

RECEIVED: 3/14/2018 MM 3/12/2018	REVIEWER:	TYPE: SWD	APP NO: PMAM1807234134
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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: Chalk Bluff SWD No.1 *(Formerly New Mexico B-41)* **API:** 30-015-00604
Pool: SWD;WC-Cisco-Canyon-Strawn **Pool Code:** 98079

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

- 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

Ben Stone

Signature

3/09/2018

Date

903-488-9850

Phone Number

ben@sosconsulting.us

e-mail Address

Keep!!! This is For date stamp only
Revised March 23, 2017

RECEIVED: 3/12/2018	REVIEWER:	TYPE: SWD	APP NO: MAR 12 2018 PM03:44 PMA1807234137
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- Geological & Engineering Bureau -
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Applicant: Percussion Petroleum, LLC **OGRID Number:** 371755
Well Name: Osage Boyd 15 Federal Com No.8 **API:** 30-015-00604
Pool: SWD;WC-Cisco-Canyon-Strawn **Pool Code:** 98079

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Ben Stone

Print or Type Name

Signature

3/09/2018

Date

903-488-9850

Phone Number

ben@sosconsulting.us

e-mail Address



Oil & Gas Accounting • Regulatory • Consulting • Auditing • Offshore Technical Assistance

March 9, 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 New Mexico BZ State Well No.1, located in Section 32, Township 17 South, Range 27 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 New Mexico BZ State No.1; the well will be renamed to the Chalk Bluff State SWD No.1. Percussion selected this well for private disposal of produced water coming from their operations in the area.

↑
"Lease Only"

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 March 11, 2018 in the Artesia Daily Press and all offset operators and other interested parties have been notified individually. The legal notice affidavit will be forwarded when received. 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 state land and minerals; a copy of the application has been sent to the State Land Office, Oil and Gas Section. There are other state and BLM lands/ 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, 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 7 Wells (2 P&A) in the subject AOR; 1 which penetrates the target interval.*** The data includes a description of each well's type, construction, date drilled, location, depth, and a schematic of P&A'd wells – ***NO P&A wells penetrate interval.***
- 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 WOLFCAMP, CISCO, CANYON and STRAWN 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 perms 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 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 7 offset lessees and/or operators within ½ mile; Well location and minerals are STATE w/ federal and state offsetting leases.***
- 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: ***3/09/2018***

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 – PROPOSED

The well is currently P&A'd and will be reentered with new 5-1/2" casing set and configured for SWD.

Item IV – Tabulation of AOR Wells

Tabulation includes all construction data for all wells within a one-half mile Radius of the subject well and which penetrate the proposed interval.

There is only one well completion which penetrates the proposed disposal interval; it is plugged back and producing from the Glorieta/ Yeso and is above the proposed injection 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.

C-108 - Item VI

Area of Review Well Data Tabulation

TOP OF PROPOSED INJECTION INTERVAL – 6100'

(Summary: 7 wells; 2 P&A'd; 1 active well penetrates.)

Listed Clockwise from North of Proposed Well (See AOR Map)

1. 30-015-34316 – DOES NOT PENETRATE – TD 3511'

RED LAKE 32 STATE G #001

Well Type	Oil
Well Status	Active
ULSTR	G-32-17S-27E
ogrid_name	PERCUSSION PETROLEUM OPERATING, LLC
pool_id_list	[51120] RED LAKE, GLORIETA-YESO, [97253] RED LAKE, SAN ANDRES

3. 30-015-36067 – DTD 6314' (PBSD 5860')

SOONERS STATE #001

Well Type	Oil
Well Status	Active
ULSTR	J-32-17S-27E
ogrid_name	LIME ROCK RESOURCES II-A, L.P.
pool_id_list	[51120] RED LAKE, GLORIETA-YESO

GLOR/YESO Perfs: 2819'-4147'; 8.625" @ 1259' (12.25" hole) w/ 595 sx – circ.; 5.5" @ 6334' (7.875" hole) w/ 1135 sx; CIBP @ 5860' w/ 30' cmt.

4. 30-015-01233 – DOES NOT PENETRATE – TD 2822'

PRE-ONGARD WELL #001

Well Type	Oil
Well Status	Plugged (Site Released)
ULSTR	N-32-17S-27E
ogrid_name	PRE-ONGARD WELL OPERATOR

(P&A'd)

County, ST	Eddy County, NM
Sec-Twn-Rng	32-17S-27E
Footage	1930' FSL and 1880' FWL
Survey	32.7892151, -104.3029251

9248'-9280'
CIBP at 9295'
9322'-9354'



