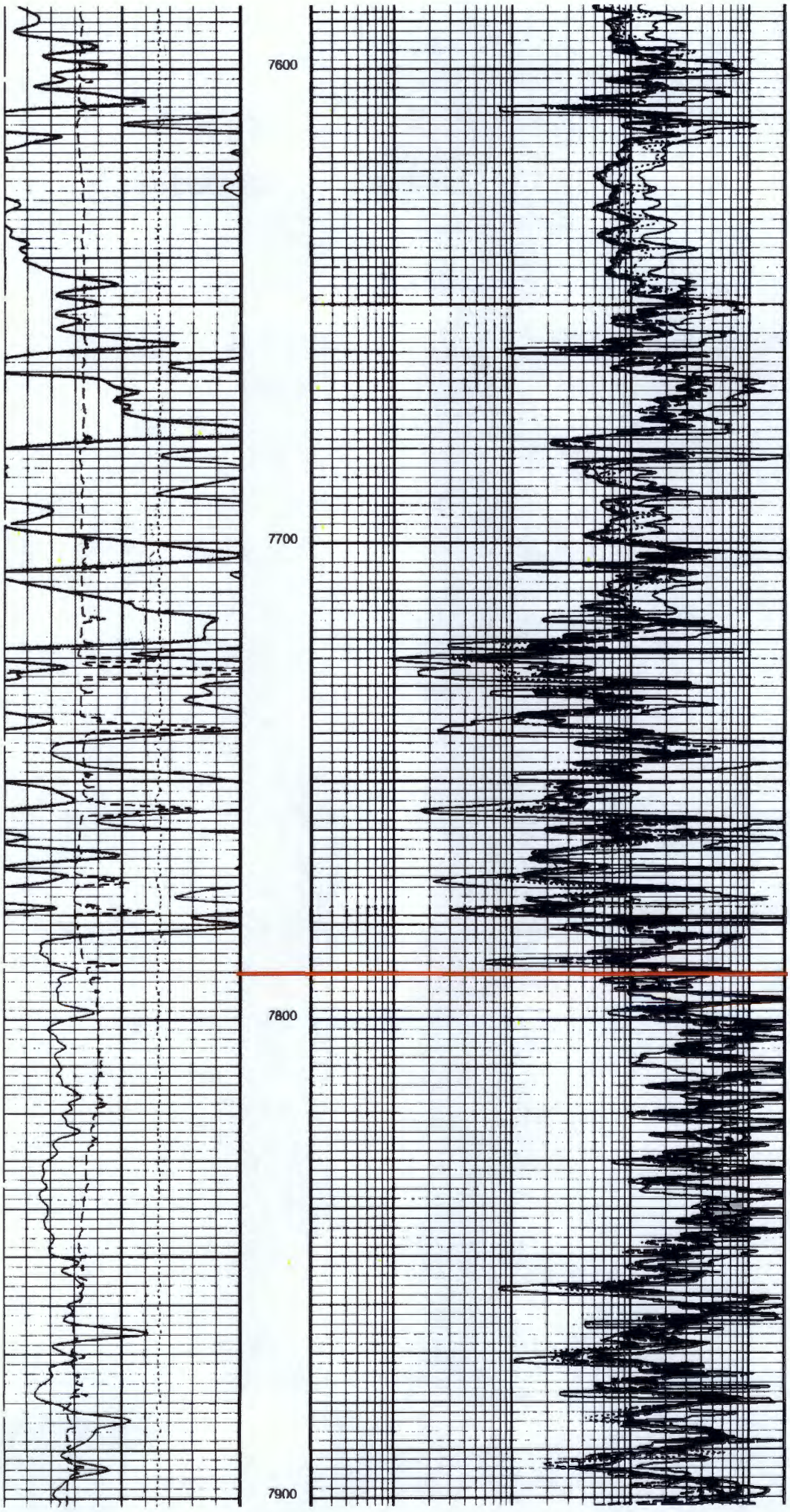
OTHER SERVICES1
OS1: HIP-HALS
OS2:
OS3:
OS4:
OS5:

OTHER SERVICES2
OS1:
OS2:
OS3:
OS4:
OS5:

REMARKS: RUN NUMBER 1
Crew Members- k. Fulcher, H. Martin.
DEPTH CONTROL
This is a primary depth reference log

REMARKS: RUN NUMBER 2

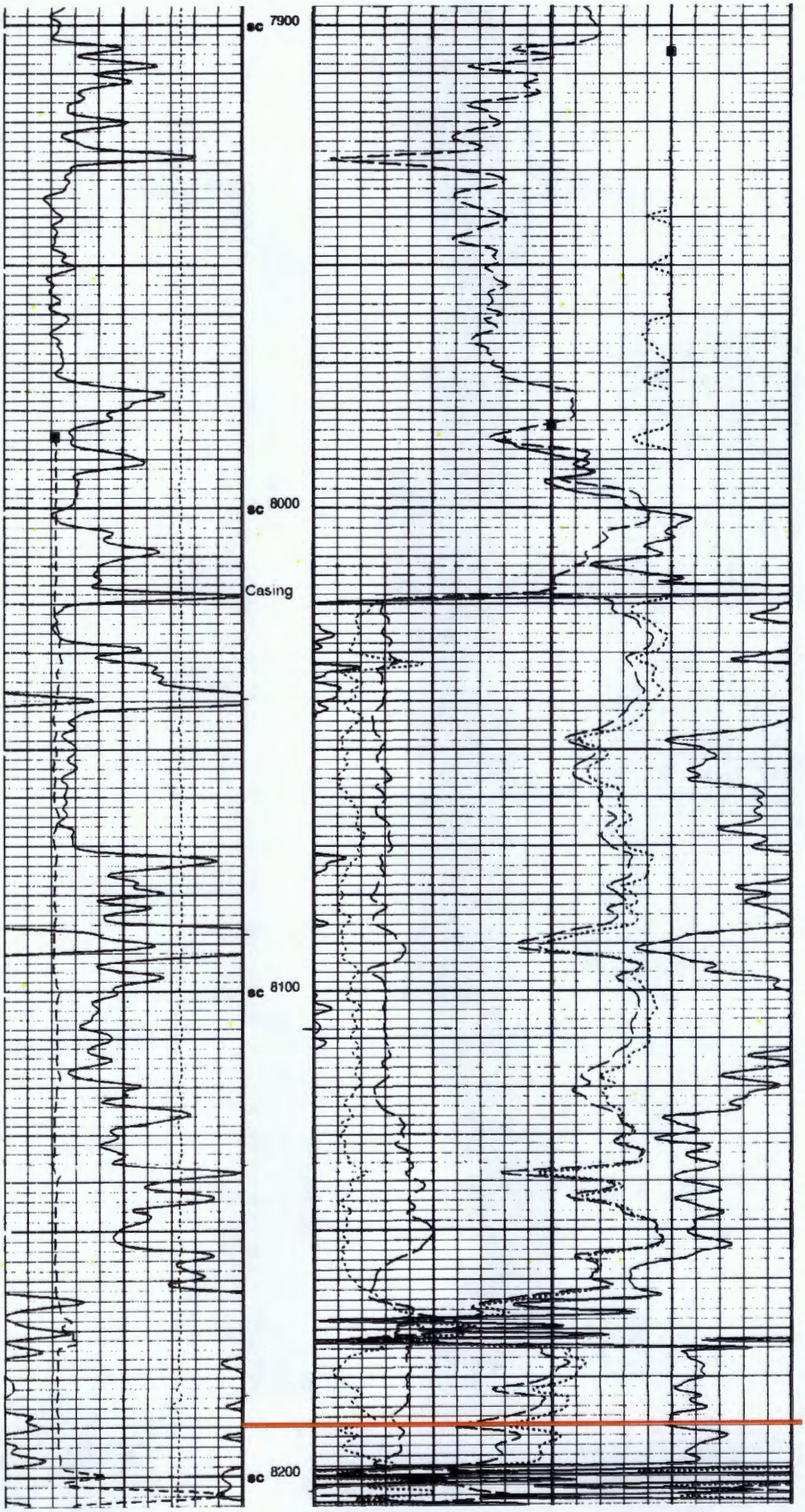
POROSITY DERIVATION
Neutron Porosity logged using the LIMESTONE matrix parameter



