

4/25/2018
mm 4/23/2018

RECEIVED:	REVIEWER:	TYPE:	APP NO:
mm 4/23/2018		SWD	PMAM 18/11340393

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; Devonian-Silurian **Pool Code:** 97869

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

APR 23 2018 11:05

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

FOR OCD ONLY

- ☐ Notice Complete
☐ Application
 Content
 Complete

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.

Ben Stone

Print or Type Name

Signature

4/19/2018

Date

903-488-9850

Phone Number

ben@sosconsulting.us

e-mail Address



~~Oil & Gas Accounting~~ ~~Regulation~~ ~~Processing Assistance~~ ~~Oil Field Technical Assistance~~

April 19, 2018

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

Attn: Ms. Heather Riley, 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. Riley,

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.

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 will run April 20, 2018 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 off-setting 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,

Ben Stone, Partner
SOS Consulting, LLC
Agent for Percussion Petroleum Operating, LLC

Cc: Application attachment and file

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: ***Agent: SOS Consulting, LLC – Ben Stone (903) 488-9850***
- 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 DEVONIAN formation 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. New logs will be run in the new hole to 11,000'.***
- *XI. ***There is 1 domestic water wells within one mile of the proposed salt water disposal well. Analysis will be forwarded.***
- 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: ***Ben Stone*** TITLE: ***SOS Consulting, LLC agent for Percussion Petroleum Operating, LLC***

SIGNATURE:  DATE: ***4/19/2018***

E-MAIL ADDRESS: ***ben@sosconsulting.us***

* 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 (P&A'd)
Wellbore Schematic – PROPOSED

The well is currently P&A'd and will be
reentered and configured for SWD.

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.

WELL SCHEMATIC - CURRENT Morris Arco SWD Well No.1

WELL P&A'd

API 30-015-29258

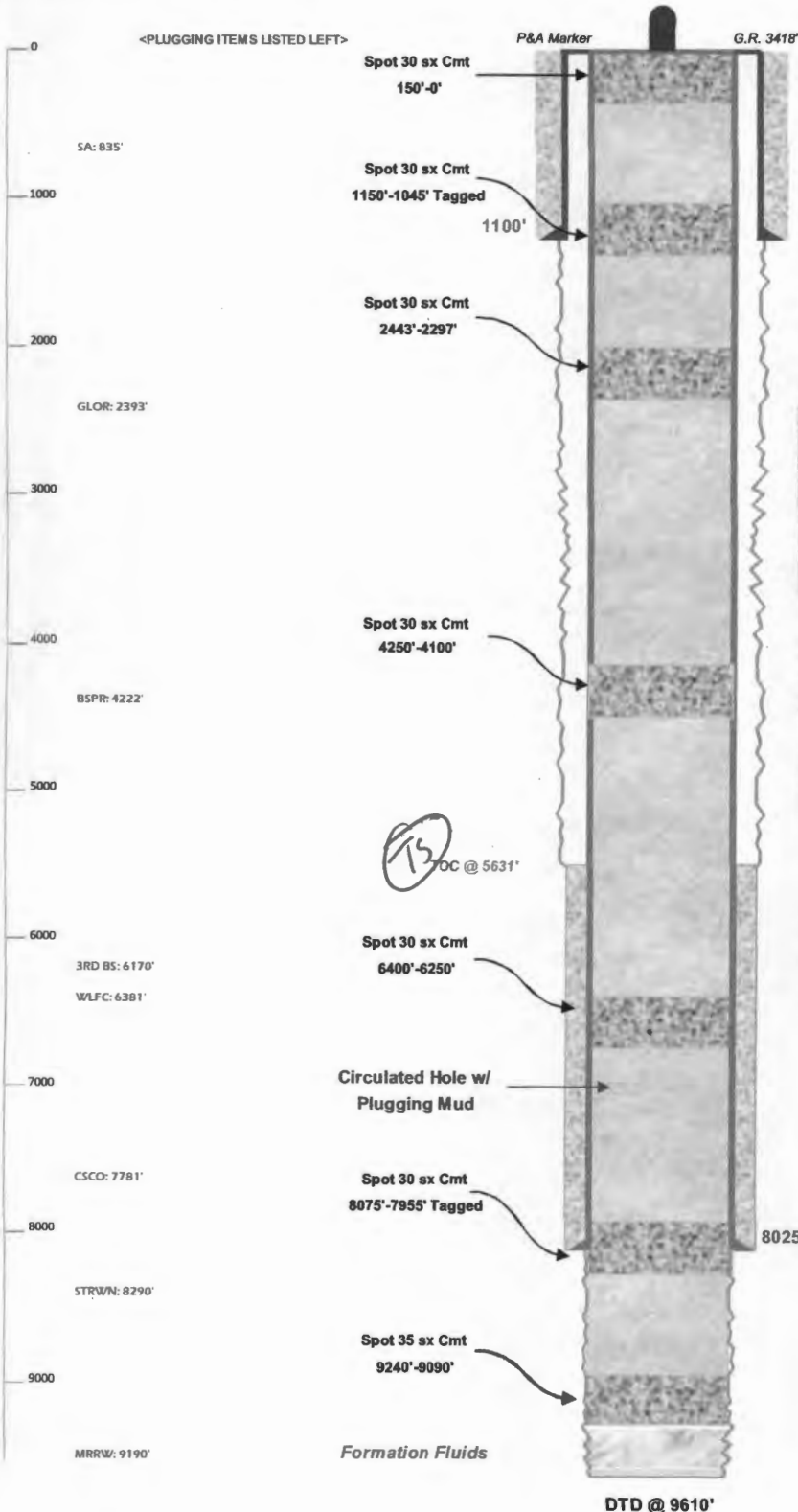
990' FNL & 1650' FEL, SEC. 26-T19S-R25E
EDDY COUNTY, NEW MEXICO

Cemetery Morrow (Plugged)

Spud Date: 9/29/1997

P&A Date: 2/03/2001

WELL PLUGGED BY
NEARBURG PRODUCING CO.



Surface Casing

9.625", 36.0# J-55 STC Csg. (14.75" Hole) @ 1100'
700 sx - Circulated to Surface

<P&A SUBSEQUENT SUNDRY>

Submit 3 Copies to Appropriate District Office DISTRICT I P.O. Box 1596, Hobbs, NM 88240 DISTRICT II P.O. Box 100, Artesia, NM 88201 DISTRICT III 1600 New Mexico Rd., Artesia, NM 87410		State of New Mexico Energy, Minerals and Natural Resources Department OIL CONSERVATION DIVISION 2040 Padheco St. Santa Fe, NM 87505		Form C-101 Revised 1-1-99
WELL API NO: 30-015-29258 Indicate Type of Lease: <input checked="" type="checkbox"/> STATE <input type="checkbox"/> FEDERAL		Lease Name or Unit Agreement Name: Morris Arco 25		
Type of Well: OIL <input checked="" type="checkbox"/> GAS <input type="checkbox"/> OTHER <input type="checkbox"/>		Lease No.: 2		
Name of Operator: Nearburg Producing Company		Address of Operator: 13300 N.A. St., Bldg 2, Suite 120, Midland, TX 79705		
Well Location: Unit Letter: 26, Section: 26, Township: 19S, Range: 25E, NE1/4, Eddy County		Well Name or Wellcat: Cemetery Morrow		

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

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
PERFORM REMEDIAL WORK	<input type="checkbox"/>	PLUG AND ABANDON	<input type="checkbox"/>
TEMPORARILY ABANDON	<input type="checkbox"/>	CHANGE PLANS	<input type="checkbox"/>
PULL OR ALTER CASING	<input type="checkbox"/>	CASING TEST AND CEMENT JOB	<input checked="" type="checkbox"/>
OTHER:	<input type="checkbox"/>	OTHER:	<input type="checkbox"/>

1) MRRU P&A on 01/01/01
 2) Spot 35 sx plug @ 9240', 02/01/01
 3) Spot 30 sx cement plug @ 8075' WOC, Tagged @ 7955', 02/01/01
 4) Spot 30 sx cement plug @ 6400', 02/02/01
 5) Spot 30 sx plug @ 4250', 02/02/01
 6) Spot 30 sx plug @ 2443'
 7) Spot 30 sx plug @ 1150', 02/02/01
 8) Tag plug @ 1045', 02/03/01
 9) Set 37 surface plug, 02/03/01
 10) Install dry hole marker
 11) Well P&A'd RDMO on 02/03/01 FINAL REPORT

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

Signature: *Kim Stewart* Title: Regulatory Analyst Date: 02-07-01

Typed or Printed Name: Kim Stewart

APPROVED BY: *[Signature]* DATE: JAN 24 2002

Production Casing

7.0", 23.0/ 26.0# N-80/ K-55 Csg. (8.75" Hole) @ 8025'
1400 sx - TOC @ 5631' by Temp.

