

RECEIVED: <u>2/01/2018</u> <u>X301 F018</u>	REVIEWER:	TYPE: <u>SWD</u>	APP NO: <u>Perm 1803/43274</u>
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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: <u>Percussion Petroleum, LLC</u>	OGRID Number: <u>371755</u>
Well Name: <u>Osage Boyd 15 Federal Com No.8</u>	API: <u>30-015-28992</u>
Pool: <u>Proposed: SWD; Cisco-Canyon</u>	Pool Code: <u>96186</u>

**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

SWD - 1/17/18

RECEIVED OCD
 210 JAN 30 A 11:08

- 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.

1/26/2018

Date

Ben Stone

Print or Type Name

903-488-9850

Phone Number

ben@sosconsulting.us

e-mail Address

Signature



January 28, 2018

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

Attn: Acting Director

*Re: Application of Percussion Petroleum, LLC to permit for salt water disposal its Osage
Boyd 15 Federal Com Well No.8, located in Section 15, Township 19 South, Range 25 East,
NMPM, Eddy County, New Mexico.*

Dear Sir or Madam,

Please find enclosed form C-108 Application for Authority to Inject, supporting the above-referenced request to permit for disposal, the Osage Boyd 15 Federal Com No.8. Percussion selected this well for private disposal of produced water coming from their operations in the area. We would point out that while the Cisco formation has in the past been productive in the area, all existing wells (excepting a few deeper Morrow gas wells) have been recompleted uphole into the Glorieta and Yeso formations. Percussion and EOG Resources are the primary operators in the area; the proposed interval was selected based on conversations with EOG geology and engineering staff.

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

Published legal notice ran on January 26, 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, leaseholder plats and other required information for a complete Form C-108. The well is located on private land federal com minerals. There are other BLM and State of New Mexico lands/ minerals within the ½ 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 12 Wells (5 P&A) 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 ***schematics plugged wells illustrating all details ATTACHED.***
- VII. ***The following data is ATTACHED*** on the proposed operation, including:
1. Proposed average and maximum daily rate and volume of fluids to be injected;
 2. Whether the system is open or closed;
 3. Proposed average and maximum injection pressure;
 4. Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and,
 5. If injection is for disposal purposes into a zone not productive of oil or gas at or within one mile of the proposed well, attach a chemical analysis of the disposal zone formation water (may be measured or inferred from existing literature, studies, nearby wells, etc.).
- *VIII. ***Appropriate geologic data on the CISCO and CANYON formations is ATTACHED*** including appropriate lithologic detail, geologic name, thickness, and depth. Give the geologic name, and depth to bottom of all underground sources of drinking water (aquifers containing waters with total dissolved solids concentrations of 10,000 mg/l or less) overlying the proposed injection zone as well as any such sources known to be immediately underlying the injection interval.
- IX. ***Stimulation program – a conventional acid job may be performed to clean and open the formation.***
- *X. Attach appropriate logging and test data on the well. (If well logs have been filed with the Division, they need not be resubmitted). ***Existing well logs are on file with OCD.***
- *XI. ***There are 2 domestic water wells within one mile of the proposed salt water disposal well. Analyses 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 6 offset lessees and/or operators within ½ mile; Well location and minerals are PRIVATE w/ federal com and offsetting state 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: ***1/28/2018***

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.



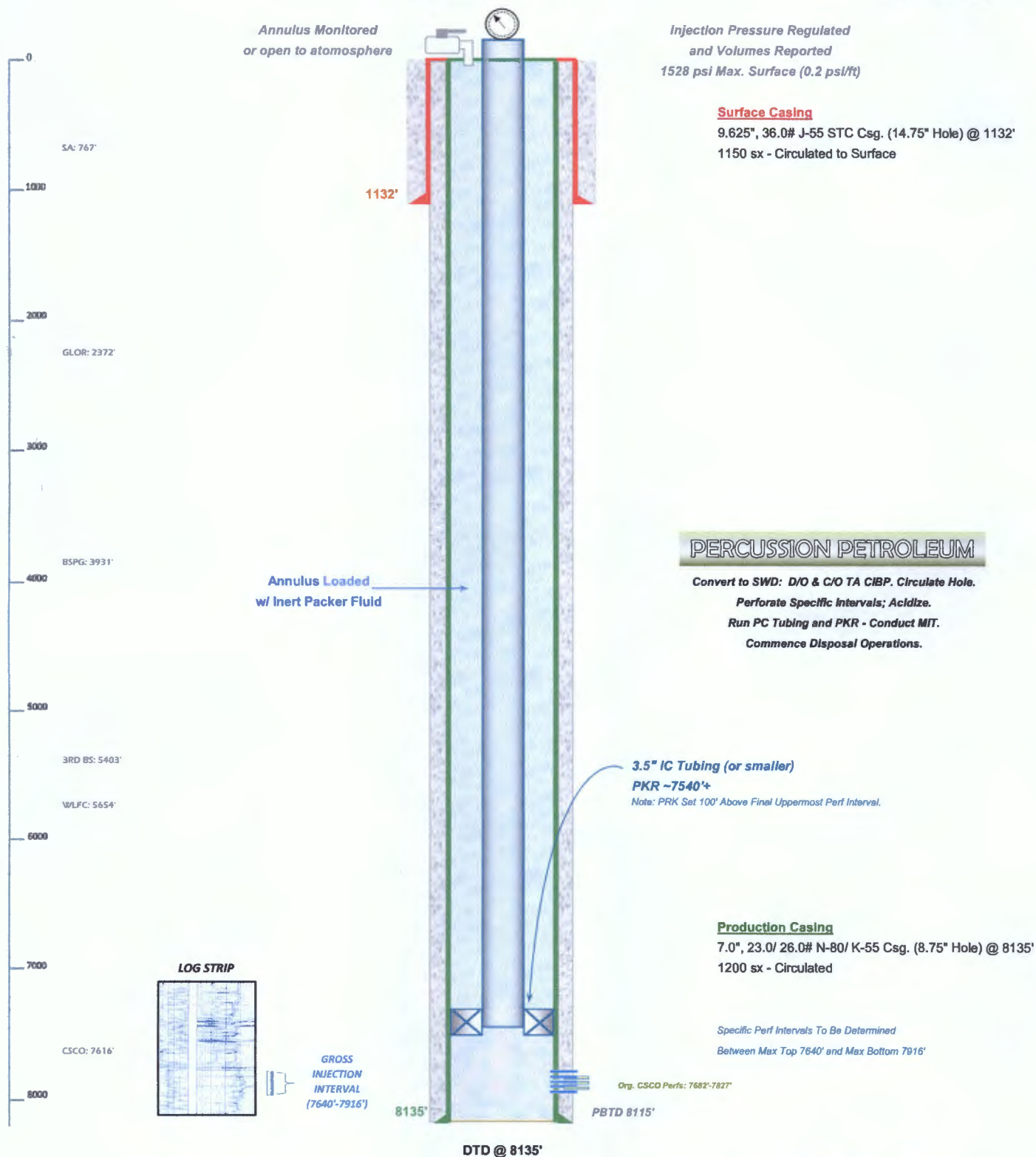
WELL SCHEMATIC - PROPOSED
Osage Boyd 15 Fed Com Well No.8 SWD

SWD; Cisco-Canyon (96186)