PAGE 2

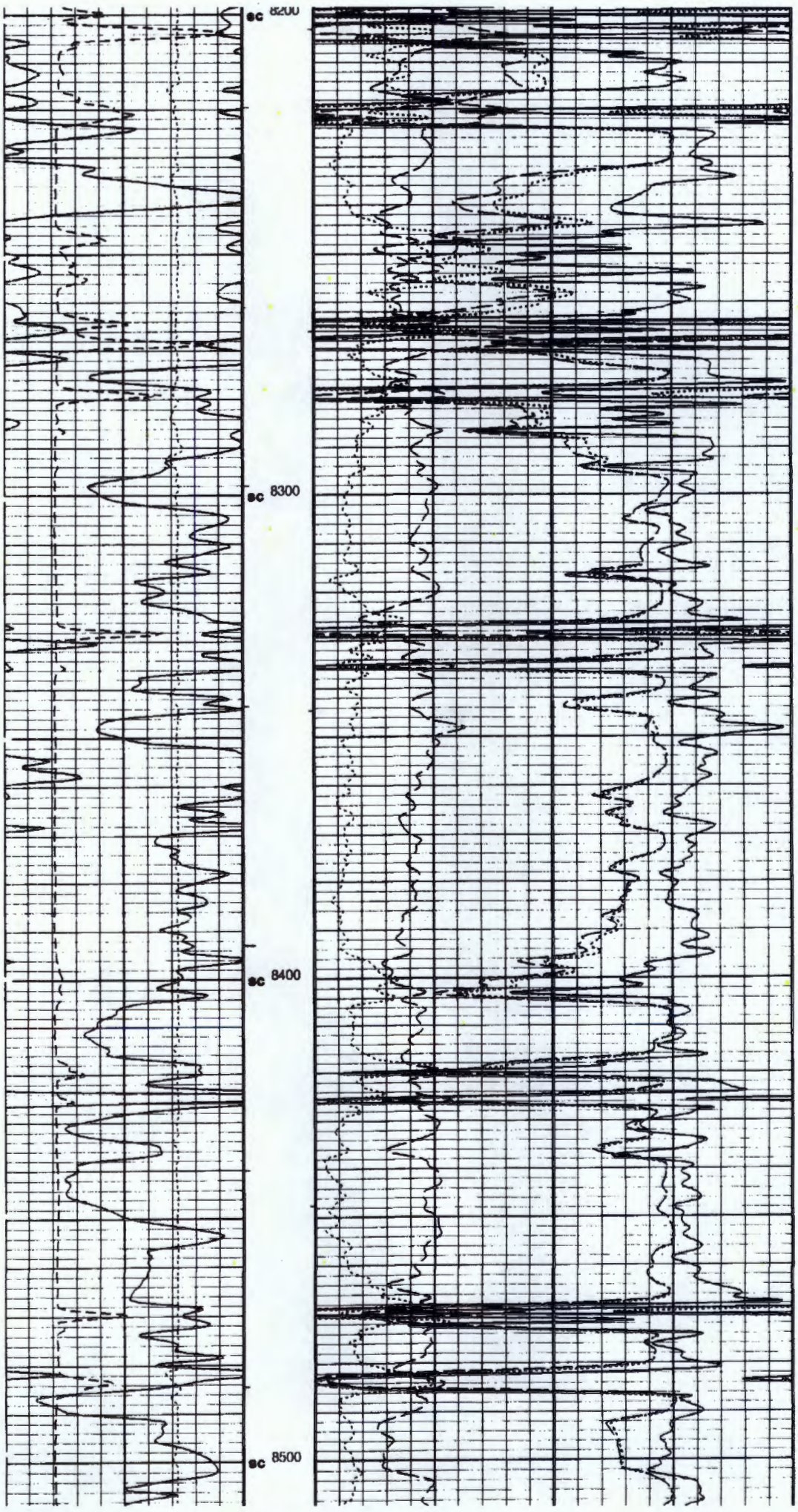
(This page only Array Induction/ GR to obtain portion of Gamma Ray)

TOP OF PROPOSED INTERVAL 7796'



PAGE 3
(Remaining pages from Compensated Neutron Log)

BOTTOM OF PROPOSED INTERVAL 8190'


sc 8200
sc 8300
sc 8400
sc 8500

C-108 ITEM VII

Item VII.1 – Proposed Injection Rates

Average Volume: 10,000 BPD
Maximum Volume: 12,000 BPD

Item VII.2 – Closed System

This will be a closed system

Item VII.3 – Proposed Injection Pressures

Average Injection Pressure: 1,200 PSI (surface pressure)
Maximum Injection Pressure: 1,556 PSI (surface pressure)

C-108 ITEM VII – PRODUCED WATER ANALYSES

Item VII.4 – Water Analysis of Source Zone Water

Glorieta/ Yeso
Bone Spring

Item VII.5 – Water Analysis of Disposal Zone Water

Cisco/ Canyon

Water Analyses follow this page.

C-108 Item VII.5 - Produced Water Data

Percussion Petroleum, LLC - Morris Arco SWD Project

SOURCE ZONE

GLO/YESO

Lab ID

Sample ID 1146

Sample No

API No 3001524754

Well Name PLATT PA 009

Location ULSTR 26 18 S 26 E **Lat / Long** 32.71216 -104.35742

330 S 990 W **County** Eddy

Operator (when sampled) Yates Petroleum Corp.

Field ATOKA Unit M

Sample Date 8/4/1984 Analysis Date

Sample Source Wellhead Depth (if known)

Water Typ Produced Water

ph	7.5	alkalinity_as_caco3_mgL	
ph_temp_F		hardness_as_caco3_mgL	
specificgravity		hardness_mgL	1800
specificgravity_temp_F		resistivity_ohm_cm	
tds_mgL	120382	resistivity_ohm_cm_temp_	
tds_mgL_180C		conductivity	
chloride_mgL	113000	conductivity_temp_F	
sodium_mgL	71415	carbonate_mgL	0
calcium_mgL	2560	bicarbonate_mgL	476
iror_mgL	0	sulfate_mgL	2001
barium_mgL		hydroxide_mgL	
magnesium_mgL	0	h2s_mgL	0
potassium_mgL		co2_mgL	
strontium_mgL		o2_mgL	
manganese_mgL		anionremarks	

Remarks

(Produced water data courtesy of NMT Octane NM WAIDS database.)

C-108 Item VII.5 - Produced Water Data

Percussion Petroleum, LLC - Morris Arco SWD Project

SOURCE ZONE

GLO/YESO

Lab ID

Sample ID 1207

API No 3001524619 Sample No

Well Name PLATT PA 008

Location ULSTR 26 18 S 26 E **Lat / Long** 32.71245 -104.35329

430 S 2260 W **County** Eddy

Operator (when sampled) Yates Petroleum Corporation

Field ATOKA Unit N

Sample Date 1/19/1985 Analysis Date

Sample Source well head Depth (if known)

Water Typ Produced Water

ph	6	alkalinity_as_caco3_mgL	
ph_temp_F		hardness_as_caco3_mgL	
specificgravity		hardness_mgL	11500
specificgravity_temp_F		resistivity_ohm_cm	
tds_mgL	136324	resistivity_ohm_cm_temp	
tds_mgL_180C		conductivity	
chloride_mgL	121000	conductivity_temp_F	
sodium_mgL	61571	carbonate_mgL	
calcium_mgL	4160	bicarbonate_mgL	104
iron_mgL	0	sulfate_mgL	3720
barium_mgL		hydroxide_mgL	
magnesium_mgL	7340	h2s_mgL	
potassium_mgL		co2_mgL	
strontium_mgL		o2_mgL	
manganese_mgL		anionremarks	

Remarks

(Produced water data courtesy of NMT Octane NM WAIDS database.)

C-108 Item VII.5 - Produced Water Data

Percussion Petroleum, LLC - Morris Arco SWD Project

SOURCE ZONE

BONE SPRING

Lab ID
Sample ID 5847
Sample No

API No 3001520225
Well Name BIG EDDY UNIT 012

Location ULSTR 21 20 S 31 E **Lat / Long** 32.56399 -103.87994
660 N 660 W **County** Eddy

Operator (when sampled) MALLON OIL COMPANY
Field BIG EDDY Unit D
Sample Date 8/27/1999 Analysis Date 8/31/1999

Sample Source
Water Typ
Depth (if known)

ph	5.2	alkalinity_as_caco3_mgL	
ph_temp_F		hardness_as_caco3_mgL	
specificgravity	1.125	hardness_mgL	
specificgravity_temp_F		resistivity_ohm_cm	
tds_mgL	181697	resistivity_ohm_cm_temp	
tds_mgL_180C		conductivity	
chloride_mgL	123750	conductivity_temp_F	
sodium_mgL	73895.6	carbonate_mgL	
calcium_mgL	5625	bicarbonate_mgL	13.725
iron_mgL	337.5	sulfate_mgL	787.5
barium_mgL		hydroxide_mgL	
magnesium_mgL		h2s_mgL	0
potassium_mgL		co2_mgL	
strontium_mgL		o2_mgL	
manganese_mgL		anionremarks	

Remarks

(Produced water data courtesy of NMT Octane NM WAIDS database.)

C-108 Item VII.5 - Produced Water Data

Percussion Petroleum, LLC - Morris Arco SWD Project

DISPOSAL ZONE

CIS

Lab ID

Sample ID 5945

API No 3001526468 Sample No

Well Name JOHN AGU 002

Location ULSTR 14 20 S 24 E **Lat / Long** 32.57883 -104.55197

660 N 660 E **County** Eddy

Operator (when sampled)

Field DAGGER DRAW Unit A

Sample Date 5/13/2000 Analysis Date

Sample Source Depth (if known)

Water Typ

ph	6.1	alkalinity_as_caco3_mgL	
ph_temp_F		hardness_as_caco3_mgL	
specificgravity	1.05	hardness_mgL	
specificgravity_temp_F		resistivity_ohm_cm	
tds_mgL	216236	resistivity_ohm_cm_temp_	
tds_mgL_180C		conductivity	
chloride_mgL	53321	conductivity_temp_F	
sodium_mgL		carbonate_mgL	
calcium_mgL	4576	bicarbonate_mgL	72619
iron_mgL	1000	sulfate_mgL	952
barium_mgL	0	hydroxide_mgL	
magnesium_mgL	463	h2s_mgL	0
potassium_mgL		co2_mgL	
strontium_mgL		o2_mgL	
manganese_mgL		anionremarks	

Remarks

(Produced water data courtesy of NMT Octane NM WAIDS database.)