Drawn by: Ben Stone, 3/09/2018





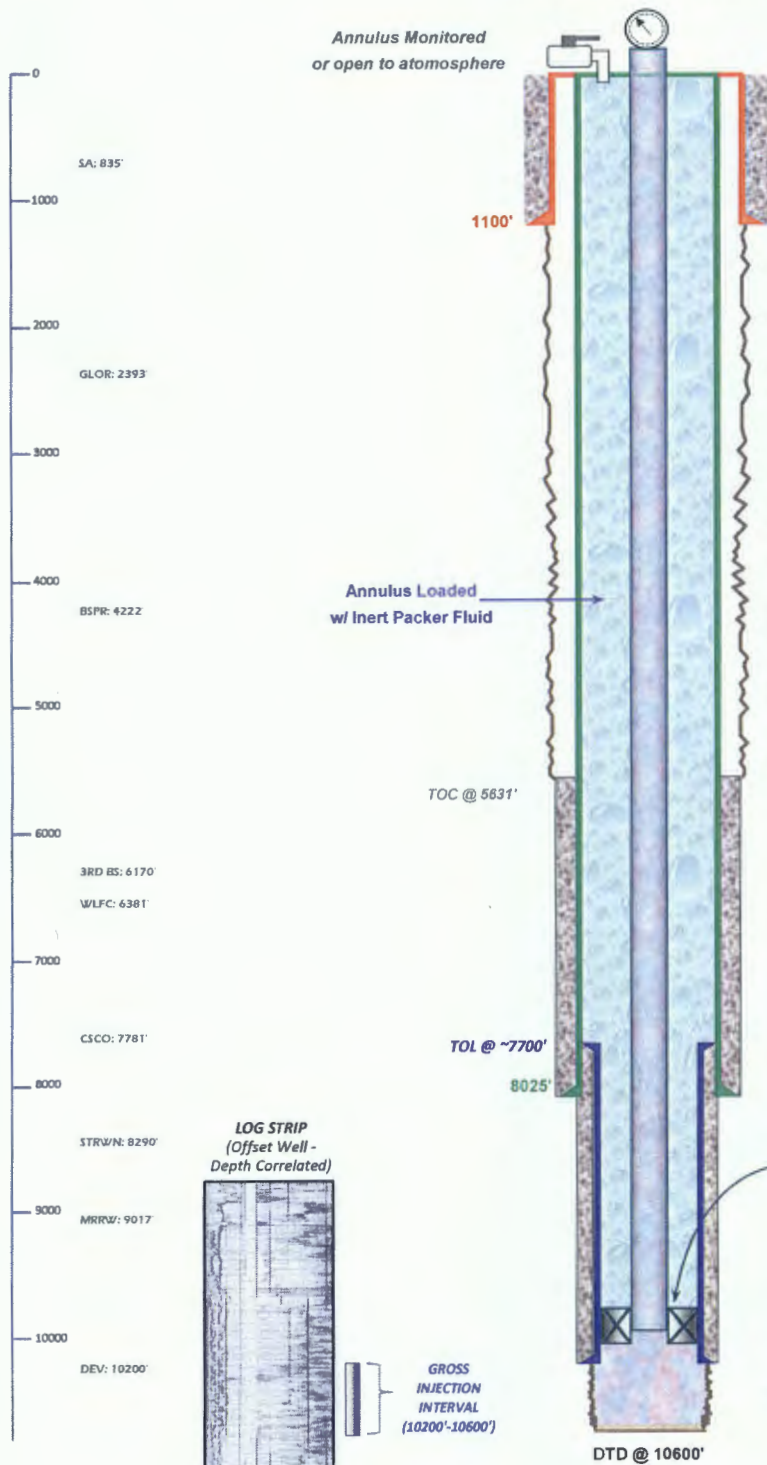
WELL SCHEMATIC - PROPOSED Morris Arco SWD Well No.1

SWD; Devonian-Silurian (97869)

API 30-015-29258

990' FNL & 1650' FEL, SEC. 26-T19S-R25E
EDDY COUNTY, NEW MEXICO

Spud Date: 1/03/1997
Config SWD Dt (Est): ~6/15/2



Injection Pressure Regulated
and Volumes Reported
1920 psi Max. Surface (0.2 psi/ft)

Surface Casing

9.625", 36.0# J-55 STC Csg. (14.75" Hole) @ 1100'
700 sx - Circulated to Surface

Percussion Petroleum

Convert to SWD: D/O & C/O Existing Plugs to 9600'.
Install 5.5" Liner from 7700' to 10,200'.
Drill 4.5" Openhole Interval to 10,600'.
Run PC Tubing and PKR - Conduct MIT.
Commence Disposal Operations.

Production Casing

7.0", 23.0/ 26.0# N-80/ K-55 Csg. (8.75" Hole) @ 8025'
1400 sx - TOC @ 5631' by Temp.

3.5" FJ/ IC Tubing (or smaller)
PKR ~10,100'+

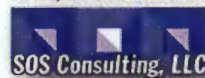
Note: PKR Set 100' Above Final Uppermost OH Interval.

Prod/LNR Casing

5.5", 23.0# Csg (6.5" Hole) 7700' to 10200'
350 sxs Cls H - TOC @ Top of LNR

Openhole Injection 10,200'-10,600'

Drawn by: Ben Stone, R/s'd 4/24/2018



McMillan, Michael, EMNRD

From: ben@sosconsulting.us
Sent: Tuesday, April 24, 2018 2:38 PM
To: McMillan, Michael, EMNRD
Cc: Goetze, Phillip, EMNRD; Jones, William V, EMNRD
Subject: RE: Percussion Petroleum Operating, LLC Morris Arco SWD Well No. 2
Attachments: MorrisArcoXsect.pdf; Schematic_PROPOSED_MorrisArco_rvsd_20180424.pdf

Mike,

Attached is a cross section as requested and a revised WBD to match Percussion geologist's call.

Apparently, what happened is the manager who sends the projects to me, decided that rather than pursue the Cisco/ Canyon that SLO had concerns with, they'd just move downhole. At the time he asked me to move forward, he said let's permit the Devonian from about 9600' to 11000'. I took that literally and moved forward with the revised C-108 for this well.

When I told him of your issues yesterday, he informed me that was his ball park call and had not consulted their geologist.

I should have investigated further but, the proposed SWD had been one subject of their Monday morning meeting last week so I thought it had all been figured out (!).

Anyway, their geologist prepared a quick cross section and I revised the WBD for a proposed interval of 10,200' to 10,600'.

Please keep in mind this SWD would be for Percussion's area production so they aren't looking for one of the high-rated, commercial-types of wells... just need some additional capacity and this wellbore is one they decided would suit their criteria.

The op narrative calls for a max of 7000 bwpd but in reality, daily averages would be half of that.

Please let me know if additional information is necessary.

Thanks,
Ben

From: McMillan, Michael, EMNRD <Michael.McMillan@state.nm.us>
Sent: Monday, April 23, 2018 1:33 PM
To: Ben Stone <ben@sosconsulting.us>
Cc: Goetze, Phillip, EMNRD <Phillip.Goetze@state.nm.us>; Jones, William V, EMNRD <WilliamV.Jones@state.nm.us>
Subject: Percussion Petroleum Operating, LLC Morris Arco SWD Well No. 2

Ben:

The OCD has concerns about the injection interval.

You used the Roy SWD well.

The Roy SWD Well No. 3, API 30-015-26562 was a Devonian-Ellenburger approved injection well.

Percussion must show with a cross-section that goes through the Proposed well and the Roy well, which must include the following log tops:

The top of the Mississippian-did the Morris Arco Well No. 2 penetrate this?