API 30-015-28992

1980' FNL & 1980' FWL, SEC. 15-T19S-R25E
EDDY COUNTY, NEW MEXICO

Spud Date: 6/18/1996
Config SWD Dt (Est): ~3/15/2



Drawn by: Ben Stone, 1/26/2018





WELL SCHEMATIC - CURRENT Osage Boyd 15 Fed Com Well No.8

Expired TA

API 30-015-28992

1980' FNL & 1980' FWL, SEC. 15-T19S-R25E
EDDY COUNTY, NEW MEXICO

Dagger Draw; Upper Penn, North (15472)

Spud Date: 6/18/1996

TA Date: 2/14/2006

Last TA MIT: 7/09/2015 - 500 psi 30 mins. - OK

Surface Casing

9.625", 36.0# J-55 STC Csg. (14.75" Hole) @ 1132'
1150 sx - Circulated to Surface

PERCUSSION PETROLEUM

Casing Loaded
w/ Inert Packer Fluid (KCI)

Production Casing

7.0", 23.0/ 26.0# N-80/ K-55 Csg. (8.75" Hole) @ 8135'
1200 sx - Circulated

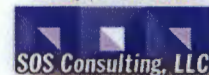
CIBP @ 7625'
w/ 35' Cmt

Org. CSCO Perfs: 7682'-7827'

PBTD 8115'

DTD @ 8135'

Drawn by: Ben Skana, 1/25/2018



Form C-108 Item VI - Tabulation of AOR Wells

Top of Proposed CISCO Interval 7640'										12 Wells Penetrate Proposed Interval.									
API	Current Operator	Well Name	Well No.	Type	Lease	Status	U/LSTR	Depth	Plug Dc.										
Subject Well																			
30-015-28992	[371755] PERCUSSION PETRO. OPERT'NG, LLC	OSAGE BOYD 15 FEDERAL COM	#008	Oil	Private	Exp TA	F-15-19S-25E	8135'											
Section 15 wells																			
30-015-28840	[25575] EOG Y RESOURCES, INC.	APOLLO APU FEDERAL COM	#001	Oil	Federal	P&A-R	B-15-19S-25E	8275'	6/27/2016 SEE P&A WELL DIAGRAM.										
30-015-28945	[371755] PERCUSSION PETRO. OPERT'NG, LLC	OSAGE BOYD 15 FEDERAL COM	#006	Oil	Federal	Active	C-15-19S-25E	8128'											
		SQUEEZED CISCO Perfs: 7730'-7810'; 9.625" (14.75" hole) @ 1100' w/ 775 sx - Circ.; 7.0" (8.75" hole) @ 8200' w/ 950 sx - Circ.																	
30-015-28679	[15742] NEARBURG PRODUCING CO	OSAGE BOYD 15 FEDERAL COM	#003	Oil	Federal	P&A-R	E-15-19S-25E	8200'	11/7/2008 SEE P&A WELL DIAGRAM.										
30-015-21355	[15742] NEARBURG PRODUCING CO	OSAGE BOYD COM	#001	Gas	Private	P&A-R	E-15-19S-25E	9256'	5/28/2008 SEE P&A WELL DIAGRAM.										
30-015-20153	[25575] EOG Y RESOURCES, INC.	BOYD BN COM	#001	Gas	Private	Active	H-15-19S-25E	9416'											
	MRRW Perfs: 9175'-9200'; 13.375" (17.5" hole) @ 105' w/ 100 sx + 7.5 yds. Redimix; 9.625" (14.75" hole) @ 1200' w/ 550 sx + 7.5 yds. Redimix; 2.875" (8.75" hole) @ 9416' w/ 500 sx - TOC @ 7700' by Temp.																		
30-015-00150	[214263] PRE-ONGARD WELL OPERATOR	PRE-ONGARD WELL	#001	Oil	P&A	J-15-19S-25E	0'	0'	1/1/1901 NO WELL FILE ON RECORD; NO DATA										
30-015-28558	[25575] EOG Y RESOURCES, INC.	BOYD BN	#002	Oil	Private	P&A-R	J-15-19S-25E	8350'	11/20/2006 SEE P&A WELL DIAGRAM.										
30-015-28599	[371755] PERCUSSION PETRO. OPERT'NG, LLC	OSAGE BOYD 15	#002	Oil	Private	Active	K-15-19S-25E	9580'											
	MRRW Perfs: 9088'-9251'; 9.625" (13.75" hole) @ 1105' w/ 950 sx - Circ.; 7.0" (8.75" hole) @ 8150' w/ 1320 sx - Circ.; 4.5" LNR 7805'-9580' w/ 175 sx TOC/TOL																		
30-015-28981	[371755] PERCUSSION PETRO. OPERT'NG, LLC	OSAGE BOYD 15	#007	Oil	Private	Active	L-15-19S-25E	8170'											
	GLOR/YESO Perfs: 2328'-2533'; *P8TD 3705'; 9.625" (14.75" hole) @ 1126' w/ 1150 sx - Circ.; 7.0" (8.75" hole) @ 8170' w/ 1210 sx - Circ.																		
30-015-28885	[371755] PERCUSSION PETRO. OPERT'NG, LLC	OSAGE BOYD 15	#005	Oil	State	Active	M-15-19S-25E	8350'											
	GLOR/YESO Perfs: 2309'-2526'; *P8TD 3786'; 9.625" (14.75" hole) @ 1115' w/ 950 sx - Circ.; 7.0" (8.75" hole) @ 8350' w/ 1505 sx - Circ.																		
30-015-28628	[371755] PERCUSSION PETRO. OPERT'NG, LLC	OSAGE BOYD 15	#004	Oil	Private	Active	N-15-19S-25E	8150'											
	GLOR/YESO Perfs: 2371'-3074'; *P8TD 3465'; 9.625" (14.75" hole) @ 1127' w/ 1150 sx - Circ.; 7.0" (8.75" hole) @ 8150' w/ 1125 sx - Circ.																		
Section 16 wells																			
30-015-28738	[25575] EOG Y RESOURCES, INC.	BOYD X STATE	#012	Oil	State	Active	H-16-19S-25E	8255'											
	GLOR/YESO Perfs: 2308'-2625'; *P8TD 4980'; 9.625" (14.75" hole) @ 1162' w/ 1200 sx - Circ.; 7.0" (8.75" hole) @ 8224' w/ 1400 sx - Circ.																		
30-015-28542	[25575] EOG Y RESOURCES, INC.	AMOLE AMM STATE COM	#004	Oil	State	Active	I-16-19S-25E	8230'											
	GLOR/YESO Perfs: 2296'-2380'; P8TD 3559'; 9.625" (14.75" hole) @ 1185' w/ 1470 sx - Circ.; 7.0" (8.75" hole) @ 8230' w/ 900 sx - Circ.																		

SUMMARY: 12 wells in 1/2 mile radius penetrate proposed disposal interval. 5 P&As.