C-108 - Item VIII

Geological Data

The Cisco Formation (Upper Penn) is a gray micritic (fine grained) fossiliferous limestone with vugular porosity as well as dolomite. The reservoirs in this area are usually limited in size with up dip porosity loss due to shelf margin carbonate build up. The upper portion becomes very shaley and is not proposed for injection.

The [Pennsylvanian] Canyon formation consists of similarly medium-grained carbonates, primarily dolomite and porous and permeable sandstone interbedded with shale and is generally 150 to 200 feet in thickness.

The combined zones offer some good porosity in the proposed injection interval located from 7796 feet to 8190 feet with some very good porosity interspersed throughout the overall interval.

The Cisco is overlain by the Wolfcamp and the Canyon is underlain by the Strawn and Atoka. (See Pool Map and Data exhibit included.)

Fresh water in the area is generally available from the karstic San Andres limestone formation which is a prime example of an artesian recharged aquifer. Based on State Engineer's records for water wells in Sections 22-27, Twp 19S, Rng 25E, groundwater is found from 40 feet to 220 feet, average depth 102 feet.

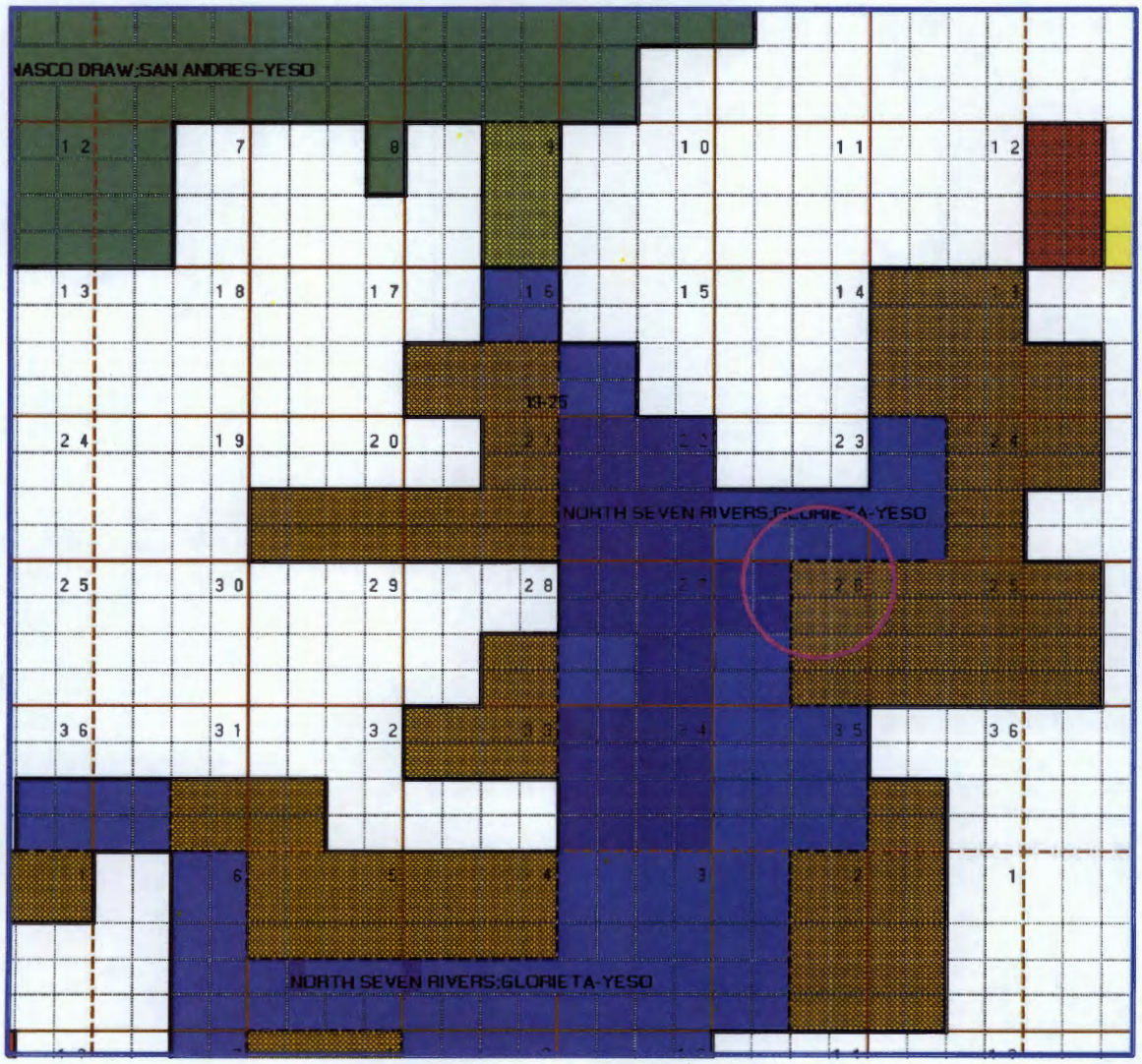
There is 1 water well located within one mile of the proposed SWD. It has been sampled and analyses are attached.

C-108 – Item VIII – Geologic Data

SUPPLEMENTAL INFORMATION – POOL DATA

GLORIETA/ YESO POOLS IN REGION

(Overlying Disposal Formation)



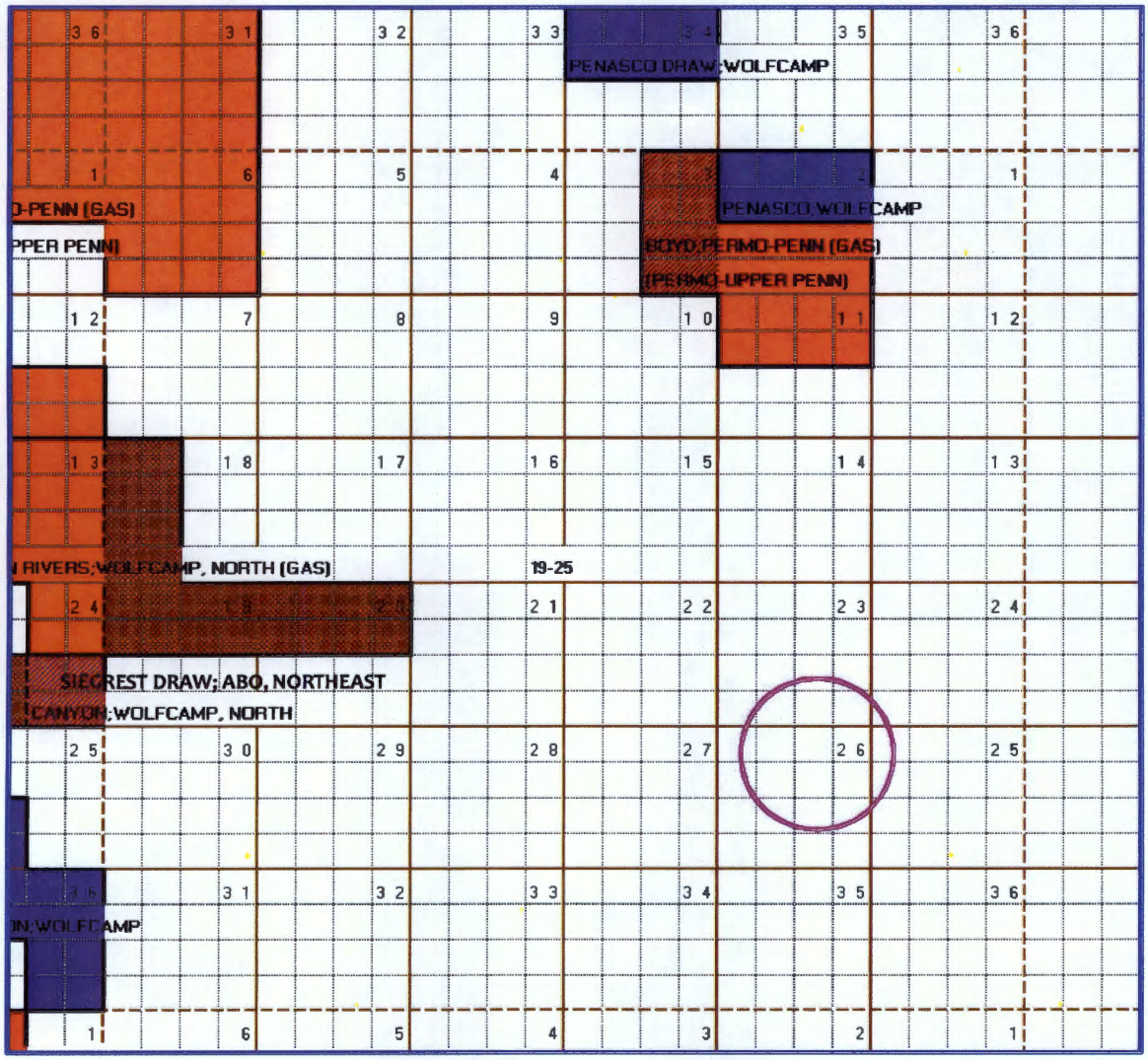
Pool Maps Courtesy of Paul Kautz

C-108 – Item VIII – Geologic Data

SUPPLEMENTAL INFORMATION – POOL DATA

ABO & WOLFCAMP POOLS IN REGION

(Overlying Disposal Formation)