WELL SCHEMATIC - PROPOSED Chalk Bluff State SWD No.1

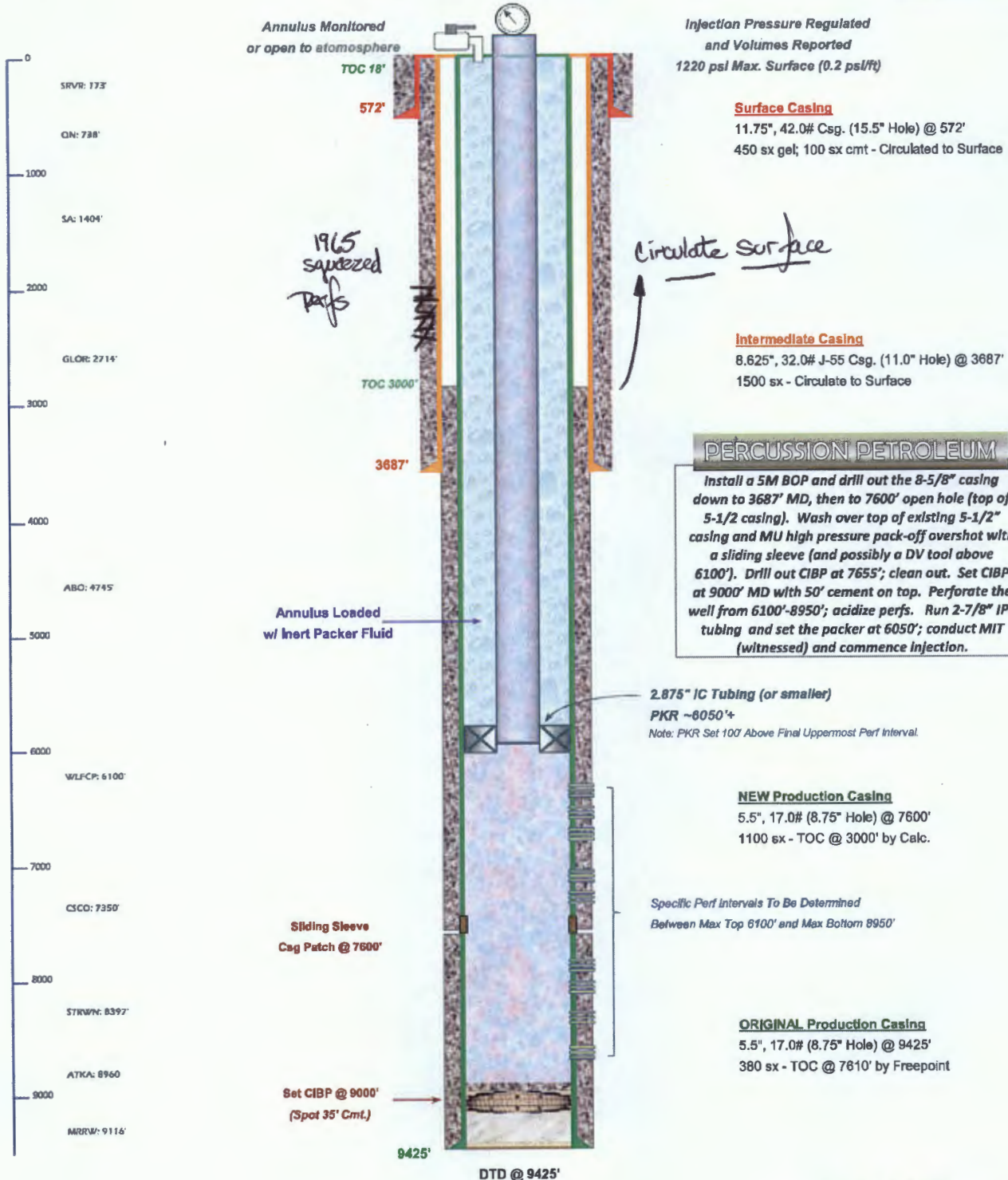
(Formerly New Mexico BZ State No.1)

API 30-015-00640

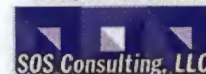
1930' FSL & 1880' FWL, SEC. 32-T17S-R27E
EDDY COUNTY, NEW MEXICO

SWD; WC-Cisco-Canyon-Strawn (98079)

Spud Date: 10/29/1966
Config SWD Dt (Est): ~6/01/2



Drawn by: Ben Stone, 3/07/2018



C-108 - Item VI

Area of Review Well Data Tabulation (cont.)

5. 30-015-29995 – DOES NOT PENETRATE – TD 2455'

CARTER COLLIER 5 FEDERAL #009

Well Type	Oil
Well Status	Active
ULSTR	2-32-17S-27E
ogrid_name	LIME ROCK RESOURCES II-A, L.P.
pool_id_list	[51300] RED LAKE, QUEEN-GRAYBURG-SA

6. 30-015-29651 – DOES NOT PENETRATE – TD 3393'

CHALK FEDERAL #006

Well Type	Oil
Well Status	Active
ULSTR	3-32-17S-27E
ogrid_name	VANGUARD OPERATING, LLC
pool_id_list	[51300] RED LAKE, QUEEN-GRAYBURG-SA

7. 30-015-05964 – DOES NOT PENETRATE – TD 335'

PRE-ONGARD WELL #002

Well Type	Oil
Well Status	Plugged (Site Released)
ULSTR	3-32-17S-27E
ogrid_name	PRE-ONGARD WELL OPERATOR