C-108 ITEM VI – AOR WELL INFORMATION

Plugged Well Schematics

CURRENT WELLBORE DIAGRAM - P&A

WELL NAME: Apollo "APU" Fed. #1 FIELD: Dagger Draw
 LOCATION: 660' FNL & 1,980' FEL of Section 15-19S-25E Eddy Co., NM
 GL: 3,454' ZERO: 18' KB: 3,472'
 SPUD DATE: 3/07/96 COMPLETION DATE: 5/04/96
 COMMENTS: API No.: 30-015-28840

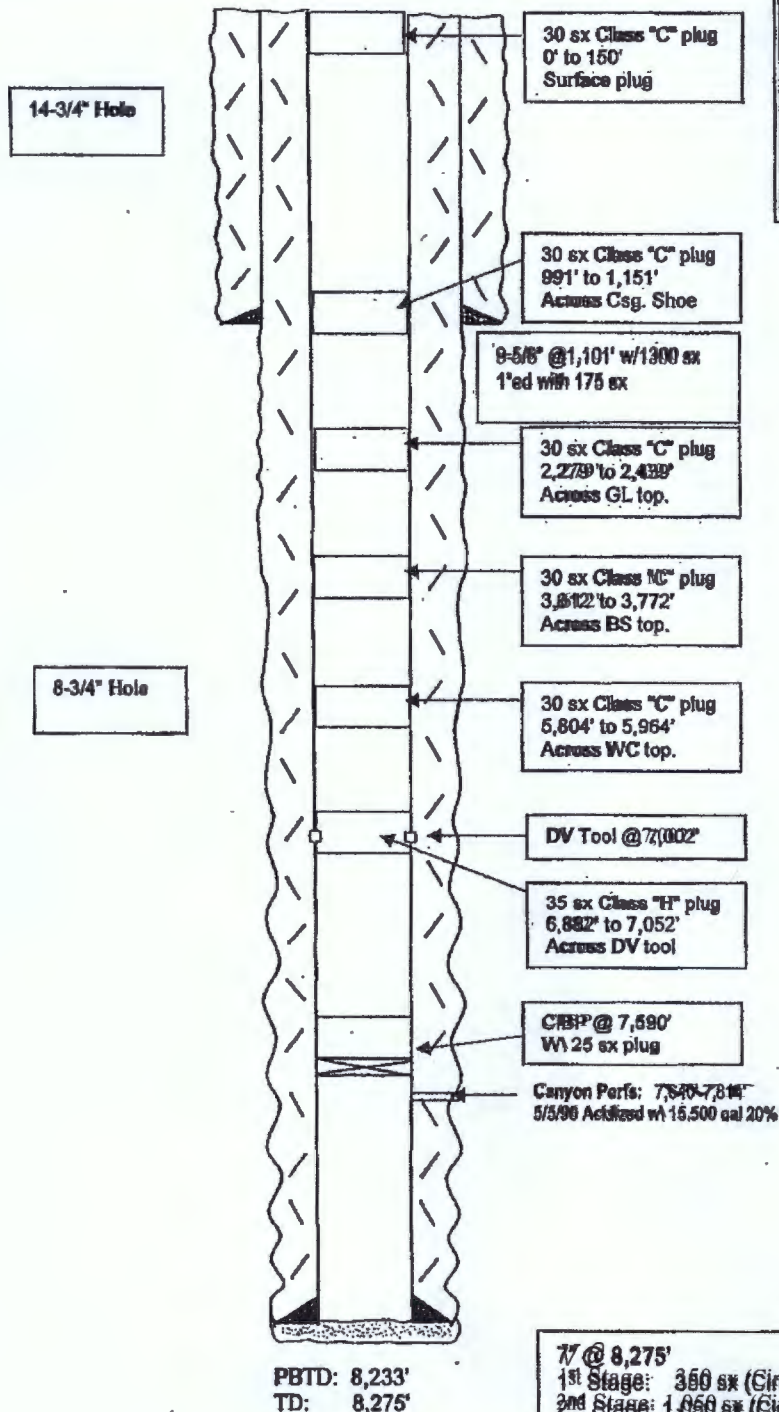
CASING PROGRAM

9-5/8" 36# J55 STC	1,101'
Surface	
7" 26# J-55 LTC 744'	
7" 23# J-55 LTC 4,730'	
7" 26# J-55 LTC 2,172'	
7" 26# N-80 LTC 635'	8,275'
Bottom	

After

TOPS

SA	782'
Glorieta	2,389'
Yeso	2,478'
BS	3,722'
WC	5,914'
Canyon	7,609'



Not to Scale
 7/18/14
 JMH

CURRENT WELLBORE DIAGRAM – P&A

LEASE: Osage Boyd 15 Federal Com	WELL: 3	FIELD: Dagger Draw North	API: 30-015-28679
LOC: 2.811' FNL and 672' FVL	SEC: 15	BLK:	PARS NO:
BH LOC: 729' FNL & 764' FVL	GL: 3,465'	CTY/ST: Eddy County, NM	SPUD: 9/30/1995
SVY: T19S, R 25E	KB: 3,465'	DF:	ID DATE: 11/1/1995
CURRENT STATUS: PLUGGED AND ABANDONED			COMP. DATE: 12/6/1995

Spot 20 sx 60'-0"
Install P&A Marker

FRESH WATER
DEPTH:

HOLE SIZE: 14 3/4"
SURF CSG & SIZE: 9 5/8" 36#
SET @: 1,135'
SXS CMT: 900 sx
CIRC: Y 150 sx
TOC AT: surface
TOC BY:

P&A DATE: 11/10/2008
COMMENTS:

Spot 70 sx 1250'-1016'
(Tagged)

CUT & PULL 7" @ 1200'

Spot 30 sx 2360'-2181'

Spot 30 sx 3850'-3671'

Spot 75 sx 5984'-5537'

Circulate 10# MLF

DV tool @ 5934'

TBG:
JTS:
SN:
TAC:
ROD SIZE:

35' cmt. On top of CIBP
CIBP @ 7740

7800-7808' 4 spf
7843-7858' 4 spf

PKR:
TYPE:

CIBP @ 7,888'

perfs 7,938'-7,996'

OH ID:
COTD:
PBTD: 7705'
TD: 8,200'

PBTD - 8,154'

HOLE SIZE: 8 3/4"
PROD. CSG & SIZE: 7" 23# & 26#
SET @: 8,200'
SXS CMT: 1,210 sx in 2 stages
CIRC: yes: 30 sx on 1st stage NO: on 2nd stage
TOC AT: 1548'
TOC BY: CBL

GEOLOGY
TOPS OF ALL ZONES
PRODUCTIVE OF HYDRO-
CARBONS:
Cisco/Canyon

CURRENT PERFS:

SQUEEZE JOBS:

OPEN HOLE:

LINER:

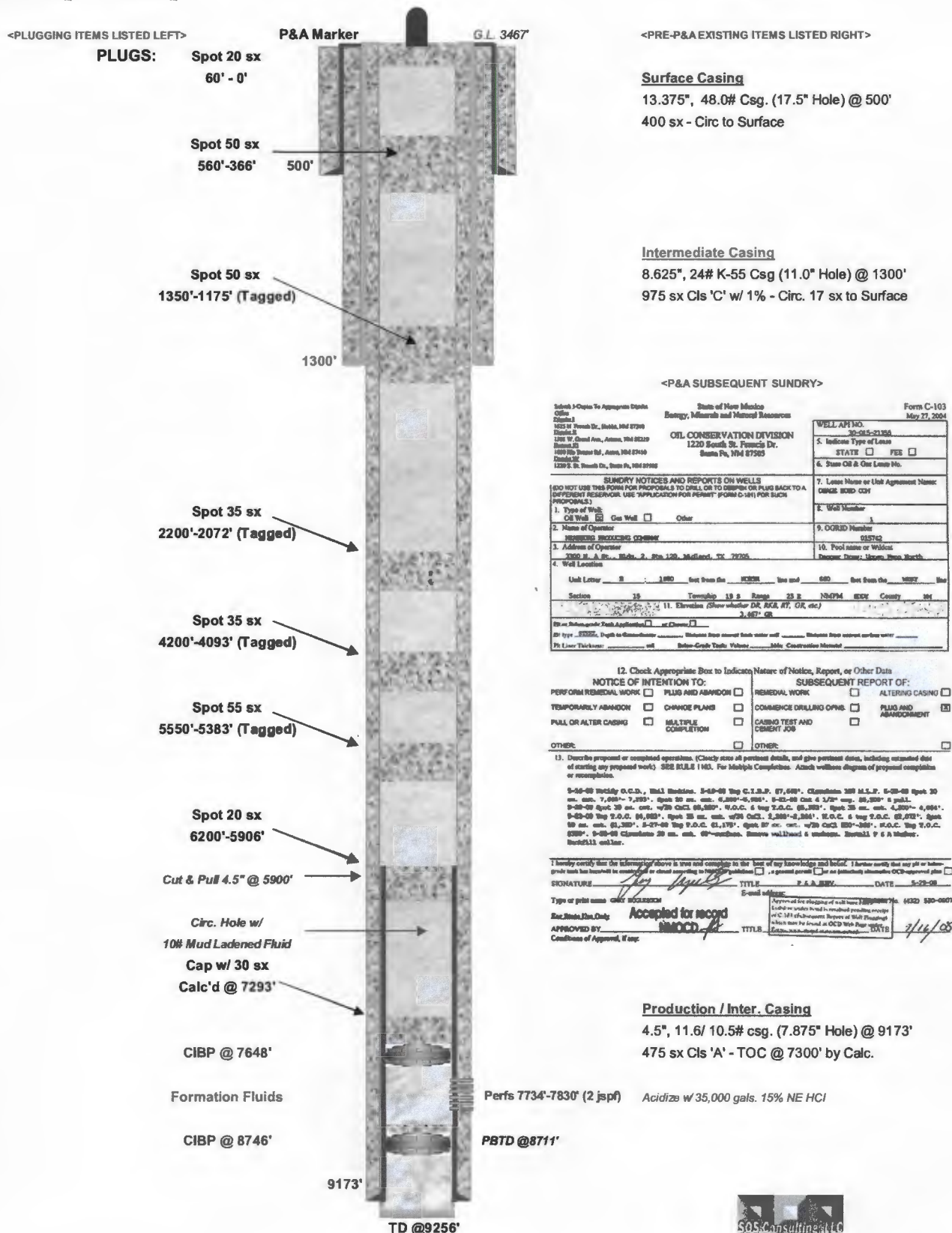
BY: TS
5/19/2008

API 30-015-21355

Spud Date: 9/30/1974

P&A Date: 5/28/2008

Well Plugged by:
Nearburg Producing Co.



SOS Consulting LLC

Drawn by: Ben Stone, 1/27/2018

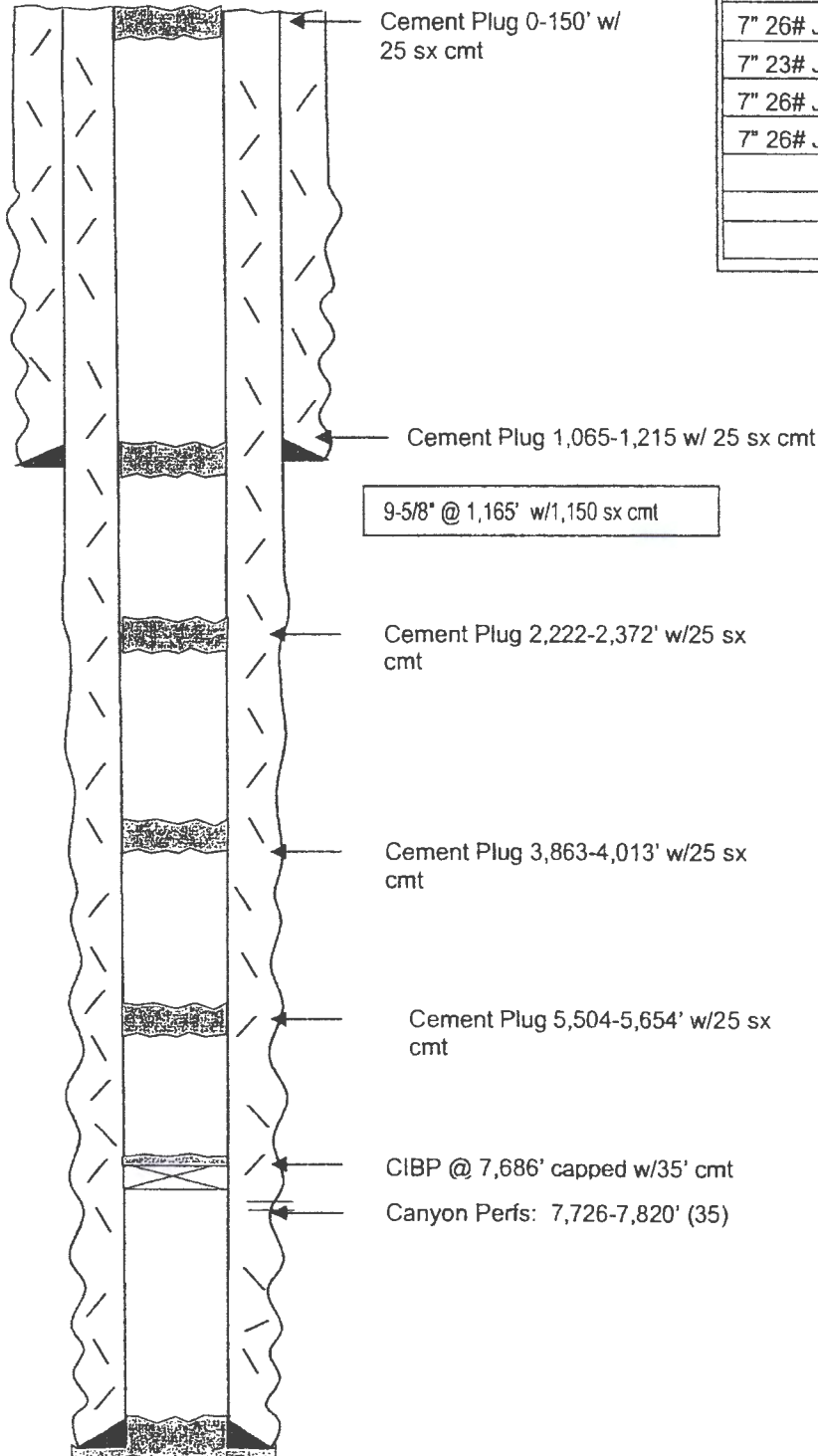
CURRENT WELLBORE DIAGRAM - P&A

WELL NAME: Boyd BN #2 **FIELD:** _____
LOCATION: 1,980' FSL & 1,980' FEL of Section 15-19S-25E Eddy Co., NM
GL: 3,456' **ZERO:** _____ **KB:** 3,471'
SPUD DATE: 9/1/95 **COMPLETION DATE:** 9/26/95
COMMENTS: API No.: 30-015-28558