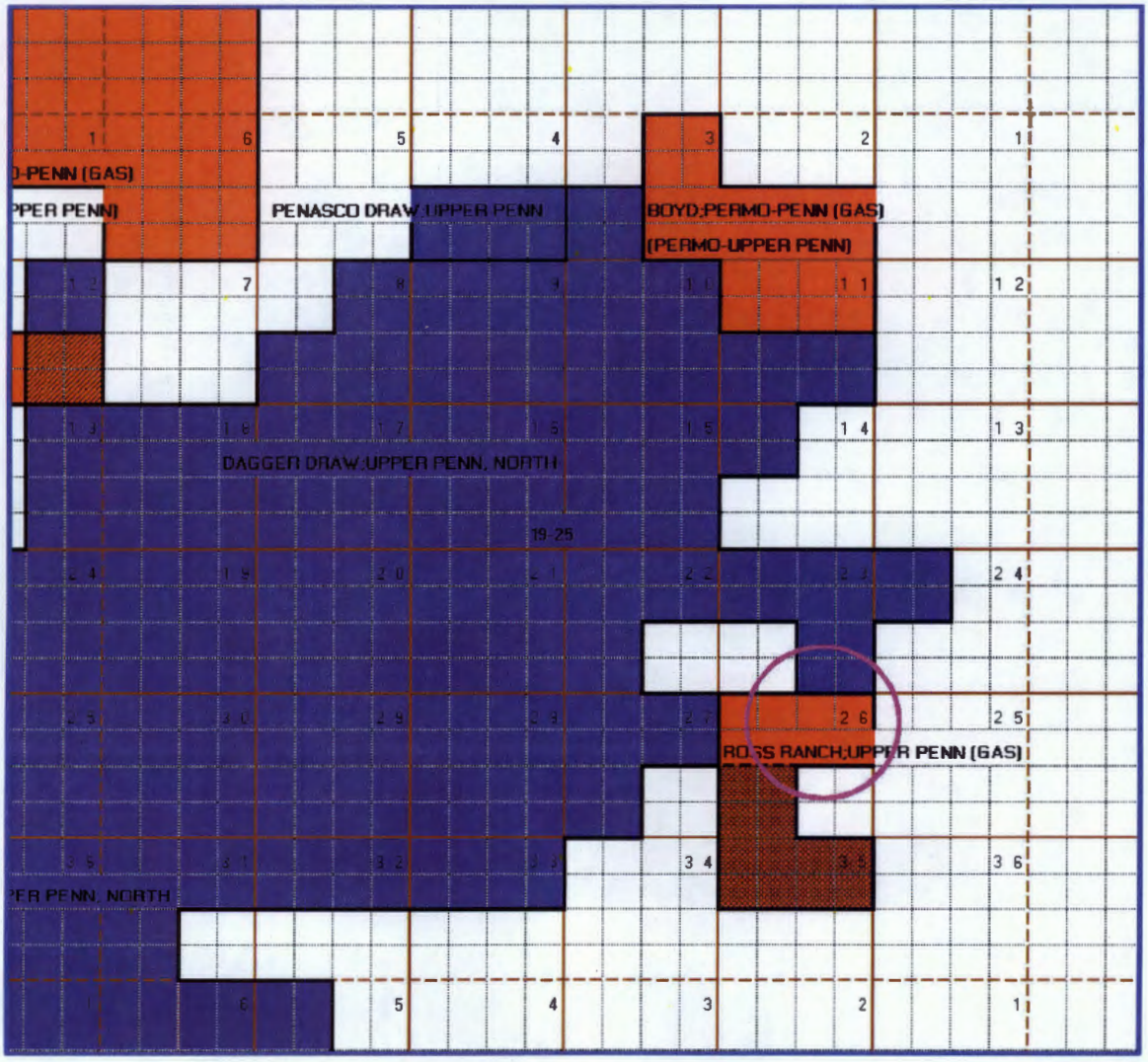
Pool Maps Courtesy of Paul Kautz

C-108 – Item VIII – Geologic Data

SUPPLEMENTAL INFORMATION – POOL DATA

PENNSYLVANIAN POOLS IN REGION

(Underlying Disposal Formation)



Pool Maps Courtesy of Paul Kautz

C-108 ITEM XI

Water Wells in One-Mile AOR

1 Water Well Spot (based on coordinates)
Within ONE MILE of Proposed SWD – Analysis attached.

New Mexico Office of the State Engineer

Active & Inactive Points of Diversion

(with Ownership Information)

(acre ft per annum) (R=POD has been replaced and no longer serves this file, C=the file is closed) (quarters are 1=NW 2=NE 3=SW 4=SE) (quarters are smallest to largest) (NAD83 UTM in meters)

WR File Nbr	Sub basin	Use	Diversion	Owner	County	POD Number	Code	Grant	Source	q q q 64 16 4	Sec	Tws	Rng	X	Y
RA 02909		DOM	3	TAYLOR ROSS	ED	RA 02909			Shallow	1 3	22	19S	25E	548864	3611989*
RA 03304		DOM	3	S. W. STOCKTON	ED	RA 03304			Shallow	1	27	19S	25E	549081	3610973*
RA 08986		PRO	0	YATES PETROLEUM CORP.	ED	RA 08986			Shallow	1 3 3	22	19S	25E	548824	3611507
RA 10155		DOM	3	SUSAN HERPIN	ED	RA 10155			Shallow	4 3 4	25	19S	25E	553001	3609865*
RA 10407		DOL	0	JOAN MULLARKEY	ED	RA 10407			Shallow	4 2	23	19S	25E	551676	3612409*
RA 10498		DOM	3	RAUL RODRIGUEZ	ED	RA 10498			Shallow	3 3 4	25	19S	25E	552801	3609865*
RA 11839		PRO	0	YATES PETROLEUM CORPORATION	ED	RA 08986			Shallow	1 3 3	22	19S	25E	548824	3611507

Record Count: 7

PLSS Search:

Section(s): 22, 23, 24, 25, 26, 27 **Township:** 19S **Range:** 25E

Sorted by: File Number

*UTM location was derived from PLSS - see Help

Please note: Percussion field personnel could not locate the above well during a foot search.

They did however; find a different active water well not indicated by OSE records.

That well (shown on Locator Map, next page) was sampled and analysis is attached.

C-108 Item XI

Water Wells Within One Mile

Morris Arco 26 No.2 SWD - Water Well Locator Map

NM OSE data indicated ONE Water Well Located Within a One-Mile Radius Area of Review. This well (highlighted by yellow arrow) could not be found. Percussion field personnel did however; find a water well not shown in NM OSE data. (Blue star and arrow). This well was sampled and analysis is attached.

C-108 ITEM XI – WATER WELLS IN AOR

Depth to Ground Water

New Mexico Office of the State Engineer
Water Column/Average Depth to Water

(A CLW##### in the POD suffix indicates the POD has been replaced & no longer serves a water right file.)

(R=POD has been replaced, O=orphaned, C=the file is closed)

(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are smallest to largest)

(NAD83 UTM in meters)

(In feet)

POD Number	POD Sub-Code basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Depth Well	Depth Water	Water Column
RA 02909		ED	1	3	22		19S	25E	548864	3611989*	188	130	58
RA 03304		ED		1	27		19S	25E	549081	3610973*	130	60	70
RA 06986		ED	1	3	3	22	19S	25E	548825	3611507	320	220	100
RA 10155		ED	4	3	4	25	19S	25E	553001	3609865*	225	60	165
RA 10496		ED	3	3	4	25	19S	25E	552801	3609865*	110	40	70