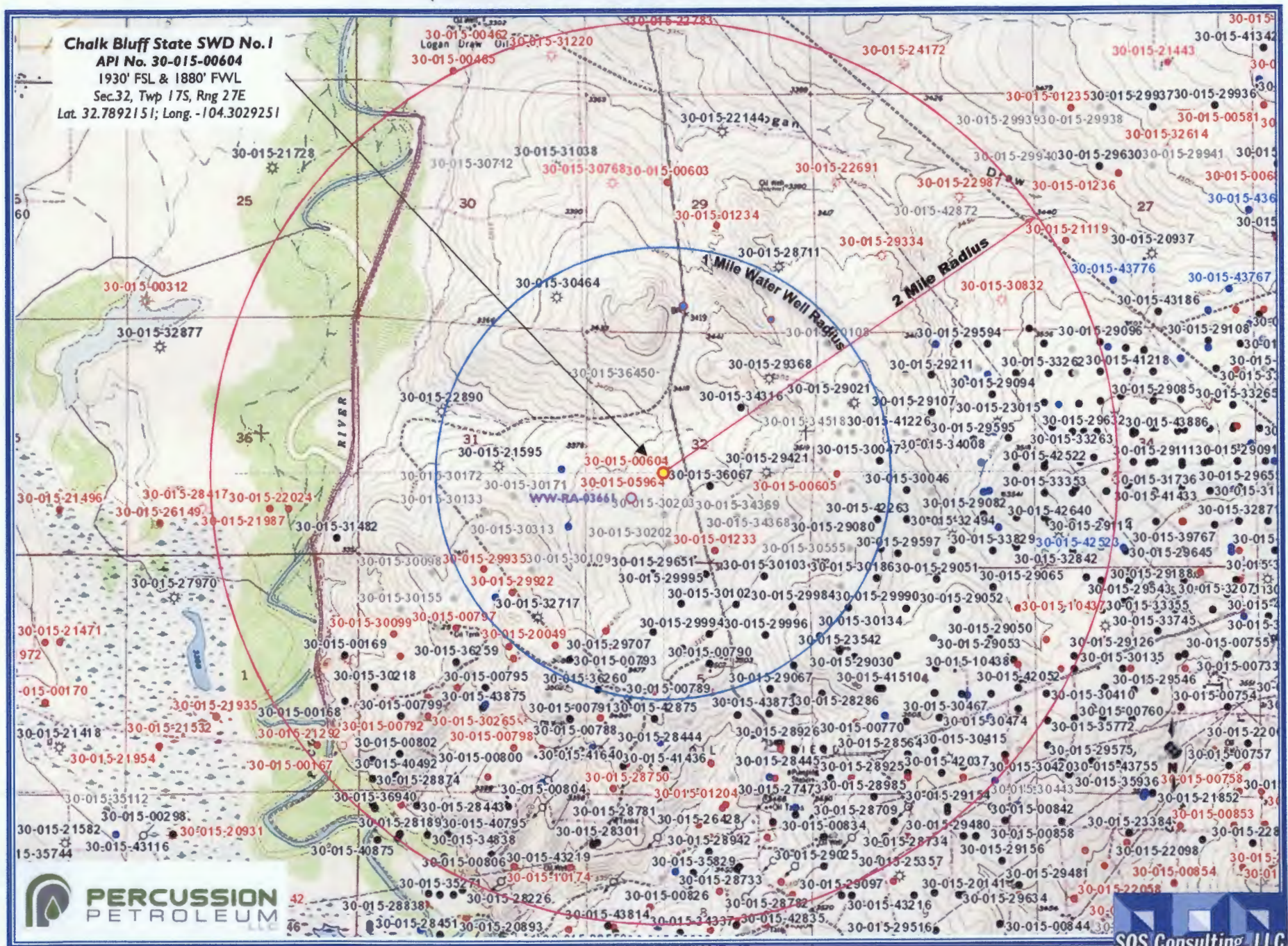
C-108 ITEM X

LOGS and AVAILABLE TEST DATA

**A Standard Suite of Logs will be run after
recompleting the well and submitted to the Division.**

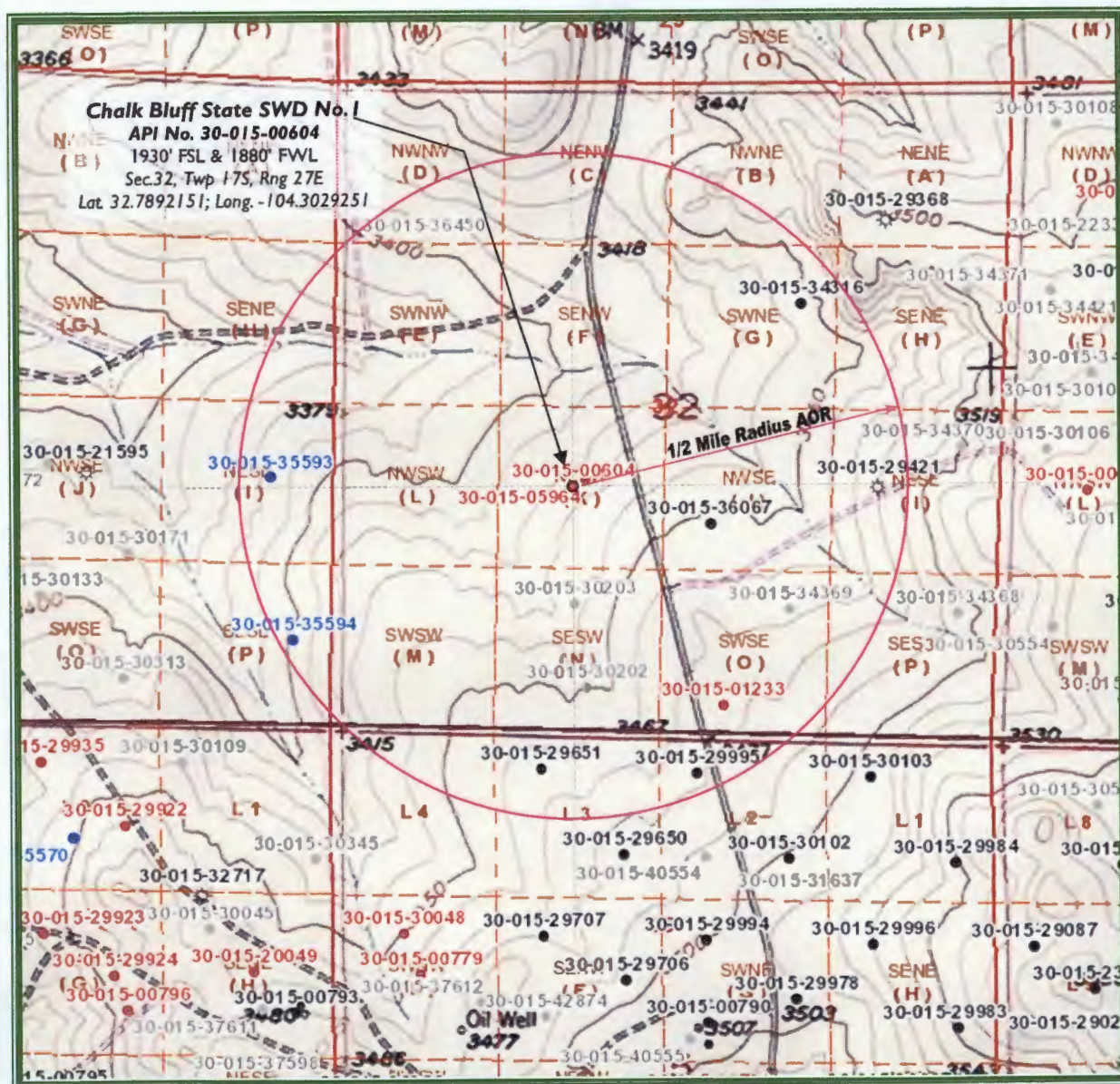
Chalk Bluff State SWD No.1 - Area of Review / 2 Miles

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



Chalk Bluff State SWD No.1 - Area of Review / Overview Map

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



6.7 miles Southeast of Artesia, NM



Eddy County, New Mexico

C-108 ITEM VII – PROPOSED OPERATION

Chalk Bluff State 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

Clear and level location; this requires some work with a maintainer/dozer to rebuild the northwest corner of the pad – the rest of the pad and the road need some minor clearing. Remove dry hole marker and install an 11" SOW 5M wellhead with baseplate resting on 11-3/4" casing (welded up to surface). Install a 5M BOP and drill out the 8-5/8" casing down to 3687' MD, then to 7600' open hole (top of 5-1/2" casing). Wash over top of existing 5-1/2" casing and MU high pressure pack-off overshot with a sliding sleeve (and possibly a DV tool above 6100'). Drill out CIBP at 7655'; clean out. Set CIBP at 9000' MD with 50' cement on top. Perforate the well from 6100'-8950'; acidize perms. Run 2-7/8" IPC tubing and set the packer at 6050' to start 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 Chalk Bluff State SWD well will be for (Percussion's area production from Gloieta / Yeso wells)

→ Lease

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.