The top of the lower Mississippian

the top of the Woodford

top of Devonian

top of Montoya,

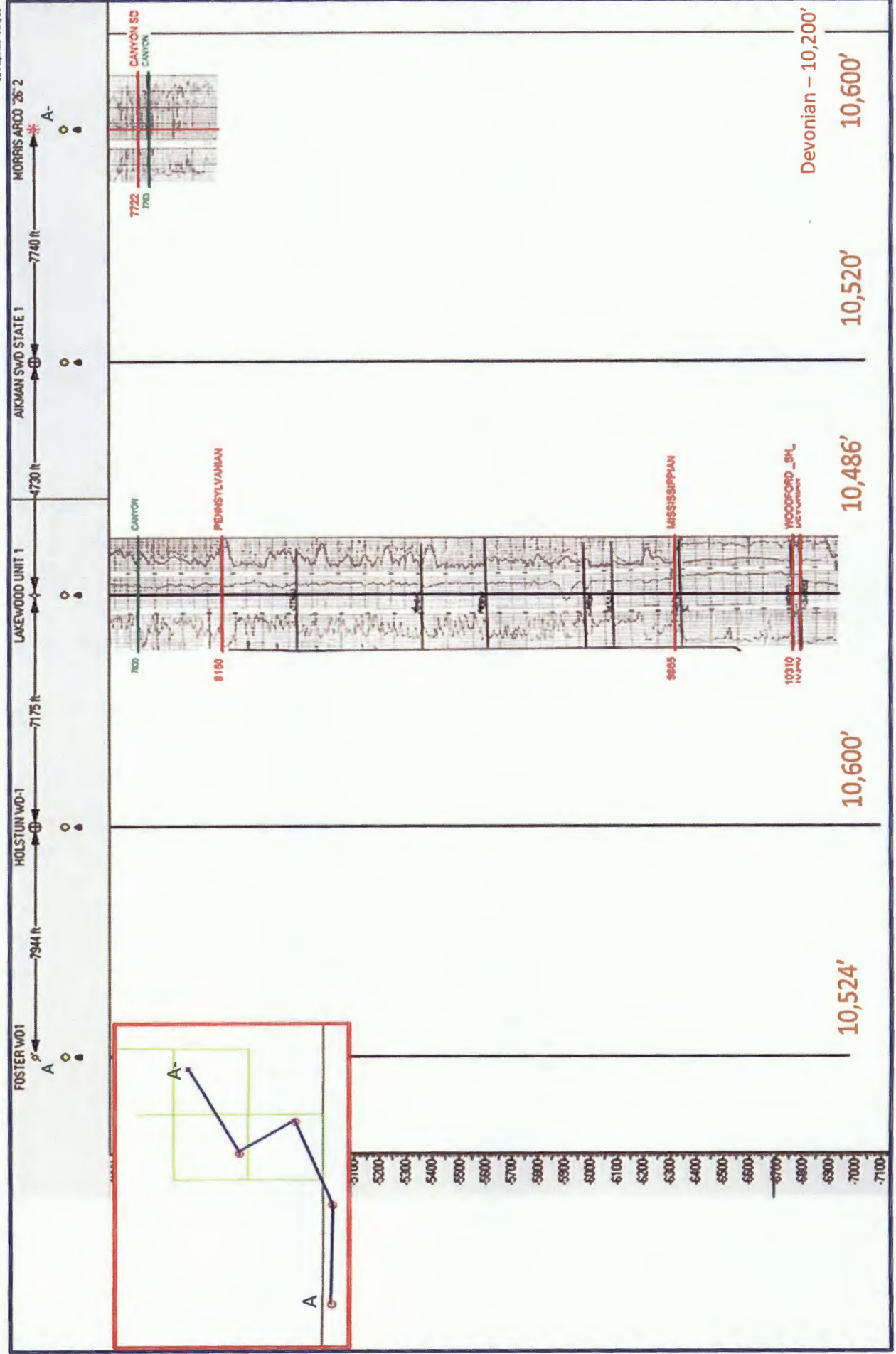
top of Ellenburger

Project top of Basement

Percussion Petroleum Operating, LLC
Morris Arco C-108 (Proposed SWD)
 Cross Section for Devonian Target



C.J. Upmish 4/24/18



C-108 - Item VI

Area of Review Well Data Tabulation

TOP OF PROPOSED INJECTION INTERVAL – 7784'

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

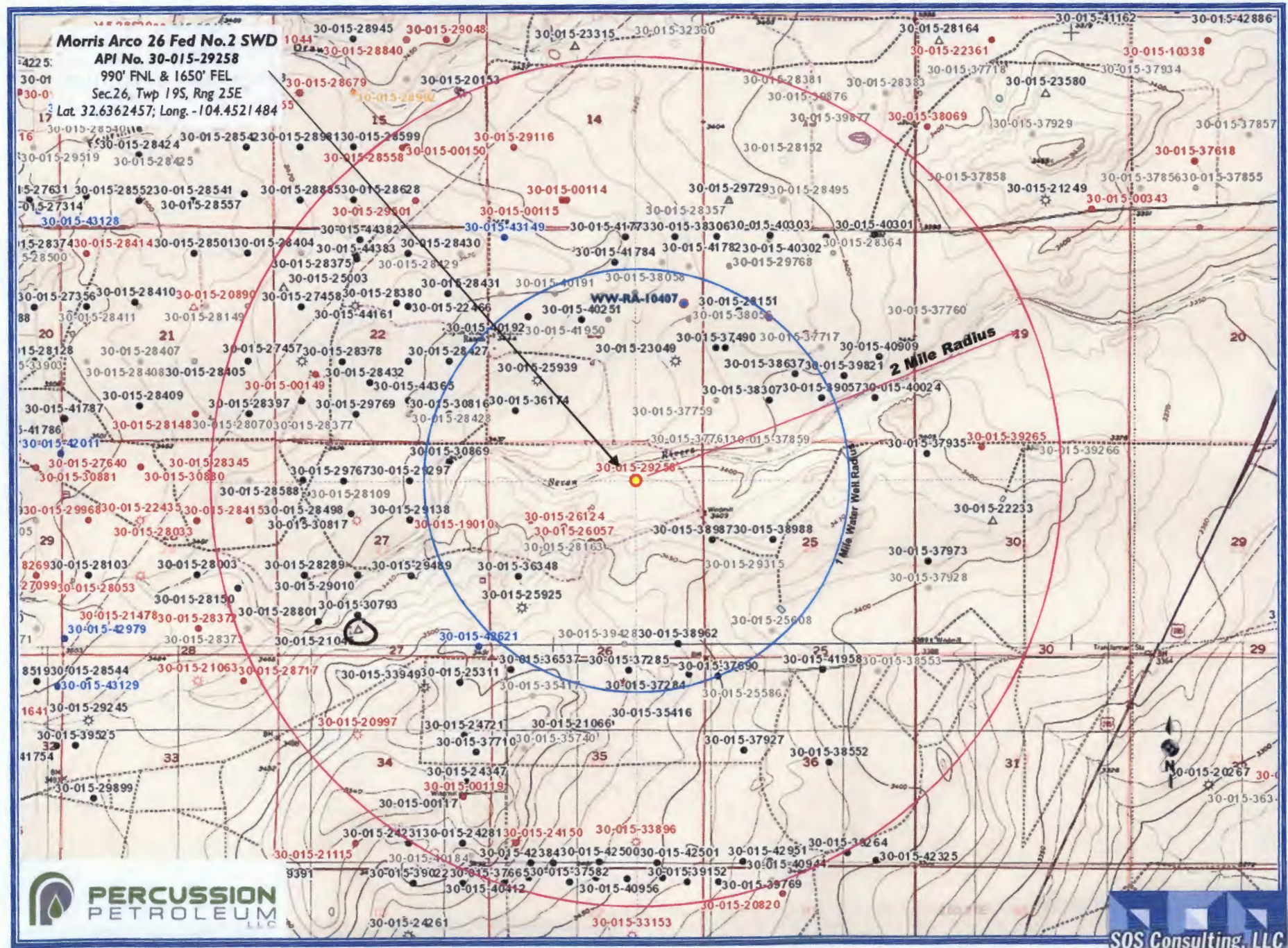
Listed West to East of Proposed Well (See AOR Map)

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

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

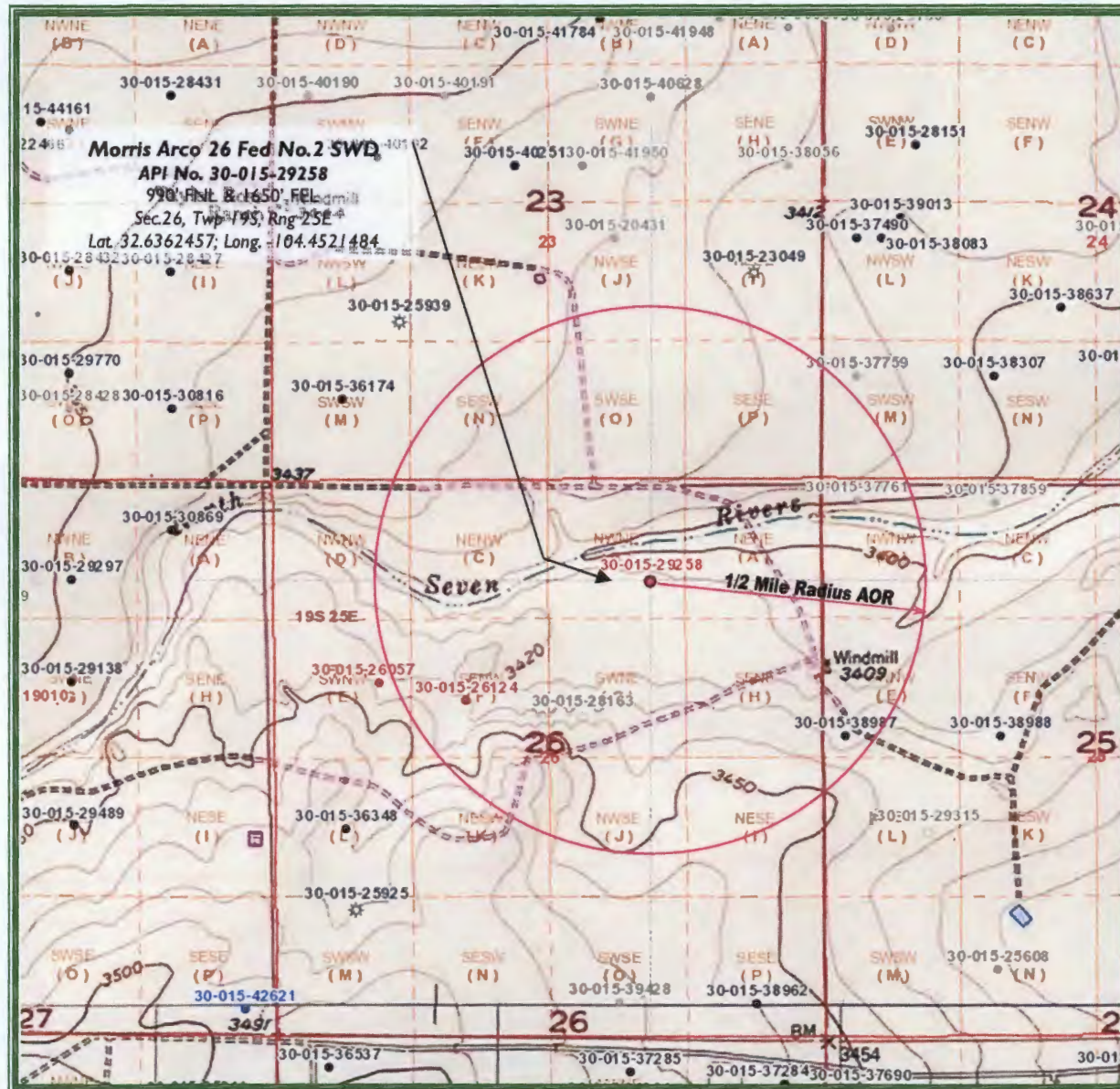
Morris Arco 26 Federal Com No.2 - Area of Review / 2 Miles