Average Depth to Water: 102 feet
Minimum Depth: 40 feet
Maximum Depth: 220 feet

Record Count: 5

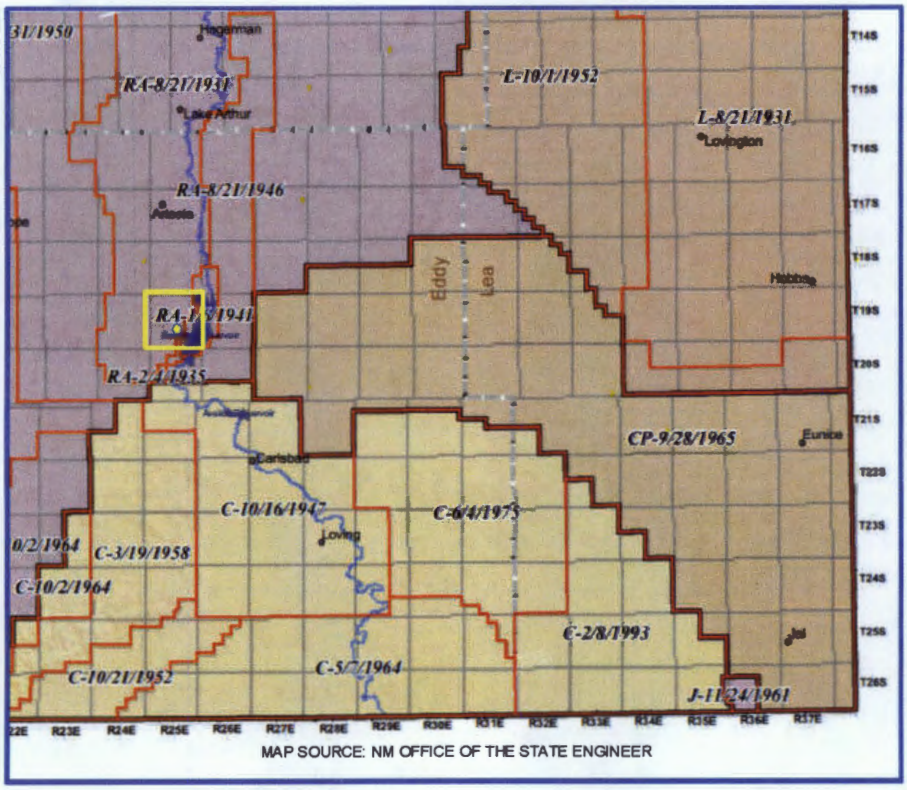
PLSS Search:

Section(s): 22, 23, 24, 25, 26, 27 Township: 19S Range: 25E

*UTM location was derived from PLSS - see Help

C-108 - Item XI

Groundwater Basins - Water Column / Depth to Groundwater



MAP SOURCE: NM OFFICE OF THE STATE ENGINEER

The subject well is located within the Roswell Basin.

The Roswell Artesian Basin consists of an eastward-dipping carbonate aquifer overlain by a leaky evaporitic confining unit, overlain in turn by an unconfined alluvial aquifer. The carbonate aquifer is artesian to the east but under water-table conditions in the western outcrop area.

Water-producing zones in the carbonate aquifer rise stratigraphically from north to south and from west to east. Some wells may penetrate as many as five water-producing zones. Secondary porosity is developed in vuggy and cavernous limestone, solution-collapse breccia, and solution-enlarged fractures. Recharge occurs by direct infiltration of precipitation and by runoff from intermittent losing streams flowing eastward across a broad area east of the Sacramento Mountains. (USGS)

State Engineer's records show water wells in 19S-25E with an average depth to water at 175 feet.

There is 1 water well located within one mile of the proposed SWD.

C-108 - Item XI

Water Well Analysis

Analysis on following pages.

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

March 23, 2018

LELAN ANDERS

PERCUSSION PETROLEUM

919 MILAM , STE 2475

HOUSTON, TX 77002

RE: MORRIS ARCO 26

Enclosed are the results of analyses for samples received by the laboratory on 03/09/18 15:00.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-17-10. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Total Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Cardinal Laboratories is accredited through the State of New Mexico Environment Department for:

Method SM 9223-B	Total Coliform and E. coli (Colilert MMO-MUG)
Method EPA 524.2	Regulated VOCs and Total Trihalomethanes (TTHM)
Method EPA 552.2	Total Haloacetic Acids (HAA-5)

Accreditation applies to public drinking water matrices for State of Colorado and New Mexico.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

PERCUSSION PETROLEUM 919 MILAM , STE 2475 HOUSTON TX, 77002	Project: MORRIS ARCO 26 Project Number: 2 SWD Project Manager: LELAN ANDERS Fax To:	Reported: 23-Mar-18 17:26

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MORRIS ARCO	H800709-01	Water	09-Mar-18 09:00	09-Mar-18 15:00

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

PERCUSSION PETROLEUM 919 MILAM , STE 2475 HOUSTON TX, 77002	Project: MORRIS ARCO 26 Project Number: 2 SWD Project Manager: LELAN ANDERS Fax To:	Reported: 23-Mar-18 17:26

MORRIS ARCO

H800709-01 (Water)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Alkalinity, Bicarbonate	**151**		5.00	mg/L	1	8031203	AC	13-Mar-18	310.1	
Alkalinity, Carbonate	<1.00		1.00	mg/L	1	8031203	AC	13-Mar-18	310.1	
Chloride*	**24.0**		4.00	mg/L	1	8030801	AC	13-Mar-18	4500-Cl-B	
Conductivity*	**2840**		1.00	uS/cm	1	8031204	AC	12-Mar-18	120.1	
pH*	**7.69**		0.100	pH Units	1	8031204	AC	12-Mar-18	150.1	
Sulfate*	**1840**		500	mg/L	50	8030907	AC	09-Mar-18	375.4	
TDS*	**2910**		5.00	mg/L	1	8030908	AC	15-Mar-18	160.1	
Alkalinity, Total*	**124**		4.00	mg/L	1	8031203	AC	13-Mar-18	310.1	
Green Analytical Laboratories										
Total Recoverable Metals by ICP (E200.7)										
Calcium*	**588**		1.00	mg/L	10	B803117	JDA	22-Mar-18	EPA200.7	
Magnesium*	**114**		1.00	mg/L	10	B803117	JDA	22-Mar-18	EPA200.7	
Potassium*	<10.0		10.0	mg/L	10	B803117	JDA	22-Mar-18	EPA200.7	
Sodium*	**22.7**		10.0	mg/L	10	B803117	JDA	22-Mar-18	EPA200.7	

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

PERCUSSION PETROLEUM 919 MILAM , STE 2475 HOUSTON TX, 77002	Project: MORRIS ARCO 26 Project Number: 2 SWD Project Manager: LELAN ANDERS Fax To:	Reported: 23-Mar-18 17:26

Inorganic Compounds - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8030801 - General Prep - Wet Chem										
Blank (8030801-BLK1)				Prepared & Analyzed: 08-Mar-18						
Chloride	ND	4.00	mg/L							
LCS (8030801-BS1)				Prepared & Analyzed: 08-Mar-18						
Chloride	100	4.00	mg/L	100		100	80-120			
LCS Dup (8030801-BSD1)				Prepared & Analyzed: 08-Mar-18						
Chloride	104	4.00	mg/L	100		104	80-120	3.92	20	
Batch 8030907 - General Prep - Wet Chem										
Blank (8030907-BLK1)				Prepared & Analyzed: 09-Mar-18						
Sulfate	ND	10.0	mg/L							
LCS (8030907-BS1)				Prepared & Analyzed: 09-Mar-18						
Sulfate	22.4	10.0	mg/L	20.0		112	80-120			
LCS Dup (8030907-BSD1)				Prepared & Analyzed: 09-Mar-18						
Sulfate	23.7	10.0	mg/L	20.0		119	80-120	5.72	20	
Batch 8030908 - Filtration										
Blank (8030908-BLK1)				Prepared: 12-Mar-18 Analyzed: 15-Mar-18						
TDS	ND	5.00	mg/L							
LCS (8030908-BS1)				Prepared: 12-Mar-18 Analyzed: 15-Mar-18						
TDS	207	5.00	mg/L	213		97.2	80-120			

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

PERCUSSION PETROLEUM 919 MILAM , STE 2475 HOUSTON TX, 77002	Project: MORRIS ARCO 26 Project Number: 2 SWD Project Manager: LELAN ANDERS Fax To:	Reported: 23-Mar-18 17:26

Inorganic Compounds - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8030908 - Filtration										
Duplicate (8030908-DUP1)	**Source: H800689-01**			Prepared: 12-Mar-18 Analyzed: 15-Mar-18						
TDS	137000	5.00	mg/L		134000			2.36	20	
Batch 8031203 - General Prep - Wet Chem										
Blank (8031203-BLK1)				Prepared & Analyzed: 12-Mar-18						
Alkalinity, Carbonate	ND	1.00	mg/L							
Alkalinity, Bicarbonate	5.00	5.00	mg/L							
Alkalinity, Total	4.00	4.00	mg/L							
LCS (8031203-BS1)				Prepared & Analyzed: 12-Mar-18						
Alkalinity, Carbonate	ND	2.50	mg/L				80-120			
Alkalinity, Bicarbonate	390	12.5	mg/L				80-120			
Alkalinity, Total	320	10.0	mg/L	250		128	80-120			BS1
LCS Dup (8031203-BSD1)				Prepared & Analyzed: 12-Mar-18						
Alkalinity, Carbonate	ND	2.50	mg/L				80-120		20	
Alkalinity, Bicarbonate	378	12.5	mg/L				80-120	3.26	20	
Alkalinity, Total	310	10.0	mg/L	250		124	80-120	3.17	20	BS1
Batch 8031204 - General Prep - Wet Chem										
LCS (8031204-BS1)				Prepared & Analyzed: 12-Mar-18						
Conductivity	490		uS/cm	500		98.0	80-120			
pH	7.18		pH Units	7.00		103	90-110			
Duplicate (8031204-DUP1)	**Source: H800709-01**			Prepared & Analyzed: 12-Mar-18						
pH	7.72	0.100	pH Units		7.69			0.389	20	
Conductivity	2800	1.00	uS/cm		2840			1.28	20	