Planned Operation Activity continued...

Anticipated daily maximum volume is 4,500 bpd and an average of 3,000 bpd at a maximum surface injection pressure of 1220 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 – 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

Wolfcamp
Cisco/ Canyon
Strawn

Water Analyses follow this page.

C-108 Item VII.5 - Produced Water Data
Percussion Petroleum, LLC - Chalk Bluff State SWD Project

SOURCE ZONE

GLO/YESO

API No	3001524754	Lab ID	
Well Name	PLATT PA 009	Sample ID	1146
		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 - Chalk Bluff State SWD Project

SOURCE ZONE

GLO/YESO

API No	3001524619	Lab ID	
Well Name	PLATT PA 008	Sample ID	1207
		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 - Chalk Bluff State SWD Project

SOURCE ZONE

BONE SPRING

API No	3001520225	Lab ID	
Well Name	BIG EDDY UNIT	Sample ID	5847
	012	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 - Chalk Bluff State SWD Project

DISPOSAL ZONE

WOLFCAMP

API No.	3001522299	Lab ID	
		Sample ID	3083
Well Name	STATE AC COM 001	Sample No	
Location	ULSTR 21 20 S 28 E 1980 S 1980 E	Lat / Long	32.55729 -104.17995
		County	Eddy
Operator (when sampled)			
	Field BURTON FLAT NORTH	Unit	J
Sample Date	11/16/1978	Analysis Date	
	Sample Source SEPARATOR	Depth (if known)	
	Water Type		
ph	5.1	alkalinity_as_caco3_mgL	
ph_temp_F		hardness_as_caco3_mgL	
specificgravity		hardness_mgL	
specificgravity_temp_F		resistivity_ohm_cm	
tds_mgL	144926	resistivity_ohm_cm_temp_	
tds_mgL_180C		conductivity	
chloride_mgL	87600	conductivity_temp_F	
sodium_mgL		carbonate_mgL	
calcium_mgL		bicarbonate_mgL	37
iron_mgL		sulfate_mgL	1350
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 VII.5 - Produced Water Data
Percussion Petroleum, LLC - Chalk Bluff State SWD Project

DISPOSAL ZONE

CIS

API No 3001526468		Lab ID	
Well Name JOHN AGU 002		Sample ID 5945	
		Sample No	
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 VII.5 - Produced Water Data
Percussion Petroleum, LLC - Chalk Bluff State SWD Project

DISPOSAL ZONE

STRAWN

API No.	3001523698	Lab ID	
		Sample ID	6849
Well Name	SLINKARD UR FEDERAL 001	Sample No	
Location	ULSTR 11 20 S 29 E 1980 N 660 E	Lat / Long	32.58918 -104.03823
		County	Eddy
Operator (when sampled)			
	Field BURTON FLAT EAST	Unit	H
Sample Date	12/24/2001	Analysis Date	
	Sample Source	Depth (if known)	
	Water Type		
ph	6.1	alkalinity_as_caco3_mgL	
ph_temp_F		hardness_as_caco3_mgL	
specificgravity	1.08	hardness_mgL	
specificgravity_temp_F		resistivity_ohm_cm	
tds_mgL	117276	resistivity_ohm_cm_temp_	
tds_mgL_180C		conductivity	
chloride_mgL	72846	conductivity_temp_F	
sodium_mgL		carbonate_mgL	
calcium_mgL	9200	bicarbonate_mgL	146
iron_mgL	5	sulfate_mgL	50
barium_mgL	0	hydroxide_mgL	
magnesium_mgL	1949.2	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 Wolfcamp formation is a mixed lithology system of light gray-brown, fine to medium crystalline fossiliferous limestone with inter-crystalline vugular porosity including considerable dolomite of medium to fine grains and minor sandstone interbedded with gray shale. Additional porosity can be found when the well bore encounters detrital carbonates which were shed off shelf and foreslope areas and transported down the Wolfcamp paleoslope. The formation thickness varies from about 400 to 500 feet.

The Cisco and Canyon formations (Upper Penn) are 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 combined intervals generally cover several hundred feet.

The Strawn formation consists mainly of alternating beds of dark and gray shale, sandstone and limestone. Dissolution of carbonates result in certain vuggy porosity still averaging less than 10%. The formation is the area is 500 to 700 feet thick.

The combined zones offer some good porosity in the proposed injection interval located from 6100 feet to 8950 feet with some very good porosity interspersed throughout the overall interval.

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

Fresh water in the area is generally available from the Santa Rosa formation (Capitan Basin). Based on State Engineer's records for a water well in Section 32, Twp 17S, Rng 27E, groundwater is at an average depth of 140 feet.

NM OSE records indicate there is one water well located within one mile of the proposed well. The well was listed as belonging to Humble Oil and Refining Company. Percussion field personnel will attempt to locate and sample if possible. An affidavit will be submitted if the well is not located.

C-108 ITEM XI – WATER WELLS IN AOR

**2 PODs, Resulted in 1 Water Well Spots
(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. (quarters are 1=NW 2=NE 3=SW 4=SE) C=the file is closed) (quarters are smallest to largest) (NAD83 UTM in meters)									
(acre ft per annum)																			
WR File Nbr	Sub	Use	Diversion	Owner	County	POD Number	Code	Grant	Source	q	q	q	Sec	Tws	Rng	X	Y		
RA-100000	basin	PRO	0	HUMBLE OIL & REFINING	ED	RA-100000			Shallow	3	2	3	32	17S	27E	565186	3628038*		
RA-100000	basin	DOM	0	HUMBLE OIL & REFINING CO	CH	RA-100000			Shallow	3	2	3	32	17S	27E	565186	3628038*		

Record Count: 2

PLSS Search:

Section(s): 29, 31, 32 Township: 17S Range: 27E

Sorted by: File Number

No PODs found.