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

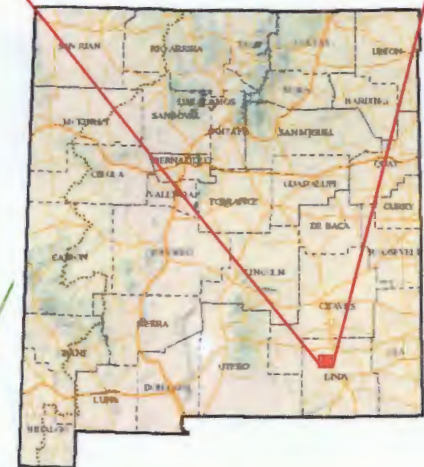


Morris Arco 26 No.2 SWD Well No.1 - Area of Review / Overview Map

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



14.4 miles S/SW of Artesia, NM



Eddy County, New Mexico

C-108 ITEM X

LOGS and AVAILABLE TEST DATA

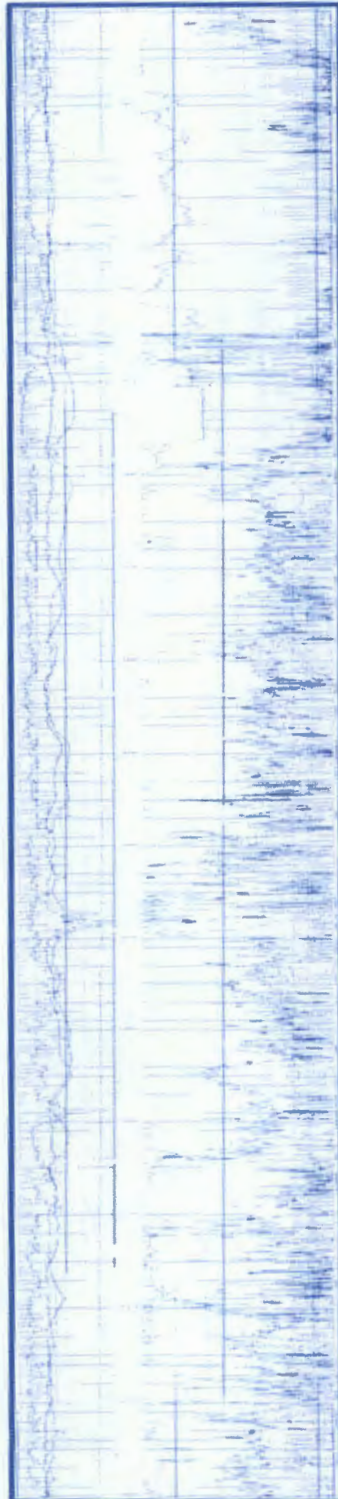
Logs were correlated to an offsetting well above proposed interval;
log strip is shown from that well for representation of the target interval.

LOG STRIP FOLLOWS

C-108 ITEM X

Corresponding Injection Interval
From Offset Log Representation

ROY SWD 7-19S-25E 3556' G.L.



Wrongly recorded



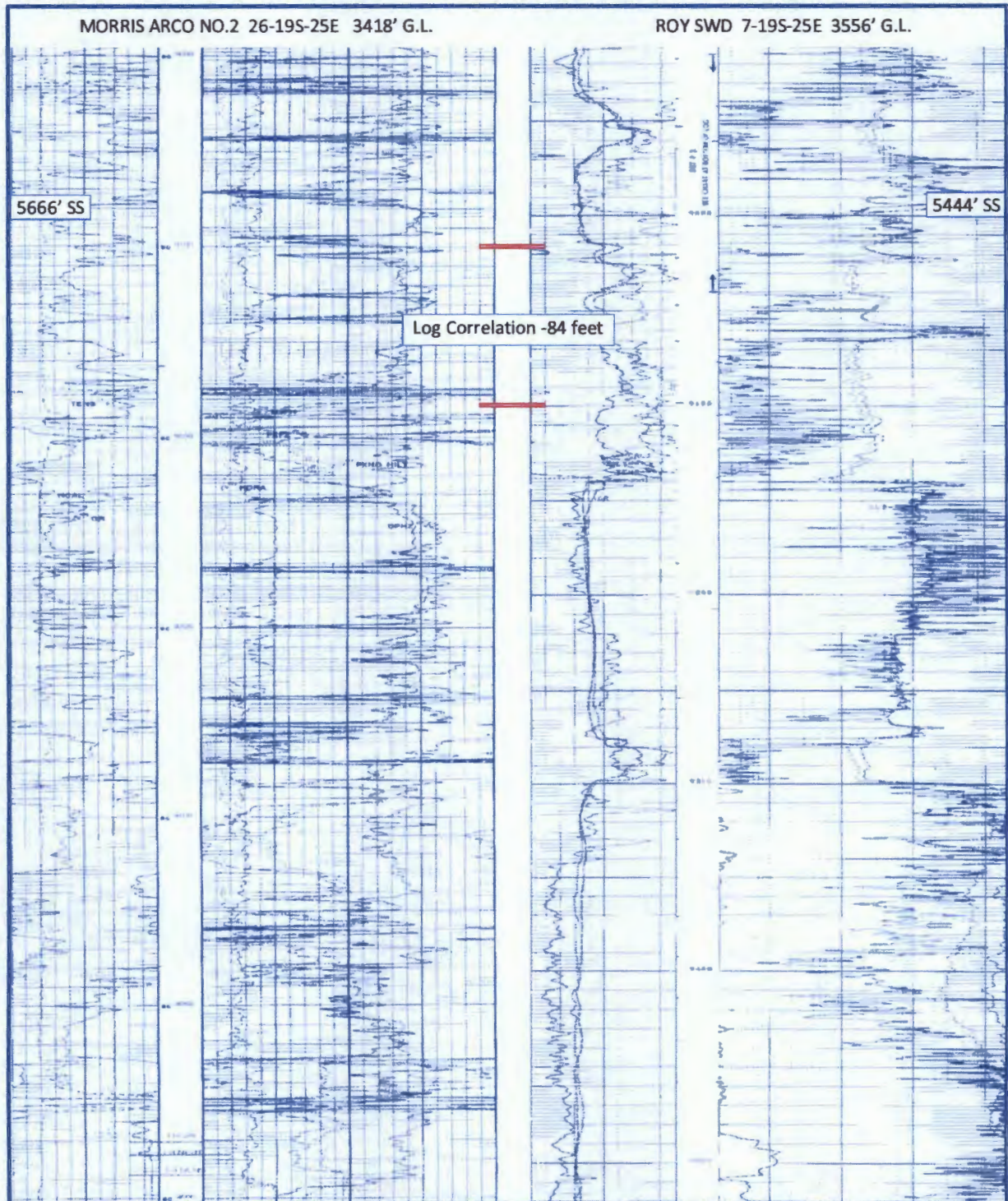
**Injection Interval
9600' to 11,000'**

**Approximately
Represented
By Offset Well Log**

C-108 ITEM X

LOGS and AVAILABLE TEST DATA

Log Correlation



C-108 ITEM VII – PROPOSED OPERATION

Morris Arco SWD No.1

Private Use SWD Facility

Upon approval of all permits for SWD, operations would begin within 30 days. Completion of the well operations will take approximately 6-8 weeks. Facility construction including installation of the tank battery, berms, plumbing and other and associated equipment would be occurring during the same interval but not to interfere with well operations. In any event, it is not expected for the construction phase of the project to last more than 60 days, depending on availability of contractors and equipment.

Configure for Salt Water Disposal

Install a 5M BOP and drill down to ~9600', set 5.5" liner across the Canyon, Atoka, Strawn and Morrow intervals and cement. Drill 4.5" hole to 11,000', set packer on 3.5" FJ or 2.785" IPC tubing at ~9500'; acidize openhole if desired. Conduct witnessed MIT and commence injection.

Prior to commencing any work, an NOI sundry(ies) will be submitted to configure the well for SWD and will detail the completion workover including all work otherwise described above, any change to the procedure noted herein and to perform mechanical integrity pressure test per OCD test procedures. (Notify NMOCD 24 hours prior.) The casing/tubing annulus will be monitored for communication with injection fluid or loss of casing integrity.

Operational Summary

The Morris Arco SWD well will be for Percussion's area production from Gloieta/ Yeso wells.

The SWD facility will not be fenced. Primary water transportation will be via pipeline but offloading hookups will be available so that trucks may access for load disposal in needed.

The well and injection equipment will be a closed system and equipped with pressure limiting devices and volume meters. The annulus, loaded with an inert, anti-corrosion packer fluid, will be monitored for pressure.

The tanks will be equipped with telemetry devices and visual alarms to alert the operator and customers of full tanks or an overflow situation.