CASING PROGRAM

9-5/8" 36# J55 STC		1,165'
7" 26# N80	366'	
7" 26# J55	906'	
7" 23# J55	3,722'	
7" 26# J55	2,623'	
7" 26# J55	733'	8,350'

14-3/4"
Hole



After

8-3/4" Hole

TOPS:

SA	767'
Glorieta	2,372'
BS	3,931'
Wolfcamp	5,654'
U. Penn	7,610'

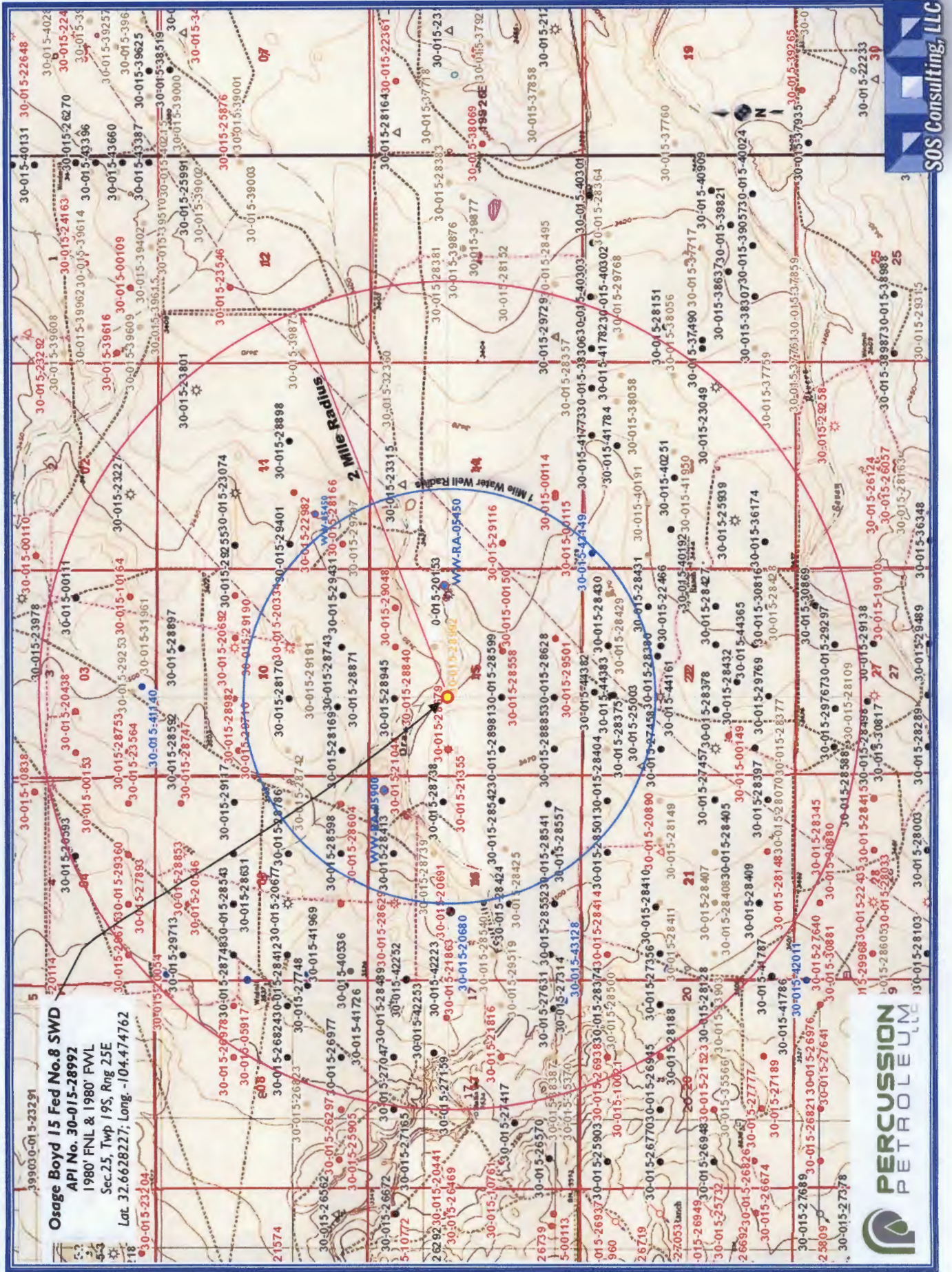
FC: 8,305'
TD: 8,350'

7" @ 8,350' w/ 1,300 sx (Circ)