PLSS Search:

Section(s): 5, 6 Township: 18S Range: 27E

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.

2/27/18 2:12 PM

Page 1 of 1

ACTIVE & INACTIVE POINTS OF DIVERSION

C-108 Item XI

Water Wells Within One Mile

Chalk Bluff State SWD No.1 - Water Well Locator Map (Current name: New Mexico BZ State No.1)

*There is one water well within a one-mile radius of the proposed SWD.
It is located approximately 425 feet to the southwest of the SWD well.*



Data from NM Office of the State Engineer. Shows as Humble Oil & Refining Company – the well MAY not be there but please check it out – If it cannot be found, I need the date and time and field reps name so I can prepare an affidavit that a good faith effort was made to locate the well.

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 (quarters are 1=NW 2=NE 3=SW 4=SE)
closed) (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 03661			ED	3	2	3	32	17S	27E	565186	3628038*	330	140	190
RA 03664			CH	3	2	3	32	17S	27E	565186	3628038*	400	100	300

Average Depth to Water: 120 feet

Minimum Depth: 100 feet

Maximum Depth: 140 feet

Record Count: 2

PLSS Search:

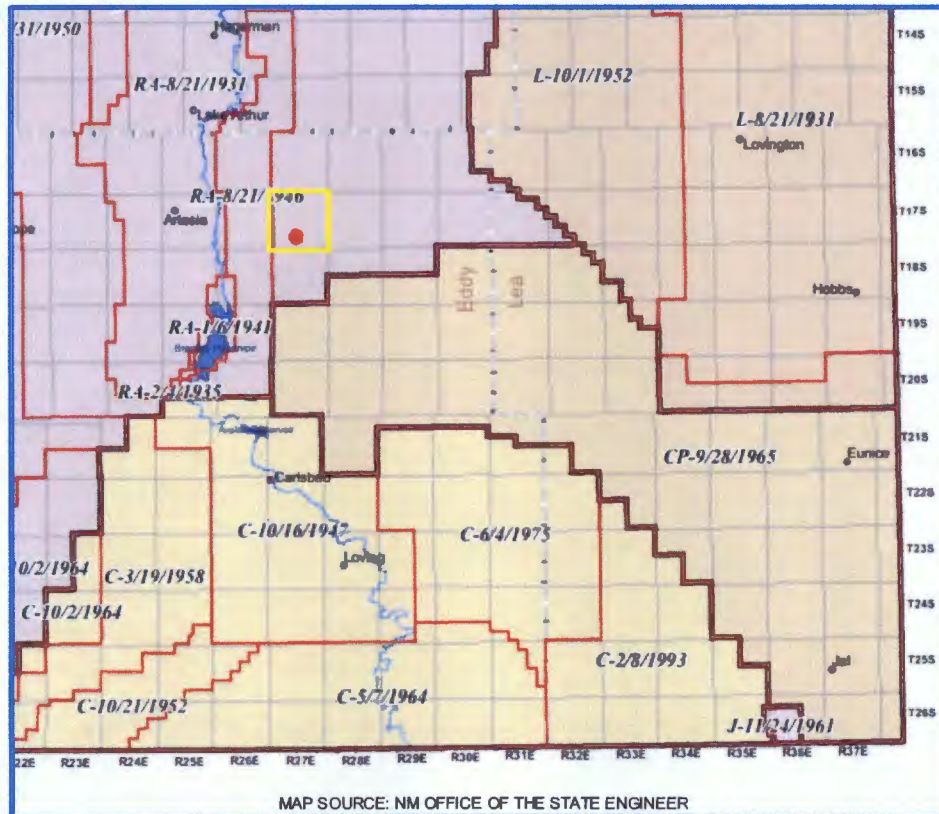
Section(s): 29, 31, 32 Township: 17S Range: 27E

*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 Artesian Basin.

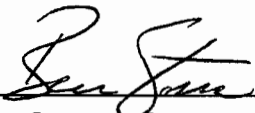
Fresh water in the area is generally available from the karstic San Andres limestone formation which is a prime example of an artesian recharged aquifer.

State Engineer's records show there is fresh water wells in the area with an depth of 140 feet and average depth to water at 175 feet.

There is 1 water well located within one mile of the proposed SWD. Samples will be taken of at least one and analysis forwarded when available.

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
Chalk Bluff State SWD No.1
Reviewed 3/01/2018