Anticipated daily maximum volume is 7,000 bpd and an average of 3,500 bpd at a maximum surface injection pressure of 1920 psi (.2 psi/ft gradient – maximum pressure will be adjusted if the top of interval is modified after well logs are run).

Potential releases will be contained and cleaned up immediately. The operator shall repair or otherwise correct the situation within 48 hours before resuming operations. OCD will be notified within 24 hours of any release greater than 5 bbls. If required, remediation will start as soon as practicable. Operator shall comply with 19.15.29 NMAC and 19.15.30 NMAC, as necessary and appropriate.

C-108 Item VII.5 - Produced Water Data
Percussion Petroleum, LLC - Morris Arco SWD Project

SOURCE ZONE

GLO/YESO

		Lab ID	
API No	3001524754	Sample ID	1146
Well Name	PLATT PA 009	Sample No	
Location	ULSTR 26 18 S 26 E 330 S 990 W	Lat / Long	32.71216 -104.35742
		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
iron_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

API No	3001524619	Lab ID	
Well Name	PLATT PA	Sample ID	1207
	008	Sample No	
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

API No	3001520225	Lab ID	
Well Name	BIG EDDY UNIT 012	Sample ID	5847
		Sample No	
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	Depth (if known)	
	Water Typ		
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

DEVONIAN

API No.	3001510280	Lab ID	
Well Name	JURNEGAN POINT 001	Sample ID	6170
		Sample No	
Location	ULSTR 05 24 S 25 E	Lat / Long	32.24037 -104.42375
	660 S 660 W	County	Eddy
Operator (when sampled)			
	Field WILDCAT	Unit	M
Sample Date	12/14/1964	Analysis Date	
	Sample Source DST	Depth (if known)	
	Water Type		
ph	7	alkalinity_as_caco3_mgL	
ph_temp_F		hardness_as_caco3_mgL	
specificgravity		hardness_mgL	
specificgravity_temp_F		resistivity_ohm_cm	
tds_mgL	229706	resistivity_ohm_cm_temp_	
tds_mgL_180C		conductivity	
chloride_mgL	136964	conductivity_temp_F	
sodium_mgL		carbonate_mgL	
calcium_mgL		bicarbonate_mgL	198
iron_mgL		sulfate_mgL	2511
barium_mgL		hydroxide_mgL	
magnesium_mgL		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 VIII

Geologic Information

The Devonian and Silurian (including Fusselman) consist of carbonates including light colored dolomite and chert intervals interspersed with some tight limestone intervals. Several thick sections of porous dolomite capable of taking water are present within the subject formations in the area. Depth control data was inferred from deep wells in the vicinity.

At a proposed depth of 11,000' BGL (Below Ground Level) the well will TD approximately 1,400 feet below the estimated top of the Devonian. Mud logging through the interval will ensure the target interval remains in Devonian and Silurian. The liner shoe depth is anticipated to be approximately 9,600' BGL. Injection will occur through the resulting openhole interval. If the base of Silurian and top of Ordovician rocks come in as expected the well will only be drilled deep enough for adequate logging rathole; estimated total depth approximately 11,000'.

The Devonian is overlain by the Woodford Shale and Mississippian Lime. The lower Silurian (Fusselman) rock is underlain by the Ordovician; Simpson, McKee and Ellenburger.

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 analysis is included in this application.

C-108 ITEM XI

Water Wells in One-Mile AOR

1 Water Well Spot (based on coordinates)
Within ONE MILE of Proposed SWD – Analyses will be forwarded.



New Mexico Office of the State Engineer Active & Inactive Points of Diversion (with Ownership Information)

(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	6416 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 04986		PRO	0	YATES PETROLEUM CORP.	ED	RA 04986			Shallow	1	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	551678	3612409*
RA 10496		DOM	3	RAUL RODRIGUEZ	ED	RA 10496			Shallow	3	3	4	25 19S 25E	552801	3609865*
RA 11939		PRO	0	YATES PETROLEUM CORPORATION	ED	RA 08986			Shallow	1	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

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

1/30/18 10:01 AM

Page 1 of 1

ACTIVE & INACTIVE POINTS OF DIVERSION

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 will be forwarded.

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 will be forwarded.



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 08986	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:

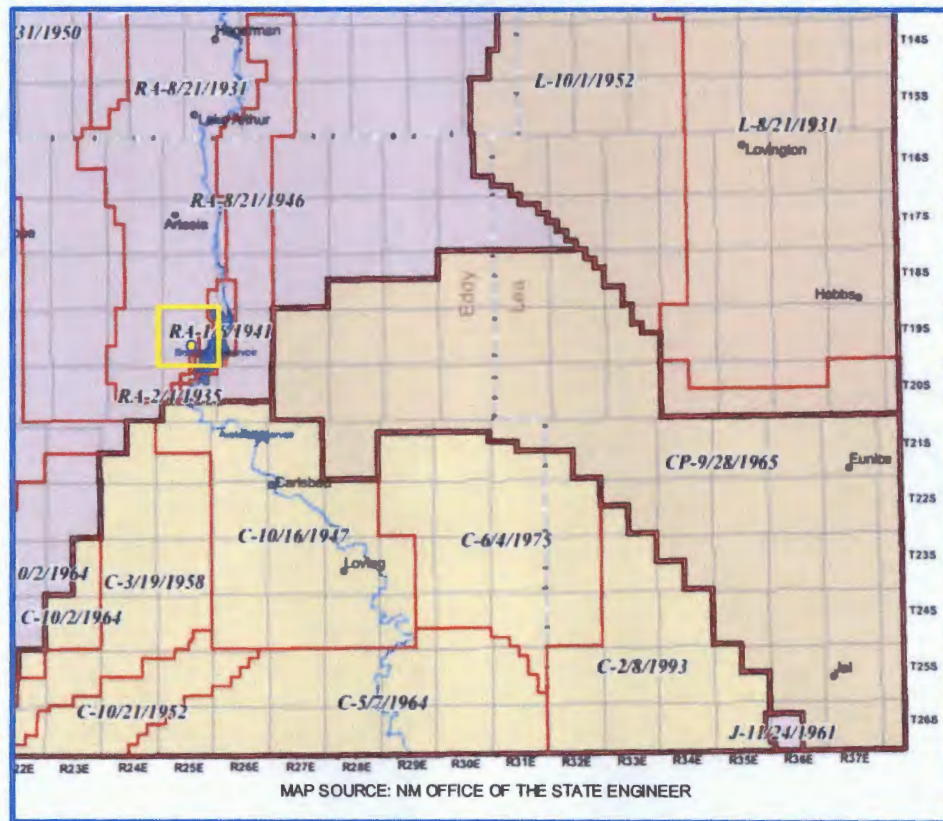
Section(s): 22, 23, 24, 25, 26, 27 Township: 19S Range: 25E

*UTM location was derived from PLSS - see Help

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

C-108 - Item XI

Groundwater Basins - Water Column / Depth to Groundwater



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.

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 accredited 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)

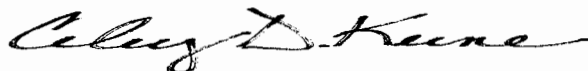
Cardinal Laboratories is accredited through the State of New Mexico Environment Department for:

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

Lab Director/Quality Manager

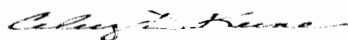
Analytical Results For:PERCUSSION PETROLEUM
919 MILAM , STE 2475
HOUSTON TX, 77002Project: MORRIS ARCO 26
Project Number: 2 SWD
Project Manager: LELAN ANDERS
Fax To:Reported:
23-Mar-18 17:26

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

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Celey D. Keene, Lab Director/Quality Manager

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	

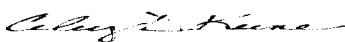
Green Analytical Laboratories
Total Recoverable Metals by ICP (E200.7)

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

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Celey D. Keene, Lab Director/Quality Manager

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
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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)

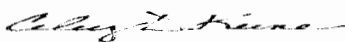
Prepared: 12-Mar-18 Analyzed: 15-Mar-18

TDS	207	5.00	mg/L	213	97.2	80-120
-----	-----	------	------	-----	------	--------

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*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

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	

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*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

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	

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Celey D. Keene, Lab Director/Quality Manager

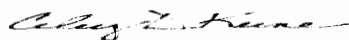
Notes and Definitions

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

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



Page 8 of 8

Company Name: Percussion Petroleum		P.O. #:		BILL TO												ANALYSIS REQUEST																	
Project Manager: Lelan Anders		Company:		TDS Cation/Anions																													
Address: 919 Milam St Suite 2475		Attn:																															
City: Houston State: TX Zip: 77002		Address:																															
Phone #: 281-908-1752 Fax #:		City:																															
Project #: Project Owner:		State: Zip:																															
Project Name: Morris Arco 26 & SWD		Phone #:																															
Project Location:		Fax #:																															
Sampler Name:																																	
FOR LAB USE ONLY				MATRIX		PRESERV		SAMPLING																									
Lab I.D.		Sample I.D.																															
H800709		Morris Arco		G		1		3-5-18 9:00																									


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Relinquished By: <i>Jordan Brown</i>		Date: <i>3-9-18</i>	Received By: <i>Jamara Oldaker</i>	Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No	Add'l Phone #:
		Time: <i>3:00</i>		Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No	Add'l Fax #:
Relinquished By:		Date:	Received By:	REMARKS:	
		Time:			
Delivered By: (Circle One) <i>O.9i</i>		Sample Condition	CHECKED BY:		
Sampler - UPS - Bus - Other: <i>Corrected 0.85</i>		Cool <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	(Initials) <i>TC #15</i>		
		Intact <input type="checkbox"/> Yes <input type="checkbox"/> No			

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.