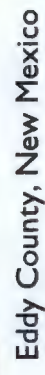
Not to Scale
 3/28/06
 DC/Hill

Osage Boyd 15 Federal Com No.8 - Area of Review / 2 Miles

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



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

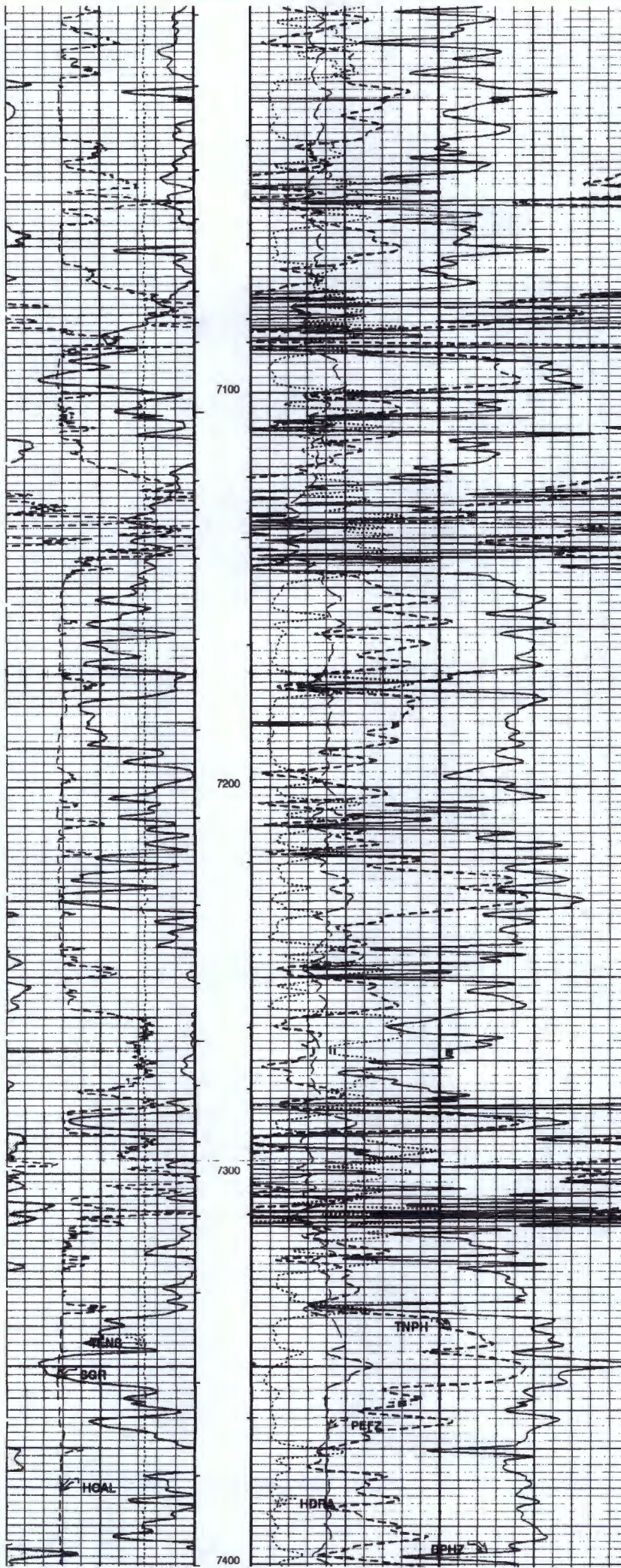


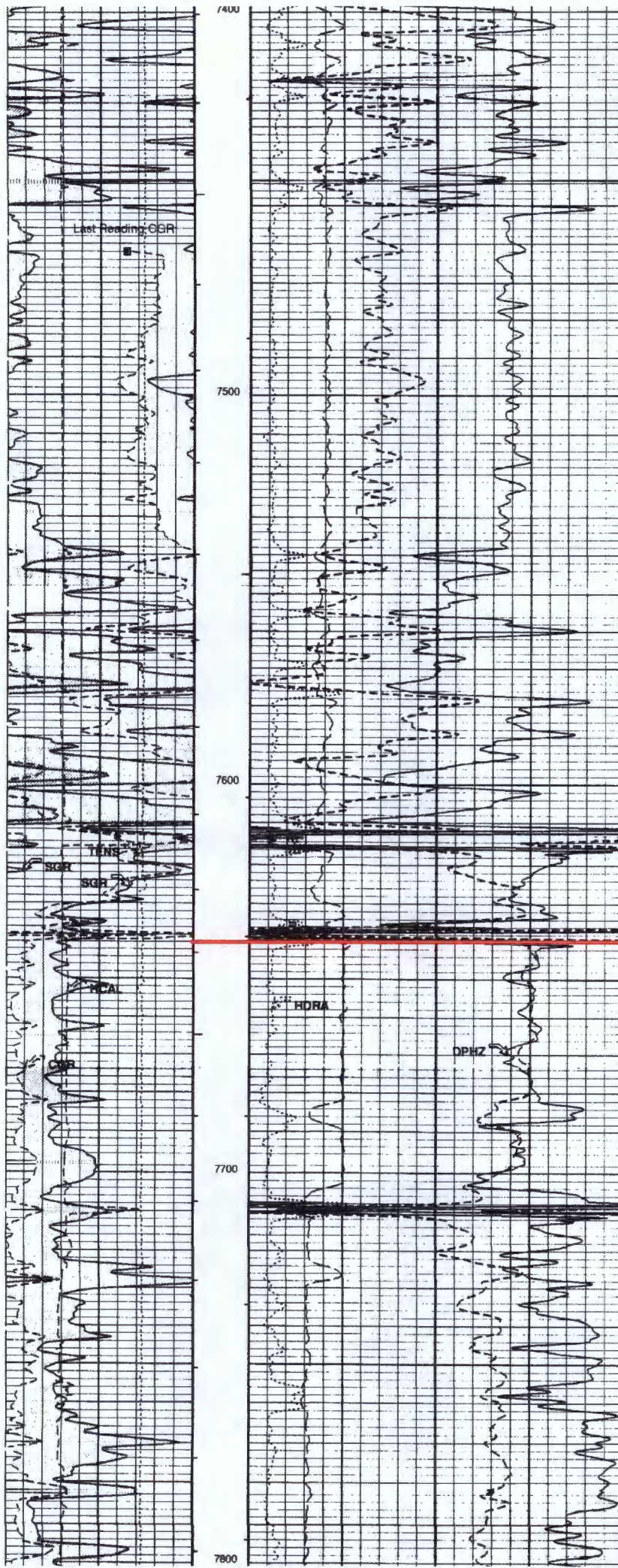
C-108 ITEM X – LOGS and AVAILABLE TEST DATA

A log strip from subject well is attached.