C-108 ITEM XIII – PROOF OF NOTIFICATION

IDENTIFICATION AND NOTIFICATION OF INTERESTED PARTIES

Exhibits for Section

Affected Parties Map

List of Interested Parties

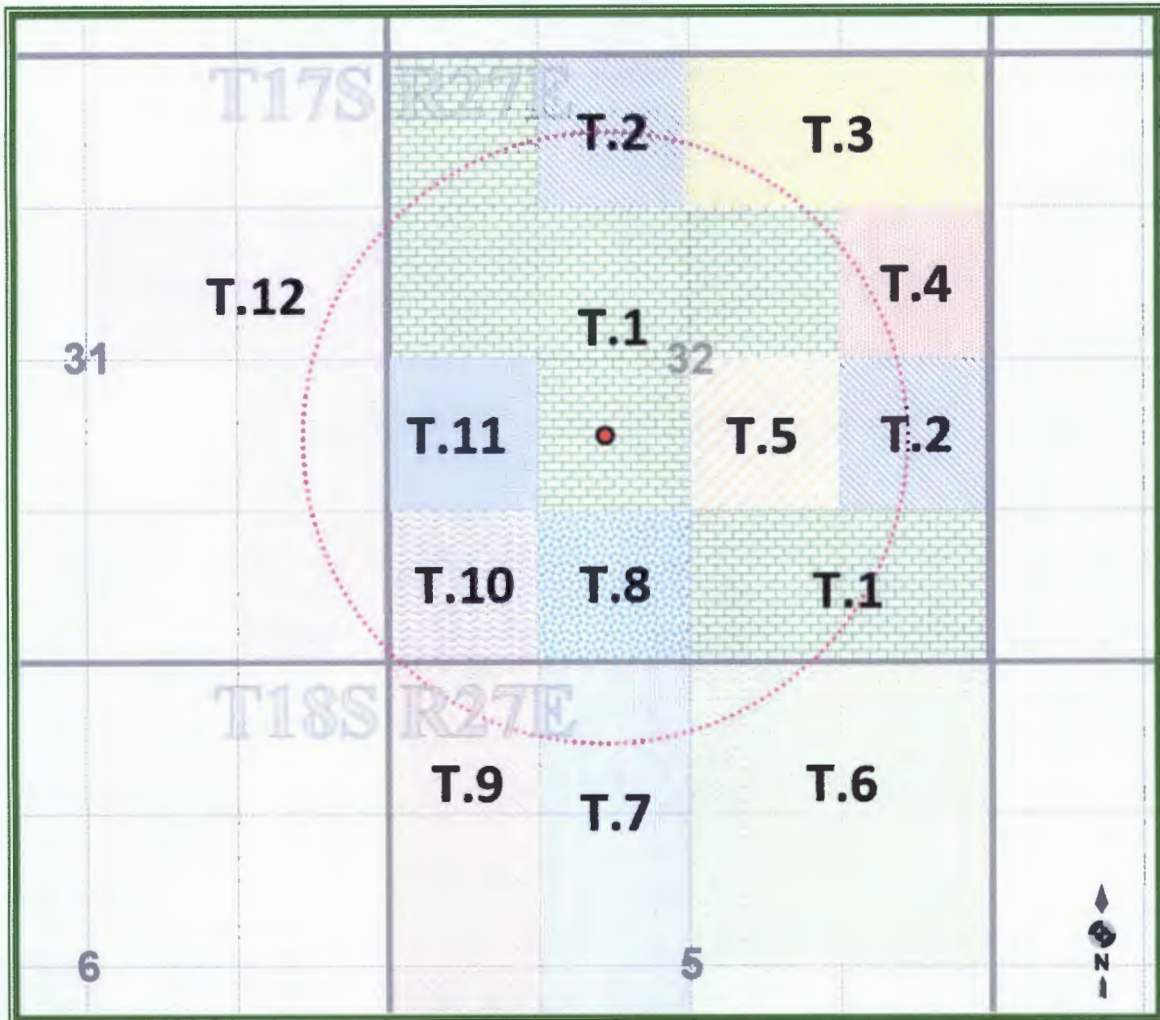
Notification Letter to Interested Parties

Proof of Certified Mailing

Published Legal Notice

Chalk Bluff State SWD No.1 – Affected Parties Plat

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



LEGEND

T.1 – VA-0787-0003 – St. Devote, LLC	T.7 – NMNM-097122 – Steve Sell
T.2 – BO-8814-0014 – ExxonMobil Corp.	T.8 – BO-6869-0042 – ExxonMobil Corp.
T.3 – E0-5313-0000 – Chevron USA, Inc.	T.9 – NMLC-049648A – ExxonMobil Corp.
T.4 – B1-1339-0003 – ExxonMobil Corp.	T.10 – BO-9391-0003 – ExxonMobil Corp
T.5 – BO-8318-0093 – ExxonMobil Corp.	T.11 – BO-6869-0040 – ExxonMobil Corp
T.6 – NMNM-0064384 – ZPZ Delaware I, LLC	T.12 – NMNM-081238 – Vanguard Operating

C-108 ITEM XIII – PROOF OF NOTIFICATION AFFECTED 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.**

SURFACE OWNERS

1. STATE OF NEW MEXICO
Oil, Gas and Minerals Division
310 Old Santa Fe Trail
Santa Fe, NM 87504
Certified: 7015 0640 0006 8756 1354

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

Private Lease (T.1 on Affected Parties Map)

Lessee

ST DEVOTE, LLC (Subsidiary of Applicant)
919 Milam, Ste.2475
Houston, TX 77002

Operator

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

State and Federal Leases BO-8814-0014, B1-1339-0003, BO-8318-0093, BO-6869-0042, NMLC-049648A, BO-9391-0003 and BO-6869-0040 (T.2, T.4, T.5, T.8, T.9, T.10 and T.11 on Affected Parties Map)

Lessee

2. EXXONMOBIL CORP.
P.O. Box 4358
Houston, TX 77210-4358
Certified: 7015 3010 0001 3789 9323

Operators

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

3. LIME ROCK RESOURCES II-A, LP
1111 Bagby Street
Houston, TX 77002
Certified: 7015 3010 0001 3789 9330

State Lease E0-5313-0000 (T.3 on Affected Parties Map)

Lessee

4. CHEVRON USA, INC.
Attn: Linda McMurray, Permitting Team
6301 Deauville Blvd.
Midland, TX 79706
Certified: 7015 3010 0001 3789 9347

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

State Lease E0-5313-0000 (T.3 on Affected Parties Map – cont.)

Operator

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

BLM Lease NMNM-0064384 (T.6 on Affected Parties Map)

Lessee

- 5 ZPZ DELAWARE I, LLC
303 Veterans Airpark Ln., Ste.1000
Midland, TX 79704
Certified: 7015 3010 0001 3789 9361

Operator

LIME ROCK RESOURCES II-A, LP
1111 Bagby Street
Houston, TX 77002

BLM Lease NMNM-097122 (T.7 on Affected Parties Map)

Lessee

- 6 STEVE SELL
P.O. Box 5061
Midland, TX 79704
Certified: 7015 0640 0006 8756 1330

Operator

- 7 EOG Y RESOURCES
104 South 4th Street
Artesia, NM 77002
Certified: 7015 3010 0001 3789 9354

BLM Lease NMNM-081238 (T.12 on Affected Parties Map)

Lessee and Operator

- 8 VANGUARD OPERATING, LLC
5847 San Felipe, Ste.3000
Houston, TX 77057
Certified: 7015 0640 0006 8756 1347

OFFSET MINERALS OWNERS (Notified via USPS Certified Mail)

- 9 U.S. DEPARTMENT OF INTERIOR
Bureau of Land Management
Oil & Gas Division
620 E. Greene St.
Carlsbad, NM 88220
Certified: 7015 3010 0001 3789 9316

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

OFFSET MINERALS OWNERS – (cont.) (Notified via USPS Certified Mail)

STATE OF NEW MEXICO
Oil, Gas and Minerals Division
310 Old Santa Fe Trail
Santa Fe, NM 87504

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

STATE OF NEW MEXICO (FedEx'ed copy)
Oil, Gas and Minerals Division
310 Old Santa Fe Trail
Santa Fe, NM 87504



March 8, 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 New Mexico State BZ No.1 (to be renamed the Chalk Bluff State 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 located in Section 32, Township 17 South, Range 27 East in Eddy County, New Mexico.