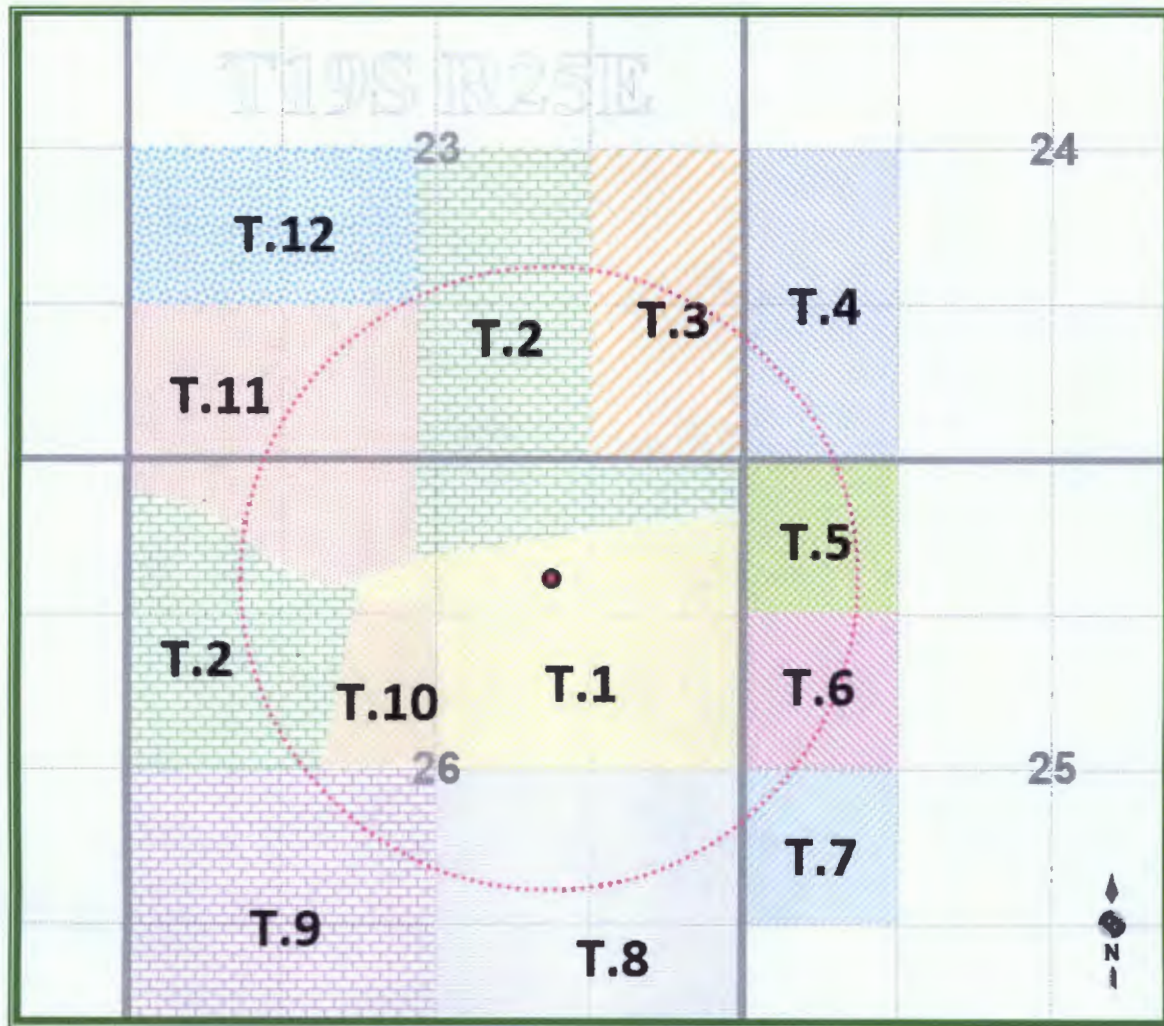


Ben Stone, Partner
SOS Consulting, LLC

Project: Percussion Petroleum Operating, LLC
Morris Arco SWD No.1
Reviewed 4/19/2018

Morris Arco 26 No.2 SWD – Affected Parties Map

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



LEGEND

- | | |
|--|--|
| T.1 – Percussion; Private – ZPZ Delaware I, LLC | T.6 – Private - B&G Royalties; Covert Trust, Fiske, Mewbourne Energy Ptms, et al, others |
| T.2 – Private – St. Devote, LLC | T.7 – BLM, NMNM-117544 – St. Devote, LLC |
| T.3 – Private – St. Devote, LLC | T.8 – Private – St. Devote, LLC |
| T.4 – Private – Mewbourne Energy Ptms, et al; Payne & Taurus; Marshall & Winston | T.9 – State, VB-0060-0004 – St. Devote, LLC |
| T.5 – Private - B&G Royalties; Covert Trust, Fiske, Mewbourne Energy Ptms, et al, others | 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

SOS Consulting is providing electronic delivery of C-108 applications.
ALL APPLICABLE AFFECTED PARTIES ARE PROVIDED A LINK IN THE NOTICE LETTER
TO A SECURE SOS/ CITRIX SHAREFILE® SITE TO VIEW AND DOWNLOAD
A FULL COPY OF THE SUBJECT C-108 APPLICATION IN PDF FORMAT.

"AFFECTED PERSON" MEANS THE DIVISION DESIGNATED OPERATOR; IN THE ABSENCE OF AN OPERATOR, A LESSEE WHOSE INTEREST IS EVIDENCED 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.3000
Midland, TX 79705
Certified: 7015 0640 0006 8756 1705

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)

Lessee

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: 7015 0640 0006 8756 1712

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: 7015 0640 0006 8756 1729
- 4 MARSHALL & WINSTON, INC.
P.O. Box 50880
Midland, TX 79710-0880
Certified: 7015 0640 0006 8756 1736

Operator

- 5 MEWBOURNE OIL COMPANY
P.O. Box 2070
Hobbs, NM 88240
Certified: 7015 0640 0006 8756 1743

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: 7015 0640 0006 8756 1750
- 7 COVERT TRUST DATED NOVEMBER 1, 2010
Attn: Charlene S. Byers
P.O. Box 22294
Denver, CO 80222-0294
Certified: 7015 0640 0006 8756 1767
- 8 PATRICIA A. FISKE
2213 Southhampton Lane
Midland, TX 79705
Certified: 7015 0640 0006 8756 1774
- 9 DOUGLAS A. FISKE
1831 Dukes Drive
Midland, TX 79705
Certified: 7015 0640 0006 8756 1781
- 10 PETRO-QUEST OIL & GAS, LP
P.O. Box 294151
Kerrville, TX 78029
Certified: 7015 0640 0006 8756 1798
- 11 TETON PETROLEUM CORPORATION
222 Sidney Baker S., Ste.209
Kerrville, TX 78028
Certified: 7015 0640 0006 8756 1804
- 12 EDWARD B. PARMA
10403 Laurel Hill Cove
Austin, TX 78730
Certified: 7015 0640 0006 8756 1811

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: 7015 0640 0006 8756 1828

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: 7015 0640 0006 8756 1835

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



April 19, 2018

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 25 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 9,600 feet to 11,000 feet.

Following is the notice published in the Artesia Daily Press, New Mexico on or about April 20, 2018.

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 to re-enter and convert the Morris Arco 26 Fed Com 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 Devonian [Silurian] formation at a maximum interval depth of 9,600 feet to 11,000 feet at a maximum surface pressure of 1920 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 Conservation 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 the applicant's agent, SOS Consulting, LLC, (903)488-9850 or, email info@sosconsulting.us.

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

You are entitled to a full copy of the application. A full copy in PDF format is posted on the SOS Consulting **ShareFile** site and is available for immediate download.

Use the URL link <https://sosconsulting.sharefile.com/d-sf4576fb54a94ef5b>

(Please Note: The ShareFile service is powered by Citrix Systems and is completely secure.*)

The link to this file will be active for 30 days from the date of this letter. Your company can access and download the file a maximum of five (5) times. (Copies may be downloaded and shared as needed among your company.)

If desired, you may call SOS Consulting, LLC at 903-488-9850, or email info@sosconsulting.us, and the same PDF file copy will be expedited to you via email.

Please use a subject like **"Morris Arco SWD April 2018 PDF Copy Request"**.

Thank you for your attention in this matter.

Best regards,



Ben Stone, SOS Consulting, LLC
Agent for Percussion Petroleum Operating, LLC

Cc: Application File

SOS Consulting is committed to providing superior quality work using technology to assist clients and interested parties in obtaining the documentation required. SOS will continue to utilize methods for reducing papers copies and are less energy and resource intensive.

We hope you'll partner with us and appreciate these efforts.

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You will not be solicited by SOS or anyone else. Data is stored on Citrix Systems servers only.