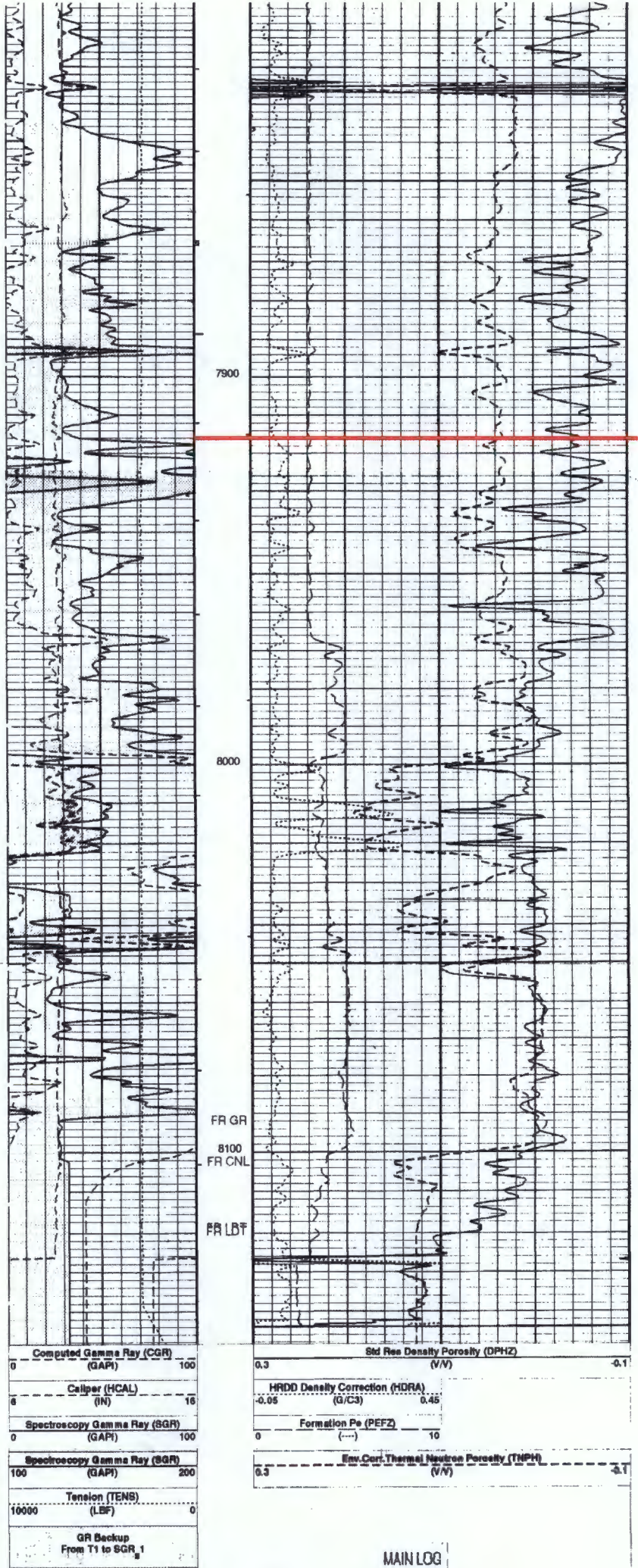
LOG STRIP FOLLOWS

COMPANY: Nearburg Producing Company WELL: Osage Boyd "15" No. 8 FIELD: Dagger Draw(Upper Penn N.) COUNTY: Eddy STATE: New Mexico		Field: Dagger Draw(Upper Penn N.) Location: 1980 FNL and 1980FWL Well: Osage Boyd "15" No 8 Company: Nearburg Producing Company	
Platform Express Compensated Neutron Litho-Density w / NGT		LOCATION 1980 FNL and 1980FWL Permanent Datum Log Measured From Kelly Bushing Drilling Measured From Kelly Bushing	
Elev K.B. 3400 F G.L. 3431 F D.F. 3401 F		Elev 3454 F 16.0 F above Perm Datum	
API Serial No. 30 015-28892		SECTION 15 TOWNSHIP 19S RANGE 25E	
FINAL PRINT			
Logging Date Run Number Depth Driller Schlumberger Depth Bottom Log Interval Top Log Interval Casing Driller Size Casing Schlumberger Bit Size Type Fluid In Hole Density Viscosity Fluid Loss PH Source Of Sample RM @ Measured Temperature RM @ Measured Temperature RM @ Measured Temperature Source RMF RM @ MHT RM @ MHT Maximum Recorded Temperature Circulation Stopped Logger On Bottom Unit Number Recorded By Witnessed By		11 July 1986 One 8135 F 8137 F 8120 F 190 F 9.650 IN 1131 F 8.720 IN Cut Barre 8.6 LB/G 7 39 S 9.6 CG Circulation Tank 7 75 DEGF 79 DEGF 0.068 CHMM 0.090 CHMM Measured 0.061 @ 128 0.061 @ 128 126 DEGF 11 July 1986 15.00 11 July 1986 22.00 3005 Rosewell Fathi M. Kara Jim Phillips	
Logging Date Run Number Depth Driller Schlumberger Depth Bottom Log Interval Top Log Interval Casing Driller Size Casing Schlumberger Bit Size Type Fluid In Hole Density Viscosity Fluid Loss PH Source Of Sample RM @ Measured Temperature RM @ Measured Temperature RM @ Measured Temperature Source RMF RM @ MHT RM @ MHT Maximum Recorded Temperature Circulation Stopped Logger On Bottom Unit Number Recorded By Witnessed By		Run 1 Run 2 Run 3 Run 4	
ALL INTERPRETATIONS ARE OPINIONS BASED ON INFERENCES FROM ELECTRICAL OR OTHER MEASUREMENTS AND WE CANNOT AND DO NOT GUARANTEE THE ACCURACY OR CORRECTNESS OF ANY INTERPRETATIONS. AND WE SHALL NOT, EXCEPT IN THE CASE OF GROSS OR WILLFUL NEGLIGENCE ON OUR PART, BE LIABLE OR RESPONSIBLE FOR ANY LOSS, COSTS, DAMAGES OR EXPENSES INCURRED OR SUSTAINED BY ANYONE RESULTING FROM ANY INTERPRETATION MADE BY ANY OF OUR OFFICERS, AGENTS OR EMPLOYEES. THESE INTERPRETATIONS ARE ALSO SUBJECT TO CLAUSE 4 OF OUR GENERAL TERMS AND CONDITIONS AS SET OUT IN OUR CURRENT PRICE SCHEDULE.			
OTHER SERVICES1 OS1: PE-HALS/NGTD OS2: FMI OS3: OS4: OS5:		OTHER SERVICES2 OS1: OS2: OS3: OS4: OS5:	
REMARKS: RUN NUMBER 1 All scales are as client requested GSRU 1915 used for PE-HRGD 1.5 in. Standoffs used for PE-HALS Bow spring used for PE-HGNS Repeat 1, Repeat 2 Repeat 3, repeat4 are regarding 5690-5750 At 5690-5750 resistivity readings went up way high, causing the detectors (electrodes) to be saturated. Since the anomaly has been unusual the section has been repeated four times. Every time the exact same depth interval appeared to be the same. It is not known what was causing the high resistivity readings and therefore saturation in all 4 cases, in response to the lithology corresponding to the same depth interval. NGTD: Quality Windows ratio being out of tolerance (in a range of .001) does not effect the quality and the accuracy of the NGT measurements Rgt. Peterson Rgt # 6		REMARKS: RUN NUMBER 2	
SERVICE ORDER # PROGRAM VERSION FLUID LEVEL LOGGED INTERVAL START STOP		SERVICE ORDER # PROGRAM VERSION FLUID LEVEL LOGGED INTERVAL START STOP	
EQUIPMENT DESCRIPTION			
RUN 1 SURFACE EQUIPMENT GSR-U/Y NCT-B CNB-AB NCS-VB DOWNHOLE EQUIPMENT		RUN 2	





BOTTOM OF
PROPOSED
INTERVAL



C-108 ITEM VII – PRODUCED WATER ANALYSES

Item VII.4 – Water Analysis of Source Zone Water

Glorieta/ Yeso
Bone Spring

Item VII.5 – Water Analysis of Disposal Zone Water

Cisco/ Canyon
(and/or Penn)

Water Analyses follow this page.

C-108 Item VII.5 - Produced Water Data
Percussion Petroleum, LLC - Osage Boyd 15 Fed Com 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 WA/DS database.)



C-108 Item VII.5 - Produced Water Data
Percussion Petroleum, LLC - Osage Boyd 15 Fed Com 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 430 S 2260 W	Lat / Long	32.71245 -104.35329
		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 - Osage Boyd 15 Fed Com SWD Project

SOURCE ZONE

BONE SPRING

		Lab ID	
API No	3001520225	Sample ID	5847
Well Name	BIG EDDY UNIT	Sample No	
	012		
Location	ULSTR 21 20 S 31 E	Lat / Long	32.56399 -103.87994
	660 N 660 W	County	Eddy
Operator (when sampled)	MALLON OIL COMPANY		
	Field	Unit D	
	BIG EDDY		
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 W'ARDS database.)



C-108 Item VII.5 - Produced Water Data
Percussion Petroleum, LLC - Osage Boyd 15 Fed Com SWD Project

DISPOSAL ZONE

CIS

		Lab ID	
API No	3001526468	Sample ID	5945
Well Name	JOHN AGU 002	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 VIII

Geological Data

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

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

The combined zones offer some good porosity in the proposed injection interval located from 7640 feet to 7916 feet with some very good porosity interspersed throughout the overall interval.

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

Fresh water in the area is generally available from the karstic San Andres limestone formation which is a prime example of an artesian recharged aquifer. Based on State Engineer's records for water wells in Sections 21 & 22, Twp 19S, Rng 25E, groundwater is found from 130 feet to 220 feet, average depth 175 feet.