The published notice states that the interval will be from 6100 feet to 8950 feet.

Following is the notice published in the Artesia Daily Press, New Mexico on or about March 9, 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 reenter and complete the New Mexico State BZ No.1 for salt water disposal; located 1930' FSL and 1880' FWL, Section 32, Township 17 South, Range 27 East, Eddy County, New Mexico; approximately 6.7 miles southeast of Artesia, NM. The well will be renamed to the Chalk Bluff State SWD No.1.

Produced water from Percussion's area production will be privately disposed into the Wolfcamp, Cisco, Canyon and Strawn formations at a maximum interval depth of 6100 feet to 8950 feet at a maximum surface pressure of 1220 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-sa4d1d6df1b54e399>

(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.)

Alternatively, 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 the subject **"Chalk Bluff SWD March 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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CITRIX

ShareFile

C-108 - Item XIV

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Oil, Gas and Minerals Division
310 Old Santa Fe Trail
Santa Fe, NM 87504

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CHEVRON USA, INC.
Attn: Linda McMurray, Permitting Team
6301 Deauville Blvd.
Midland TX 79706

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C-108 - Item XIV

Proof of Notice (Certified Mail Receipts – cont.)

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 104 S. 4th Street
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 5847 San Felipe, Ste.3000
 Houston, TX 77057
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 U.S. DEPARTMENT OF INTERIOR
 Oil & Gas Division
 620 E. Greene St.
 Carlsbad, NM 88220
 PS Form Instructions

C-108 - Item XIV

Proof of Notice – Legal Notice Newspaper of General Circulation

Legal Notice

Percussion Petroleum Operating, L.L.C. – 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 reenter and complete the New Mexico State BZ No.1 for salt water disposal; located 1930' FSL and 1880' FWL, Section 32, Township 17 South, Range 27 East, Eddy County, New Mexico; approximately 6.7 miles southeast of Artesia, NM. The well will be renamed to the Chalk Bluff State SWD No.1.

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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, L.L.C., (903)488-9850 or, email info@sosconsulting.us.

Published in the Artesia Daily Press, Artesia, N.M., March 11, 2018 Legal No. 24593.

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.

ORIGIN ID:TYRA (903) 488-9850
BENJAMIN STONE
SOS CONSULTING, LLC
1950 CR 2331

COMO, TX 75431
UNITED STATES US

SHIP DATE: 09MAR18
ACTWGT: 0.50 LB
CAD: 100120607/NET3980

BILL SENDER

TO **TERRY WARNELL**
NM STATE LAND OFFICE - OIL & GAS
310 OLD SANTA FE TRL

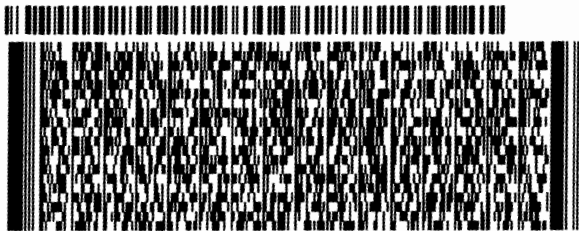
SANTA FE NM 87501

(505) 827-5791
INV.
PO:

REF: PERCUSSION CHALK BLUFF SWD

DEPT:

552J107F5DC45



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2111184128414

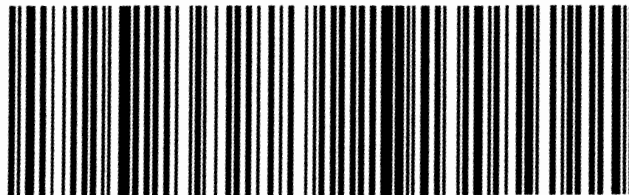
TUE - 13 MAR 10:30A

MORNING 2DAY

TRK#
0201 **7717 6725 4474**

SX SAFA

87501
NM-US **ABQ**



McMillan, Michael, EMNRD

From: ben@sosconsulting.us
Sent: Wednesday, March 14, 2018 1:31 PM
To: McMillan, Michael, EMNRD
Subject: Affidavit - Percussion's NM BZ State/ Chalk Bluff SWD...
Attachments: Affidavit_ChalkBluff_20180314001.pdf

Michael,

Affidavit attached. Hard copy in US mail.

Any luck w/ their B&B and Osage?

Thanks,
Ben



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Affidavit of Publication

No. 24593

State of New Mexico

County of Eddy:

Danny Scott

being duly sworn says that she 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 March 11, 2018

Second Publication

Third Publication

Fourth Publication

Fifth Publication

Sixth Publication

Seventh Publication

Subscribed and sworn before me this

12th day of March 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 reenter and complete the New Mexico State BZ No.1 for salt water disposal; located 1930' FSL and 1880' FWL, Section 32, Township 17 South, Range 27 East, Eddy County, New Mexico; approximately 6.7 miles southeast of Artesia, NM. The well will be renamed to the Chalk Bluff State SWD No.1.

Produced water from Percussion's area production will be privately disposed into the Wolfcamp, Cisco, Canyon and Strawn formations at a maximum interval depth of 6100 feet to 8950 feet at a maximum surface pressure of 1220 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., March 11, 2018 Legal No. 24593.

MAR 19 2018 PM03:21

C-108 - Item XI

Water Wells Within One Mile

AFFIRMATIVE STATEMENT

State Engineer's records indicate that there is one water well located in the NW/SW of Section 32. This information was relayed to Mr. Lelan Anders of Percussion Petroleum Operating, LLC so that a water sample could be obtained, and analysis conducted.