CITRIX

ShareFile

C-108 - Item XIV

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Postage
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 City, State,
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ZIPZ DELAWARE I, LLC
 Attn: Jan Carter
 303 Veterans Airpark Ln., Ste.1000
 Midland, TX 79704

Postmark Here
 APR 19 2018
 TX 75704

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Total Postage and Fees
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Sent To
 Street and
 City, State,
 PS Form

MEWBOURNE ENERGY PRTNRS 09-A
 CMW 2000-B, 3MG CORP, others
 P.O. Box 7698
 Tuler, TX 75711

Postmark Here
 APR 19 2018
 TX 75704

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PAYNE & TAURUS, LLP
 P.O. Box 1477
 Little Elm, TX 75068

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 APR 19 2018
 TX 75704

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MARSHALL & WINSTON, INC.
 P.O. Box 50880
 Midland, TX 79710-0880

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 APR 19 2018
 TX 75704

C-108 - Item XIV

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☐ Adult Signature Restricted Delivery \$

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City, State

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

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Street at
City, State

B & G ROYALTIES PARTNERSHIP
P.O. Box 376
Artesia, NM 88211-0376

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Postage
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Sent To
Street at
City, State

COVERT TRUST DATED NOV 1, 2010
Attn: Charlene S. Byers
P.O. Box 22294
Denver, CO 80222-0294

PS Form 3849 Instructions

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Postage
\$

Total Postage and Fees
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Sent To
Street at
City, State

PATRICIA A. FISKE
2213 Southhampton Lane
Midland, TX 79705

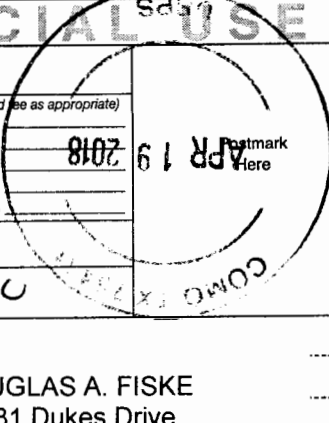
PS Form 3849 Instructions

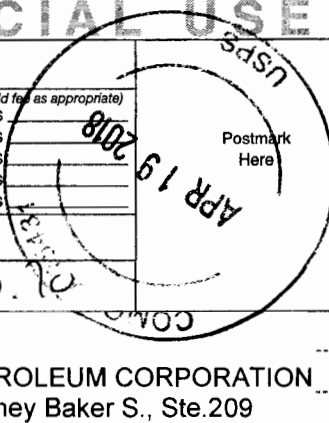
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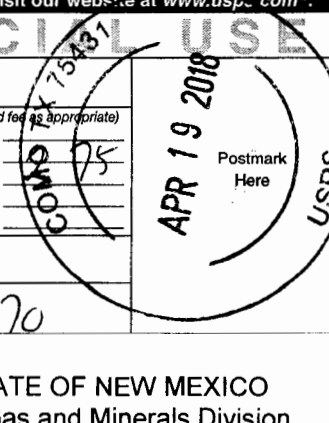
C-108 - Item XIV

Proof of Notice (Certified Mail Receipts – cont.)

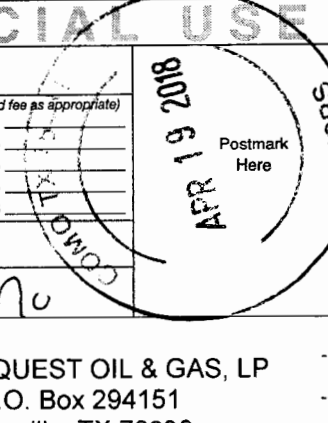
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7015 0640 0006 8756 1804
7015 0640 0006 8756 1811
7015 0640 0006 8756 1828

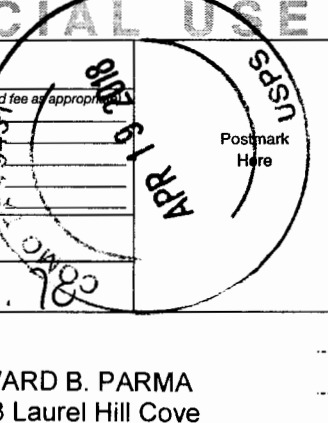
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OFFICIAL USE	
Certified Mail Fee \$	
Extra Services & Fees (check box, add fee as appropriate)	
<input type="checkbox"/> Return Receipt (hardcopy) \$	
<input type="checkbox"/> Return Receipt (electronic) \$	
<input type="checkbox"/> Certified Mail Restricted Delivery \$	
<input type="checkbox"/> Adult Signature Required \$	
<input type="checkbox"/> Adult Signature Restricted Delivery \$	
Postage \$	
Total Postage and Fees \$ 6.70	
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Street & City, State	
DOUGLAS A. FISKE 1831 Dukes Drive Midland, TX 79705	
PS Form 3800	Instructions

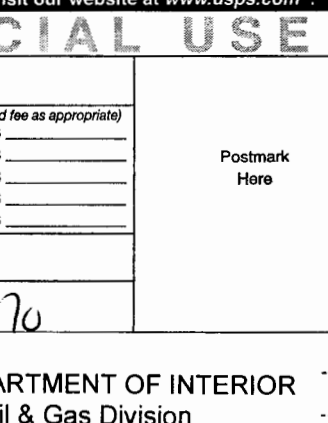
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Extra Services & Fees (check box, add fee as appropriate)	
<input type="checkbox"/> Return Receipt (hardcopy) \$	
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<input type="checkbox"/> Adult Signature Restricted Delivery \$	
Postage \$	
Total Postage and Fees \$ 6.70	
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TETON PETROLEUM CORPORATION 222 Sidney Baker S., Ste.209 Kerrville, TX 78028	
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<input type="checkbox"/> Return Receipt (electronic) \$	
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<input type="checkbox"/> Adult Signature Restricted Delivery \$	
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Total Postage and Fees \$ 6.70	
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STATE OF NEW MEXICO Oil, Gas and Minerals Division 310 Old Santa Fe Trail Santa Fe, NM 87504	
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7015 0640 0006 8756 1811
7015 0640 0006 8756 1828

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<input type="checkbox"/> Return Receipt (electronic) \$	
<input type="checkbox"/> Certified Mail Restricted Delivery \$	
<input type="checkbox"/> Adult Signature Required \$	
<input type="checkbox"/> Adult Signature Restricted Delivery \$	
Postage \$	
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<input type="checkbox"/> Return Receipt (electronic) \$	
<input type="checkbox"/> Certified Mail Restricted Delivery \$	
<input type="checkbox"/> Adult Signature Required \$	
<input type="checkbox"/> Adult Signature Restricted Delivery \$	
Postage \$	
Total Postage and Fees \$ 6.78	
Sent To	
Street & City, State	
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PS Form 3800	Instructions

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<input type="checkbox"/> Return Receipt (hardcopy) \$	
<input type="checkbox"/> Return Receipt (electronic) \$	
<input type="checkbox"/> Certified Mail Restricted Delivery \$	
<input type="checkbox"/> Adult Signature Required \$	
<input type="checkbox"/> Adult Signature Restricted Delivery \$	
Postage \$	
Total Postage and Fees \$ 6.70	
Sent To	
Street and Ap. City, State	
U.S. DEPARTMENT OF INTERIOR Oil & Gas Division 620 E. Greene St. Carlsbad, NM 88220	
PS Form 3800	Instructions

C-108 - Item XIV

Proof of Notice – Legal Notice
Newspaper of General Circulation

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 to re-enter and convert the Morris Arco 26 Fed Com No.2 for salt water disposal; located 990' FNL and 1650' FFL, 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 Devonian [Silurian] formation at a maximum interval depth of 9,600 feet to 11,000 feet at a maximum surface pressure of 1920 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 Conservation 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 the applicant's agent, SOS Consulting, LLC, (903)488-9850 or, email info@sosconsulting.us.

Published in the Artesia Daily Press, Artesia, N.M., April 20, 2018 Legal No. 24651.

The above is the "Proof Copy" sent from the Artesia Daily Press.
The affidavit of publication will be forwarded as soon as it is received.

I am having a difficult time trying to make sense of the log tops on your application- Is Percussion essentially going to inject into the Devonian-Allenburger formations?

See my attachment for deep Roy tops

Also, the Aikman SWD State Well No. 1, API 30-015-21045 has injected 37,775,638 BW into the Devonian.

Mike

Michael McMillan
1220 South St. Francis
Santa Fe, New Mexico
505-476-3448
Michael.mcmillan@state.nm.us

McMillan, Michael, EMNRD

From: ben@sosconsulting.us
Sent: Wednesday, April 25, 2018 1:06 PM
To: McMillan, Michael, EMNRD
Subject: Morris Arco Affidavit...
Attachments: 018_Affidavit_MorrisArco_20180420001.pdf

Mike,

Affidavit attached... please let me know if additional info is needed. Hard copy via U.S. mail...

Thanks,
Ben



Visit us on the web at www.sosconsulting.us!

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Affidavit of Publication

No. 24651

State of New Mexico

County of Eddy:

Danny Scott

being duly sworn says that she is the

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 20, 2018

Second Publication

Third Publication

Fourth Publication

Fifth Publication

Sixth Publication

Seventh Publication

Subscribed and sworn before me this

23rd day of April 2018



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 to re-enter and convert the Morris Arco 26 Fed Com 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 Devonian [Silurian] formation at a maximum interval depth of 9,600 feet to 11,000 feet at a maximum surface pressure of 1920 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 Conservation Division, 1220 St. Francis Dr., Santa Fe, NM 87505, (505) 476-8460 within 15 days of the date of this notice. Additional information may be obtained from the applicant's agent, SOS Consulting, LLC, (903) 488-9850 or, email info@sosconsulting.us.