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

PERCUSSION PETROLEUM 919 MILAM , STE 2475 HOUSTON TX, 77002	Project: MORRIS ARCO 26 Project Number: 2 SWD Project Manager: LELAN ANDERS Fax To:	Reported: 23-Mar-18 17:26

Total Recoverable Metals by ICP (E200.7) - Quality Control

Green Analytical Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B803117 - Total Rec. 200.7/200.8/200.2										
Blank (B803117-BLK1)				Prepared: 19-Mar-18 Analyzed: 20-Mar-18						
Calcium	ND	0.100	mg/L							
Sodium	ND	1.00	mg/L							
Potassium	ND	1.00	mg/L							
Magnesium	ND	0.100	mg/L							
LCS (B803117-BS1)				Prepared: 19-Mar-18 Analyzed: 20-Mar-18						
Sodium	3.30	1.00	mg/L	3.24		102	85-115			
Potassium	8.17	1.00	mg/L	8.00		102	85-115			
Magnesium	20.6	0.100	mg/L	20.0		103	85-115			
Calcium	4.04	0.100	mg/L	4.00		101	85-115			
LCS Dup (B803117-BSD1)				Prepared: 19-Mar-18 Analyzed: 20-Mar-18						
Potassium	8.25	1.00	mg/L	8.00		103	85-115	1.08	20	
Sodium	3.33	1.00	mg/L	3.24		103	85-115	0.876	20	
Calcium	4.14	0.100	mg/L	4.00		104	85-115	2.41	20	
Magnesium	21.0	0.100	mg/L	20.0		105	85-115	2.28	20	

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Notes and Definitions

BS1	Blank spike recovery above laboratory acceptance criteria. Results for analyte potentially biased high.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240
(575) 393-2326 FAX (575) 393-2476

Company Name: Percussion Petroleum	BILL TO
Project Manager: Lelan Anders	P.O. #:
Address: 919 Milam St Suite 2475	Company:
City: Houston State: TX Zip: 77002	Attn:
Phone #: 281-905-1752 Fax #:	Address:
Project #: Project Owner:	City:
Project Name: Morris Arco 26 2 SWD	State: Zip:
Project Location:	Phone #:
Sampler Name:	Fax #:

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	PRESERV.: ACID/BASE:	ICE / COOL	OTHER :	SAMPLING: DATE	TIME	ANALYSIS REQUEST: TDS Cation/Anions	Cl
H800709 1	Morris Arco	G	1	✓									3-9-18	9:00	✓	✓

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analyses. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.

Relinquished By: Jordan Thomas	Date: 3-9-18 Time: 3:00	Received By: Tamara Oldaker	Phone Result: ☐ Yes ☐ No Add'l Phone #:
Relinquished By:	Date: Time:	Received By:	Fax Result: ☐ Yes ☐ No Add'l Fax #:
Delivered By: (Circle One) 0.9c	Sample Condition: Cool ☑ Yes ☐ No; Intact ☐ Yes ☐ No	CHECKED BY: (Initials) TO #15	REMARKS:
Sampler - UPS - Bus - Other: Corrected 0.8c			

+ Cardinal cannot accept verbal changes. Please fax written changes to (575) 393-2326

C-108 ITEM XII

Geologic Affirmation

We have examined available geologic and engineering data and have found no evidence of open faults or other hydrologic connection between the disposal interval and any underground sources of drinking water.

Ryan Barber, Petroleum Engineer
Percussion Petroleum, LLC

Project: Percussion Petroleum Operating, LLC
Morris Arco SWD No.1
Reviewed 4/10/2019

C-108 ITEM XIII – PROOF OF NOTIFICATION

IDENTIFICATION AND NOTIFICATION OF INTERESTED PARTIES

Exhibits for Section

Affected Parties Map

List of Interested Parties

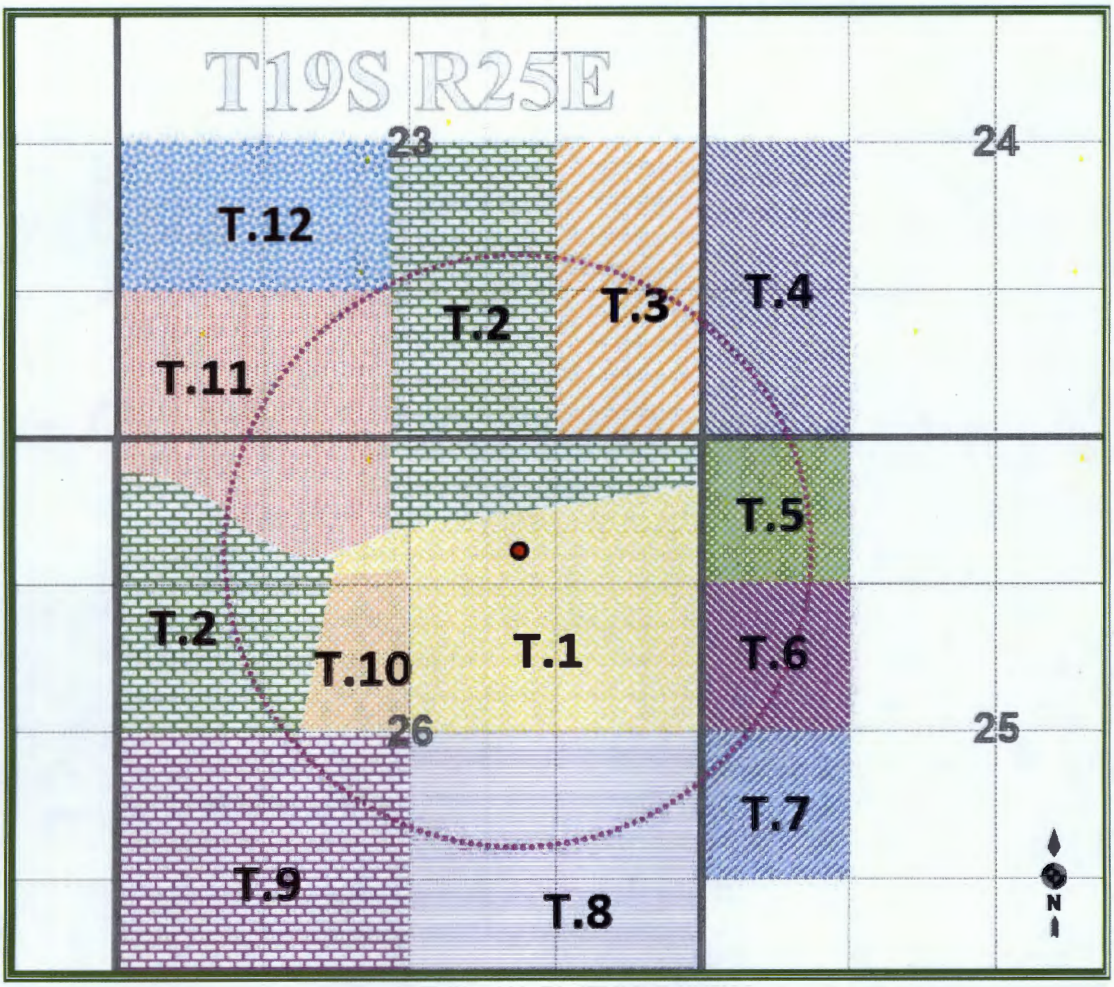
Notification Letter to Interested Parties

Proof of Certified Mailing

Published Legal Notice

Morris Arco 26 No.2 SWD – Affected Parties Map

(Attachment to NMOCD Form C-108, Application for Authority to Inject.)



PERCUSSION PETROLEUM LLC

LEGEND

T.1 – Percussion; Private – ZPZ Delaware I, LLC

T.2 – Private – St. Devote, LLC

T.3 – Private – St. Devote, LLC

T.4 – Private – Mewbourne Energy Ptrns, et al; Payne & Taurus; Marshall & Winston

T.5 – Private - B&G Royalties; Covert Trust, Fiske, Mewbourne Energy Ptrns, et al, others

T.6 – Private - B&G Royalties; Covert Trust, Fiske, Mewbourne Energy Ptrns, et al, others

T.7 – BLM, NMNM-117544 – St. Devote, LLC

T.8 – Private – St. Devote, LLC

T.9 – State, VB-0060-0004 – St. Devote, LLC

T.10 – Private – St. Devote, LLC

T.11 – Private – St. Devote, LLC

T.12 – Private – St. Devote, LLC

C-108 ITEM XIII – PROOF OF NOTIFICATION
INTERESTED PARTIES LIST

"AFFECTED PERSON" MEANS THE DIVISION DESIGNATED OPERATOR; IN THE ABSENCE OF AN OPERATOR, A LESSEE WHOSE INTEREST IS EVIDENCE BY A WRITTEN CONVEYANCE DOCUMENT EITHER OF RECORD OR KNOWN TO THE APPLICANT AS OF THE DATE THE APPLICANT FILES THE APPLICATION; OR IN THE ABSENCE OF AN OPERATOR OR LESSEE, A MINERAL INTEREST OWNER WHOSE INTEREST IS EVIDENCED BY A WRITTEN CONVEYANCE DOCUMENT EITHER OF RECORD OR KNOWN TO THE APPLICANT AS OF THE DATE THE APPLICANT FILED THE APPLICATION FOR PERMIT TO INJECT.; PER OCD RULES NMAC 19.15.26.7, A. AND 19.15.26.8, B.2.