On March 9, 2018, Mr. Eli Trevino, Percussion production foreman conducted a foot search and located the subject water well. It was found to be abandoned with no way to obtain a sample. Pictures were taken and shown below. There are no other known water wells in the area, no windmills are visible.

This information was relayed to me by Mr. Anders via email on 4/03/2018.



Ben Stone

Agent for Percussion Petroleum Operating, LLC





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

DATE RECORD: First Rec: 3/2/2018 Admin Complete: 3/16/2018 or Suspended: _____ Add. Request/Reply: _____ORDER TYPE: WFX / PMX / SWD Number: _____ Order Date: _____ Legacy Permits/Orders: _____Well No. FI Well Name(s): CHALK BLANK SWDAPI: 30-0 15-0060Y Spud Date: 10-29-1956 New or Old (EPA): 2 (UIC Class II Primacy 03/07/1982)Footages 1930 FSL 1940 FHL Lot _____ or Unit 4 Sec 32 Tsp 17S Rge 27E County EddyGeneral Location: 6 miles SE of Antesia Pool: _____ Pool No.: _____BLM 100K Map: Antesia Operator: Penetration Petroleum LLC OGRID: 371755 Contact: Ben Stuchlik AgentCOMPLIANCE RULE 5.9: Total Wells: 143 Inactive: 3 Fincl Assur: OK Compl. Order? NA IS 5.9 OK? Y Date: 4-04-2018WELL FILE REVIEWED ☐ Current Status: PFAWELL DIAGRAMS: NEW: Proposed ☐ or RE-ENTER: Before Conv. ☒ After Conv. ☐ Logs in Imaging: Y

Planned Rehab Work to Well: _____

Well Construction Details		Sizes (in) Borehole / Pipe	Setting Depths (ft)	Cement Sx or Cf	Cement Top and Determination Method
Planned ___ or Existing ___ Surface		<u>11" / 13 1/4"</u>	<u>3400' - 552'</u>	<u>1400'</u>	<u>CIRCUIT / VISUAL</u>
Planned ___ or Existing ___ Interm/Prod		<u>11" / 8 1/4"</u>	<u>3400' - 552'</u>	<u>1400'</u>	<u>CIRCUIT / VISUAL</u>
Planned ___ or Existing ___ Interm/Prod		<u>6 3/4" / 5 1/2"</u>	<u>9425'</u>	<u>380'</u>	<u>602' / VISUAL</u>
Planned ___ or Existing ___ Prod/Liner		<u>6 3/4" / 5 1/2"</u>	<u>7600'</u>	<u>(380')</u>	<u>602' / VISUAL</u>
Planned ___ or Existing ___ Liner		<u>6 3/4" / 5 1/2"</u>			<u>IC-B</u>
Planned ___ or Existing ___ OH / PERF		<u>6 1/2" - 8 1/2"</u>		<u>Inj Length 2850'</u>	
Injection Lithostratigraphic Units:		Depths (ft)	Injection or Confining Units	Tops	Completion/Operation Details:
Adjacent Unit: Litho. Struc. Por.					Drilled TD <u>9425'</u> PBTD _____
Confining Unit: Litho. Struc. Por.					NEW TD <u>9000'</u> NEW PBTD _____
Proposed Inj Interval TOP:					NEW Open Hole <input type="radio"/> or NEW Perfs <input checked="" type="radio"/>
Proposed Inj Interval BOTTOM:					Tubing Size <u>2 3/4" in.</u> Inter Coated? _____
Confining Unit: Litho. Struc. Por.					Proposed Packer Depth <u>6050'</u> ft
Adjacent Unit: Litho. Struc. Por.					Min. Packer Depth <u>6000'</u> (100-ft limit)
					Proposed Max. Surface Press. <u>1220</u> psi
					Admin. Inj. Press. <u>1220</u> (0.2 psi per ft)
AOR: Hydrologic and Geologic Information					
POTASH: R-111-P _____ Noticed? _____ BLM Sec Ord <input type="radio"/> WIPP <input type="radio"/> Noticed? _____ Salt/Salado T: _____ B: _____ NW: Cliff House fm _____					
FRESH WATER: Aquifer <u>Quaternary</u> Max Depth <u>125'</u> HYDRO AFFIRM STATEMENT By Qualified Person <u>Not Accessible</u>					
NMOSE Basin: <u>Antesia</u> CAPITAN REEF: thru _____ adj <u>NA</u> No. GW Wells in 1-Mile Radius? <u>1</u> FW Analysis? <u>NA</u>					
Disposal Fluid: Formation Source(s) <u>yes 0</u> Analysis? <u>Y</u> On Lease <input type="radio"/> Operator Only <input checked="" type="radio"/> or Commercial <input type="radio"/>					
Disposal Interval: Inject Rate (Avg/Max BWPD): <u>3K/4.5K</u> Protectable Waters? _____ Source: _____ System: Closed or Open					
HC Potential: Producing Interval? <u>Y</u> Formerly Producing? _____ Method: Logs/DST/P&A/Other _____ 2-Mi Radius Pool Map <input type="radio"/>					
AOR Wells: 1/2-M Radius Map and Well List? <u>Y</u> No. Penetrating Wells: <u>1</u> [AOR Horizontals: _____ AOR SWDs: _____]					
Penetrating Wells: No. Active Wells <u>0</u> Num Repairs? _____ on which well(s)? _____ Diagrams? _____					
Penetrating Wells: No. P&A Wells <u>1</u> Num Repairs? _____ on which well(s)? _____ Diagrams? _____					
NOTICE: Newspaper Date <u>March 9, 2018</u> Mineral Owner <u>NMSLU</u> Surface Owner <u>NMSLU</u> N. Date <u>March 9, 2018</u>					
RULE 26.7(A): Identified Tracts? <u>Y</u> Affected Persons: <u>XTA, Limerock, Chevron</u> N. Date <u>March 9, 2018</u>					

Order Conditions: Issues:

Additional COAs: Drill string C-B-L of new casing 3500' - 9425' @ 54AB
& old casing shot off @ 7600' @ operation only