Published in the Artesia Daily Press, Artesia, N.M., April 20, 2018 Legal No. 24651.

MAY 01 2018 AM 09:49



New Mexico Office of the State Engineer

Point of Diversion Summary

		(quarters are 1=NW 2=NE 3=SW 4=SE)				(NAD83 UTM in meters)
		(quarters are smallest to largest)				
Well Tag	POD Number	Q64 Q16 Q4 Sec TwS Rng	X	Y		
RA 10155		4 3 4 25 19S 25E	553001	3609865*		

Driller License: 1064 **Driller Company:** DELFORD W. MARTIN

Driller Name: MARTIN, DELFORD

Drill Start Date: 05/26/2002 **Drill Finish Date:** 06/01/2002 **Plug Date:**

Log File Date: 06/07/2002 **PCW Rcv Date:** **Source:** Shallow

Pump Type: **Pipe Discharge Size:** **Estimated Yield:**

Casing Size: 5.50 **Depth Well:** 225 feet **Depth Water:** 60 feet

Water Bearing Stratifications:	Top	Bottom	Description
	182	225	Shallow Alluvium/Basin Fill

Casing Perforations:	Top	Bottom
	40	225

*UTM location was derived from PLSS - see Help

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

5/10/18 2:18 PM

POINT OF DIVERSION SUMMARY

This form is to be filed with the appropriate District Office of the Division not later than 20 days after the completion of any newly-drilled or deepened well. It shall be accompanied by one copy of all electrical and radio-activity logs run on the well and a summary of all specific tests conducted, including drill stem tests. All depths reported shall be measured depths. In the case of directionally drilled wells, true vertical depths shall also be reported. For multiple completions, Items 25 through 29 shall be reported for each zone. The form is to be filed in quintuplicate except on state land, where six copies are required. See Rule 1105.

INDICATE FORMATION TOPS IN CONFORMANCE WITH GEOGRAPHICAL SECTION OF STATE

Southeastern New Mexico

T. Anhy _____	T. Canyon _____ 7722.0
T. Salt _____	T. Strawn _____
B. Salt _____	T. Atoka _____
T. Yates _____	T. Miss _____
T. 7 Rivers _____	T. Devonian _____
T. Queen _____	T. Silurian _____
T. Grayburg _____	T. Montoya _____
T. San Andres _____ 825.0	T. Simpson _____
T. Glorieta _____ 2393.0	T. McKee _____
T. Paddock _____	T. Ellenburger _____
T. Blinebry _____	T. Gr. Wash _____
T. Tubb _____	T. Delaware Sand _____
T. Drinkard _____	T. Bone Springs _____ 4222.0
T. Abo _____	T. 3rd Bone springs SS- _____ 6170.0
T. Wolfcamp _____ 6381.0	T. _____
T. Penn _____	T. _____
T. Cisco (Bough C) _____	T. _____

Northwestern New Mexico

T. Ojo Alamo _____	T. Penn. "B" _____
T. Kirtland-Fruitland _____	T. Penn. "C" _____
T. Pictured Cliffs _____	T. Penn. "D" _____
T. Cliff House _____	T. Leadville _____
T. Menefee _____	T. Madison _____
T. Point Lookout _____	T. Elbert _____
T. Mancos _____	T. McCracken _____
T. Gallup _____	T. Ignacio Otzte _____
Base Greenhorn _____	T. Granite _____
T. Dakota _____	T. _____
T. Morrison _____	T. _____
T. Todilto _____	T. _____
T. Entrada _____	T. _____
T. Wingate _____	T. _____
T. Chinle _____	T. _____
T. Permian _____	T. _____
T. Penn. "A" _____	T. _____

OIL OR GAS SANDS OR ZONES

No. 1, from _____ to _____
No. 2, from _____ to _____
No. 3, from _____ to _____
No. 4, from _____ to _____

IMPORTANT WATER SANDS

Include data on rate of water inflow and elevation to which water rose in hole.

No. 1, from to feet

No. 2, from to feet

No. 3, from to feet

LITHOLOGY RECORD (Attach additional sheet if necessary)

From	To	Thickness in Feet	Lithology
825.0	2393.0	1568.0	Dolomite, Chert, Anhydrite
2393.0	4222.0	1829.0	Dolomite, Sand, Chert
4222.0	6170.0	1948.0	Limestone, Shale, Sand, dolomite
6170.0	6381.0	211.0	Sand, Siltstone, shale
6381.0	7722.0	1341.0	Dolomite, Sand, Limestone, shale

* see

FORM C-108 Technical Review Summary [Prepared by reviewer and included with application; V16.2]

DATE RECORD: First Rec: 4/23/2018 Admin Complete: 4/25/2018 or Suspended: _____ Add. Request/Reply: _____

ORDER TYPE: WFX / PMX (SWD) Number: _____ Order Date: _____ Legacy Permits/Orders: _____

Well No. 1 Well Name(s): MORRIS ARCO

API: 30-0 15-29258 Spud Date: 11/19/1996 (U) New or Old (EPA): N (UIC Class II Primacy 03/07/1982)

Footages 1650 FEL Lot _____ or Unit B Sec 26 Tsp 19S Rge 25E County Edley

General Location: 5 mile SW / Anteq Pool: SAD, Delusion S. 14 1/4 Pool No.: 57865

BLM 100K Map: Antesia Operator: Petroleum OGRID: 371755 Contact: Ben Stone, Hec

COMPLIANCE RULE 5.9: Total Wells: 1923 Inactive: 3 Fincl Assur: Y Compl. Order? MA IS 5.9 OK? Y Date: 7-27-2018

WELL FILE REVIEWED ☐ Current Status: DEA

WELL DIAGRAMS: NEW: Proposed ☐ or RE-ENTER: Before Conv. ☒ After Conv. ☐ Logs in Imaging: X

Planned Rehab Work to Well: see below (standard requirements) Leaky

Well Construction Details	Sizes (in) Borehole / Pipe	Setting Depths (ft)	Cement Sx or Cf	Cement Top and Determination Method
Planned ___ or Existing ___ Surface	<u>14 3/4" / 5 1/2"</u>	<u>1100</u>	<u>700</u>	<u>Surface / U.S. 42</u>
Planned ___ or Existing ___ Interm/Prod	<u>8 3/4" / 7"</u>		<u>1400</u>	<u>5631 / (TS)</u>
Planned ___ or Existing ___ Interm/Prod	<u>6 1/2" / 5 1/2"</u>	<u>10600</u>	<u>10,200</u>	<u>C-B-L</u>
Planned ___ or Existing ___ Prod/Liner				
Planned ___ or Existing ___ (Liner)				
Planned ___ or Existing ___ OH / PERF				

Injection Lithostratigraphic Units	Depths (ft)	Injection or Confining Units	Tops
Adjacent Unit: Litho. Struc. Por.			
Confining Unit: Litho. Struc. Por.			
Proposed Inj Interval TOP:			
Proposed Inj Interval BOTTOM:			
Confining Unit: Litho. Struc. Por.			
Adjacent Unit: Litho. Struc. Por.			

Completion/Operation Details:

Drilled TD 9600 PBDT _____
NEW TD 10600 NEW PBDT _____
NEW Open Hole ☒ or NEW Perfs ☐
Tubing Size 3 1/2 in. Inter Coated? _____
Proposed Packer Depth 10500 ft
Min. Packer Depth _____ (100-ft limit)
Proposed Max. Surface Press. 1920 psi
Admin. Inj. Press. 240 (0.2 psi per ft)

AOR: Hydrologic and Geologic Information

POTASH: R-111-P MA Noticed? _____ BLM Sec Ord ☐ WIPP ☐ Noticed? _____ Salt/Salado T: _____ B: _____ NW: Cliff House fm _____

FRESH WATER: Aquifer Quaternary Max Depth 225 HYDRO AFFIRM STATEMENT By Qualified Person ☒

NMOSE Basin: LAB CAPITAN REEF: thru _____ adj _____ NA _____ No. GW Wells in 1-Mile Radius? 2 FW Analysis? X

Disposal Fluid: Formation Source(s) yes, Bine Analysis? _____ On Lease ☐ Operator Only ☒ Commercial ☐

Disposal Interval: Inject Rate (Avg/Max BWPD): 7000 BWP Protectable Waters? MA Source: _____ System: Closed or Open

HC Potential: Producing Interval? MA Formerly Producing? _____ Method: Logs/DST/P&A/Other MA 2-Mi Radius Pool Map ☒

AOR Wells: 1/2-M Radius Map and Well List? X No. Penetrating Wells: _____ [AOR Horizontals: _____ AOR SWDs: _____]

Penetrating Wells: No. Active Wells 0 Num Repairs? _____ on which well(s)? _____ Diagrams? _____

Penetrating Wells: No. P&A Wells 0 Num Repairs? _____ on which well(s)? _____ Diagrams? _____

NOTICE: Newspaper Date 4-20-2018 Mineral Owner Petroleum Surface Owner Petroleum N. Date _____

RULE 26.7(A): Identified Tracts? Y Affected Persons: neighbour, 202 B & G N. Date April

Order Conditions: Issues: 1) Run C-B-L -> 500 top Liner -> base Liner

Additional COAs: 2) Notify Antesia of tops

3) max cement in 45th & 200' hole of int 1540P.