SURFACE OWNER

PERCUSSION PETROLEUM OPERATING, LLC (Applicant)
919 Milam, Ste.2475
Houston, TX 77002

OFFSET MINERALS LESSEES (or OWNERS) and OPERATORS (Notified via USPS Certified Mail)

Private Lease (T.1 on Affected Parties Plat)
Mineral Owner

1 ZPZ DELAWARE I, LLC
Attn: Jan Carter
303 Veterans Airpark Lane, Ste.1000
Midland, TX 79705
Certified: 9314 7699 0430 0057 9148 52

Operator
PERCUSSION PETROLEUM OPERATING, LLC
919 Milam, Ste.2475
Houston, TX 77002

Private Leases (T.2, T.3, T.8, T.10, T.11, T.12, T.13 on Affected Parties Plat)
Lessse
ST DEVOTE, LLC (Subsidiary of Applicant
919 Milam, Ste.2475
Houston, TX 77002

Operator
PERCUSSION PETROLEUM OPERATING, LLC
919 Milam, Ste.2475
Houston, TX 77002

Private Lease (T.4 on Affected Parties Plat)
Lessees

2 MEWBOURNE ENERGY PARTNERS 09-A, LP; CWM 2000-B, LTD; CWM 2000-B II, LTD; 3MG CORP.; MEWBOURNE DEVELOPMENT CORP.; MEWBOURNE OIL COMPANY
P.O. Box 7698
Tyler, TX 75711
Certified: 9314 7699 0430 0057 9163 06

C-108 ITEM XIII – PROOF OF NOTIFICATION
INTERESTED PARTIES LIST (cont.)

Private Lease (T.4 on Affected Parties Plat – cont.)

Lessees (cont.)

3 PAYNE & TAURUS, LLP
P.O. Box 1477
Little Elm, TX 75068
Certified: 9314 7699 0430 0057 9169 48

4 MARSHALL & WINSTON, INC.
P.O. Box 50880
Midland, TX 79710-0880
Certified: 9314 7699 0430 0057 9166 72

Operator

5 MEWBOURNE OIL COMPANY
P.O. Box 2070
Hobbs, NM 88240
Certified: 9314 7699 0430 0057 9170 51

Private Lease (T.5 and T.6 on Affected Parties Plat)

Lessees

6 B & G ROYALTIES PARTNERSHIP
P.O. Box 376
Artesia, NM 88211-0376
Certified: 9314 7699 0430 0057 9171 12

7 COVERT TRUST DATED NOVEMBER 1, 2010
Attn: Charlene S. Byers
P.O. Box 22294
Denver, CO 80222-0294
Certified: 9314 7699 0430 0057 9171 98

8 PATRICIA A. FISKE
2213 Southhampton Lane
Midland, TX 79705
Certified: 9314 7699 0430 0057 9172 59

9 DOUGLAS A. FISKE
1831 Dukes Drive
Midland, TX 79705
Certified: 9314 7699 0430 0057 9173 27

10 PETRO-QUEST OIL & GAS, LP
P.O. Box 294151
Kerrville, TX 78029
Certified: 9314 7699 0430 0057 9174 33

11 TETON PETROLEUM CORPORATION
222 Sidney Baker S., Ste.209
Kerrville, TX 78028
Certified: 9314 7699 0430 0057 9176 31

12 EDWARD B. PARMA
10403 Laurel Hill Cove
Austin, TX 78730
Certified: 9314 7699 0430 0057 9178 84

C-108 ITEM XIII – PROOF OF NOTIFICATION
INTERESTED PARTIES LIST (cont.)

Private Lease (T.5 and T.6 on Affected Parties Plat – cont.)
Lessees (cont.)
MARSHALL & WINSTON, INC.
P.O. Box 50880
Midland, TX 79710-0880

MEWBOURNE ENERGY PARTNERS, et al
P.O. Box 7698
Tyler, TX 75711

Operator
MEWBOURNE OIL COMPANY
P.O. Box 2070
Hobbs, NM 88240

BLM Lease NMNM-117544 (T.7 on Affected Parties Plat)
Lessees
ST DEVOTE, LLC
919 Milam, Ste.2475
Houston, TX 77002 1484

Operator
PERCUSSION PETROLEUM OPERATING, LLC
919 Milam, Ste.2475
Houston, TX 77002

State Lease VB-0060-0004 (T.9 on Affected Parties Plat)
Lessee
ST DEVOTE, LLC
919 Milam, Ste.2475
Houston, TX 77002

Operator
PERCUSSION PETROLEUM OPERATING, LLC
919 Milam, Ste.2475
Houston, TX 77002

OFFSET MINERALS OWNERS

13 U.S. DEPARTMENT OF INTERIOR (Notified via USPS Certified Mail)
Bureau of Land Management
Oil & Gas Division
620 E. Greene St.
Carlsbad, NM 88220
Certified: 9314 7699 0430 0057 9180 65

C-108 ITEM XIII – PROOF OF NOTIFICATION
INTERESTED PARTIES LIST (cont.)

OFFSET MINERALS OWNERS (cont.)

14 STATE OF NEW MEXICO
Oil, Gas and Minerals Division
310 Old Santa Fe Trail
Santa Fe, NM 87504
Certified: 9314 7699 0430 0057 9181 71

REGULATORY

NEW MEXICO OIL CONSERVATION DIVISION (FedEx'ed original and copy)
1220 S. St. Francis Dr.
Santa Fe, NM 87505

NEW MEXICO OIL CONSERVATION DIVISION (FedEx'ed copy)
811 S. First St.
Artesia, NM 88210

PERCUSSION PETROLEUM LLC

Percussion Petroleum, LLC
919 Milam Street Suite 2475
Houston, TX 77002

April 11, 2019

NOTIFICATION TO INTERESTED PARTIES
via U.S. Certified Mail – Return Receipt Requested

To Whom It May Concern:

Percussion Petroleum Operating, LLC, Houston, Texas, has made application to the New Mexico Oil Conservation Division to reenter and complete for salt water disposal the Morris Arco 26 No.2 (to be renamed the Morris Arco SWD No.1). The proposed SWD will be for private produced water disposal from Percussion's area operations. As indicated in the notice below, the well is in Section 26, Township 19 South, Range 25 East in Eddy County, New Mexico.

The published notice states that the interval will be from 7796 feet to 8190 feet.

Following is the notice published in the Artesia Daily Press, New Mexico on or about April 11, 2019.

LEGAL NOTICE

Percussion Petroleum Operating, LLC – 919 Milam, Ste.2475, Houston, Texas 77002, is filing Form C-108 (Application for Authority to Inject) with the New Mexico Oil Conservation Division seeking administrative approval convert the Morris Arco 26 No.2 for salt water disposal; located 990' FNL and 1650' FEL, Section 26, Township 19 South, Range 25 East, Eddy County, New Mexico; approxi-mately 14.4 miles south of Artesia, NM.

Produced water from Percussion's area production will be privately disposed into the Cisco and Canyon formations at a maximum interval depth of 7796 feet to 8190 feet at a maximum surface pressure of 1556 psi and a rate limited only by such pressure.

Interested parties wishing to object to the proposed application must file with the New Mexico Oil Conser-vation Division, 1220 St. Francis Dr., Santa Fe, NM 87505, (505)476-3460 within 15 days of the date of this notice. Additional information may be obtained from Percussion at 713-300-1853.

You have been identified as a party who may be interested as an offset lessee or operator.

Any questions may be directed to the undersigned.

Regards,

Ryan Barber

Petroleum Engineer

Percussion Petroleum, LLC

713-300-1853

Ryan@percussionpetroleum.com

C-108 - Item XIV

Proof of Notice (Certified Mail Receipts)

U.S. Postal Service®
CERTIFIED MAIL® RECEIPT
Domestic Mail Only

USPS® ARTICLE NUMBER

9314 7699 0430 0057 9174 33

Certified Mail Fee	$
Return Receipt (Hardcopy)	$
Return Receipt (Electronic)	$
Certified Mail Restricted Delivery	$
Postage	$
Total Postage and Fees	$

Postmark Here

Sent to:

PETRO-QUEST OIL & GAS, LP
PO BOX 294151
KERRVILLE, TX 78029-4151

SAM HOUSTON FINANCE APR 12 2019 HOUSTON, TX 77052

Reference Information

PS Form 3800, Facsimile, July 2015

U.S. Postal Service®
CERTIFIED MAIL® RECEIPT
Domestic Mail Only

USPS® ARTICLE NUMBER

9314 7699 0430 0057 9173 27

Certified Mail Fee	$
Return Receipt (Hardcopy)	$
Return Receipt (Electronic)	$
Certified Mail Restricted Delivery	$
Postage	$
Total Postage and Fees	$

Postmark Here

Sent to:

DOUGLAS A. FISKE
1831 DUKES DR
MIDLAND, TX 79705-1575

SAM HOUSTON FINANCE APR 12 2019 HOUSTON, TX 77052

Reference Information

PS Form 3800, Facsimile, July 2015

U.S. Postal Service®
CERTIFIED MAIL® RECEIPT
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USPS® ARTICLE NUMBER

9314 7699 0430 0057 9172 59

Certified Mail Fee	$
Return Receipt (Hardcopy)	$
Return Receipt (Electronic)	$
Certified Mail Restricted Delivery	$
Postage	$
Total Postage and Fees	$

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Sent to:

PATRICIA A. FISKE
2213 SOUTHAMPTON LN
MIDLAND, TX 79705-1714

SAM HOUSTON FINANCE APR 12 2019 HOUSTON, TX 77052

Reference Information

PS Form 3800, Facsimile, July 2015

U.S. Postal Service®
CERTIFIED MAIL® RECEIPT
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USPS® ARTICLE NUMBER

9314 7699 0430 0057 9171 98

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Return Receipt (Hardcopy)	$
Return Receipt (Electronic)	$
Certified Mail Restricted Delivery	$
Postage	$
Total Postage and Fees	$

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COVERT TRUST
CHARLENE S BYERS
PO BOX 22294
DENVER, CO 80222-0294

SAM HOUSTON FINANCE APR 12 2019 HOUSTON, TX 77052

Reference Information

PS Form 3800, Facsimile, July 2015

C-108 - Item XIV

Proof of Notice (Certified Mail Receipts)

U.S. Postal Service®
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9314 7699 0430 0057 9181 71

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Return Receipt (Hardcopy)	$
Return Receipt (Electronic)	$
Certified Mail Restricted Delivery	$
Postage	$
Total Postage and Fees	$

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SAM HOUSTON FINANCE APR 12 2019 HOUSTON, TX 77052

Sent to:

STATE OF NEW MEXICO
OIL, GAS & MINERALS DIVISION
310 OLD SANTA FE TRL
SANTA FE, NM 87501-2708

Reference Information

U.S. Postal Service®
CERTIFIED MAIL® RECEIPT
Domestic Mail Only

USPS® ARTICLE NUMBER

9314 7699 0430 0057 9180 65

Certified Mail Fee	$
Return Receipt (Hardcopy)	$
Return Receipt (Electronic)	$
Certified Mail Restricted Delivery	$
Postage	$
Total Postage and Fees	$

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SAM HOUSTON FINANCE APR 12 2019 HOUSTON, TX 77052

Sent to:

U.S DEPARTMENT OF INTERIOR
OIL & GAS DIVISION
620 E GREENE ST
CARLSBAD, NM 88220-6292

Reference Information

U.S. Postal Service®
CERTIFIED MAIL® RECEIPT
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USPS® ARTICLE NUMBER

9314 7699 0430 0057 9178 84

Certified Mail Fee	$
Return Receipt (Hardcopy)	$
Return Receipt (Electronic)	$
Certified Mail Restricted Delivery	$
Postage	$
Total Postage and Fees	$

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SAM HOUSTON FINANCE APR 12 2019 HOUSTON, TX 77052

Sent to:

EDWARD B. PARMA
10403 LAUREL HILL CV
AUSTIN, TX 78730-1416

Reference Information

PS Form 3800, Facsimile, July 2015

U.S. Postal Service®
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USPS® ARTICLE NUMBER

9314 7699 0430 0057 9176 31

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Return Receipt (Hardcopy)	$
Return Receipt (Electronic)	$
Certified Mail Restricted Delivery	$
Postage	$
Total Postage and Fees	$

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SAM HOUSTON FINANCE APR 12 2019 HOUSTON, TX 77052

Sent to:

TETON PETROLEUM CORPORATION
222 SIDNEY BAKER ST S STE 209
KERRVILLE, TX 78028-2110

Reference Information

PS Form 3800, Facsimile, July 2015

C-108 - Item XIV

Proof of Notice (Certified Mail Receipts)

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USPS® ARTICLE NUMBER

9314 7699 0430 0057 9171 12

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Return Receipt (Hardcopy)	$
Return Receipt (Electronic)	$
Certified Mail Restricted Delivery	$
Postage	$
Total Postage and Fees	$

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Sent to:

B & G ROYALTIES PARTNERSHIP
PO BOX 376
ARTESIA, NM 88211-0376

SAM HOUSTON FINANCE APR 12 2019 HOUSTON,TX 77052

Reference Information

U.S. Postal Service®
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Domestic Mail Only

USPS® ARTICLE NUMBER

9314 7699 0430 0057 9170 51

Certified Mail Fee	$
Return Receipt (Hardcopy)	$
Return Receipt (Electronic)	$
Certified Mail Restricted Delivery	$
Postage	$
Total Postage and Fees	$

Postmark Here

Sent to:

MEWBOURNE OIL COMPANY
PO BOX 2070
HOBBS, NM 88241-2070

SAM HOUSTON FINANCE APR 12 2019 HOUSTON,TX 77052

Reference Information

PS Form 3800, Facsimile, July 2015

U.S. Postal Service®
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USPS® ARTICLE NUMBER

9314 7699 0430 0057 9166 72

Certified Mail Fee	$
Return Receipt (Hardcopy)	$
Return Receipt (Electronic)	$
Certified Mail Restricted Delivery	$
Postage	$
Total Postage and Fees	$

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Sent to:

MARSHALL & WINSTON
PO BOX 50880
MIDLAND, TX 79710-0880

SAM HOUSTON FINANCE APR 12 2019 HOUSTON,TX 77052

Reference Information

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USPS® ARTICLE NUMBER

9314 7699 0430 0057 9169 48

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Return Receipt (Hardcopy)	$
Return Receipt (Electronic)	$
Certified Mail Restricted Delivery	$
Postage	$
Total Postage and Fees	$

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Sent to:

PAYNE & TAURAS, LLP
PO BOX 1477
LITTLE ELM, TX 75068-1477

SAM HOUSTON FINANCE APR 12 2019 HOUSTON,TX 77052

Reference Information

PS Form 3800, Facsimile, July 2015

C-108 - Item XIV

Proof of Notice (Certified Mail Receipts)

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USPS® ARTICLE NUMBER

9314 7699 0430 0057 9148 52

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Return Receipt (Electronic)	$	
Certified Mail Restricted Delivery	$	
Postage	$	
Total Postage and Fees	$	

Sent to:

JAN CARTER
303 VETERANS AIRPARK LN STE 1000
MIDLAND, TX 79705-4572

SAM HOUSTON FINANCE APR 12 2019 HOUSTON, TX 77052

Reference Information

PS Form 3800, Facsimile, July 2015

U.S. Postal Service®
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USPS® ARTICLE NUMBER

9314 7699 0430 0057 9163 06

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Return Receipt (Hardcopy)	$	
Return Receipt (Electronic)	$	
Certified Mail Restricted Delivery	$	
Postage	$	
Total Postage and Fees	$	

Sent to:

MEWBOURNE ENERGY PRTNRS 09-A
CMW 2000-B, 3MG CORP, OTHERS
PO BOX 7698
TYLER, TX 75711-7698

SAM HOUSTON FINANCE APR 12 2019 HOUSTON, TX 77052

Reference Information

PS Form 3800, Facsimile, July 2015

Affidavit of Publication

No. 25070

State of New Mexico

County of Eddy:

Danny Scott

being duly sworn sayes that he is the **Publisher**

of the Artesia Daily Press, a daily newspaper of General circulation, published in English at Artesia, said county and state, and that the hereto attached

Legal Ad

was published in a regular and entire issue of the said Artesia Daily Press, a daily newspaper duly qualified for that purpose within the meaning of Chapter 167 of the 1937 Session Laws of the state of New Mexico for

1 Consecutive weeks/day on the same day as follows:

First Publication	April 11, 2019
Second Publication	
Third Publication	
Fourth Publication	
Fifth Publication	
Sixth Publication	
Seventh Publication	

Subscribed and sworn before me this

11th day of April 2019

OFFICIAL SEAL
Latisha Romine
NOTARY PUBLIC-STATE OF NEW MEXICO
My commission expires: 5/12/2019

Latisha Romine

Latisha Romine

Notary Public, Eddy County, New Mexico

Copy of Publication:

Legal Notice

Percussion Petroleum Operating, LLC – 919 Milam, Ste.2475, Houston, Texas 77002, is filing Form C-108 (Application for Authority to Inject) with the New Mexico Oil Conservation Division seeking administrative approval convert the Morris Arco 26 No.2 for salt water disposal; located 990' FNL and 1650' FEL, Section 26, Township 19 South, Range 25 East, Eddy County, New Mexico; approximately 14.4 miles south of Artesia, NM.

Produced water from Percussion's area production will be privately disposed into the Cisco and Canyon formations at a maximum interval depth of 7796 feet to 8190 feet at a maximum surface pressure of 1556 psi and a rate limited only by such pressure.

Published in the Artesia Daily Press, Artesia, N.M., April 11, 2019 Legal No. 25070.