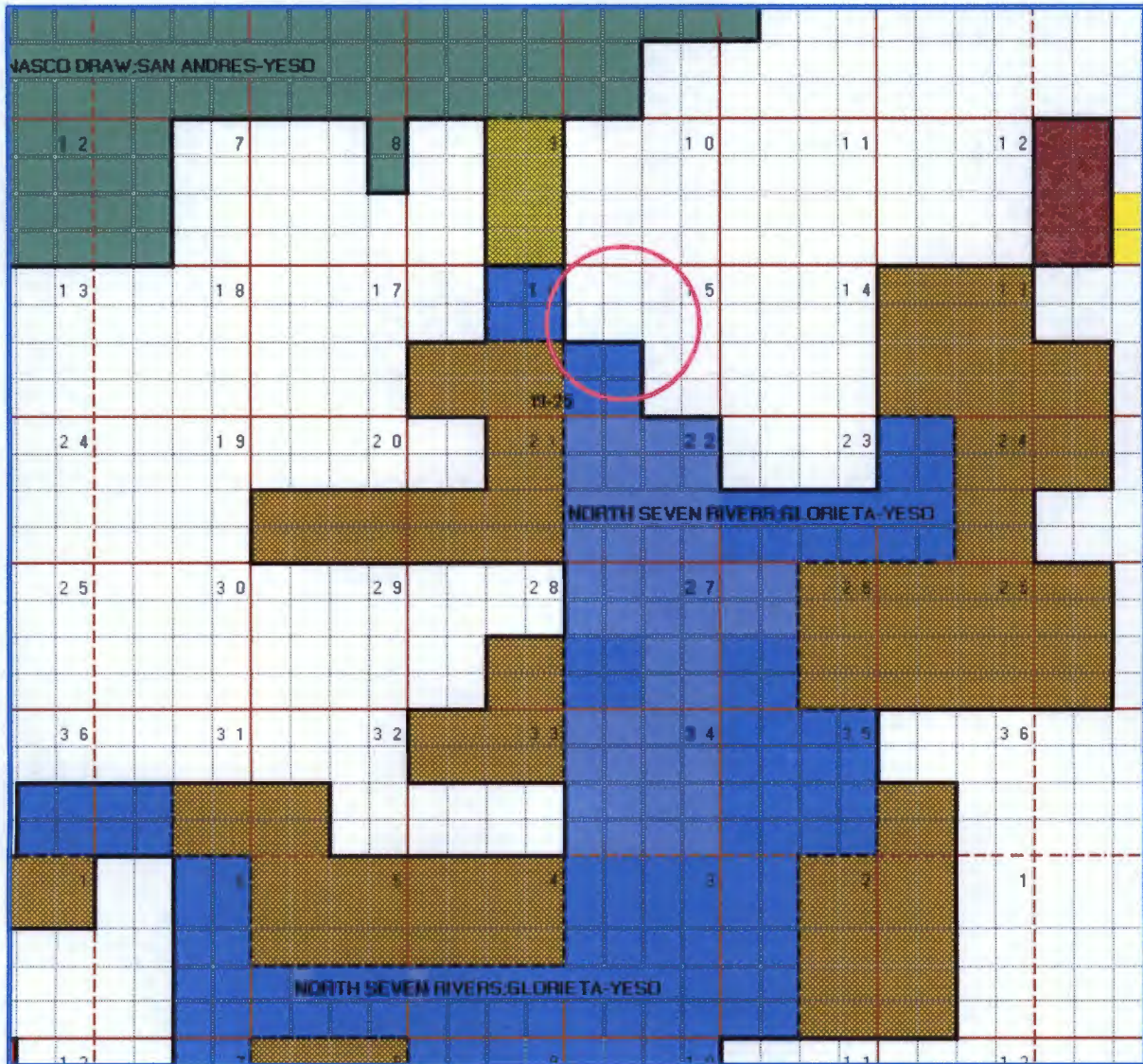
There are 2 water wells located within one mile of the proposed SWD. 1 or 2 will be sampled and analyses will be forwarded upon receipt.

C-108 – Item VIII – Geologic Data

SUPPLEMENTAL INFORMATION – POOL DATA

GLORIETA/ YESO POOLS IN REGION

(Overlying Disposal Formation)



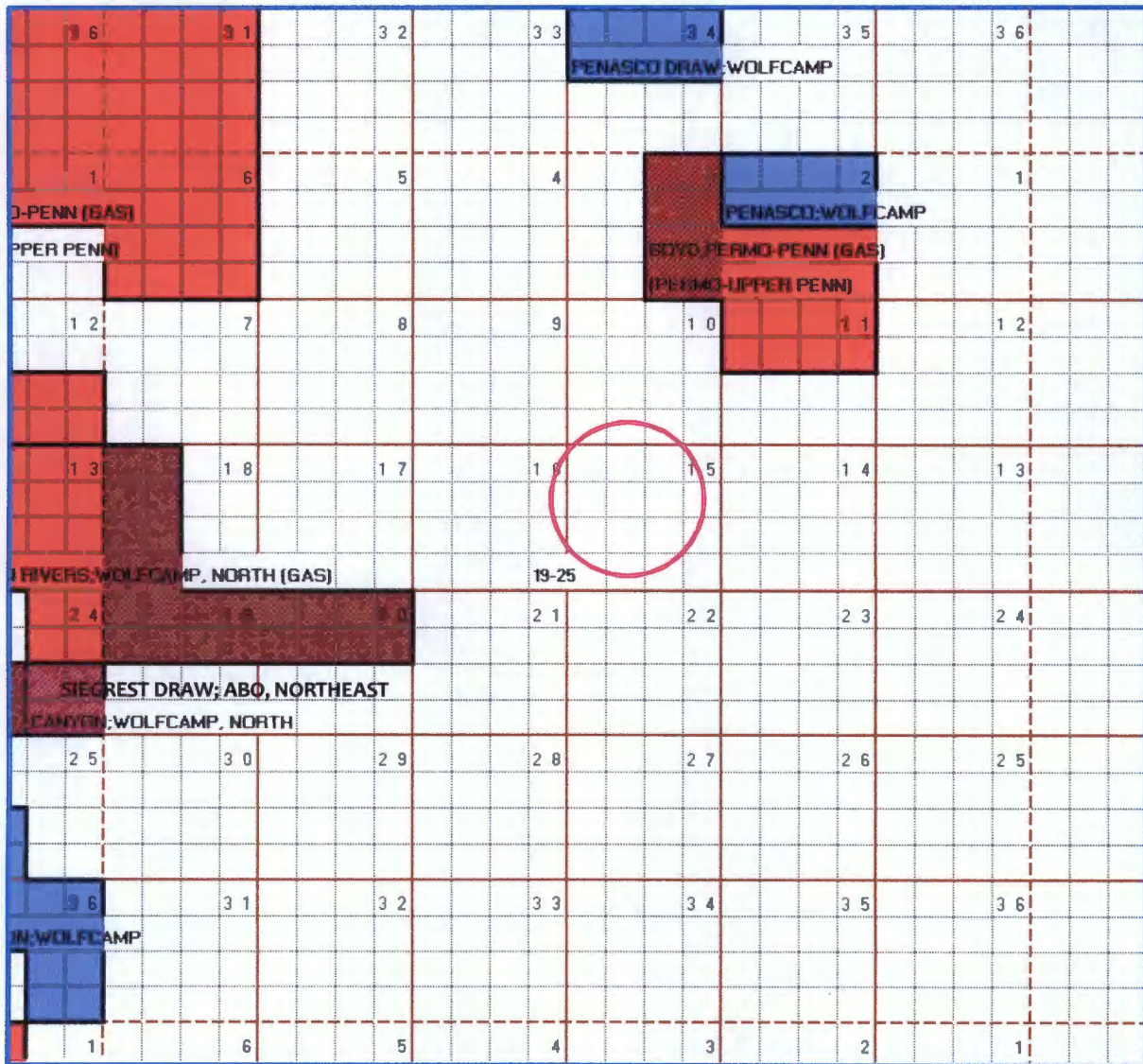
Pool Maps Courtesy of Paul Kautz

C-108 – Item VIII – Geologic Data

SUPPLEMENTAL INFORMATION – POOL DATA

ABO & WOLFCAMP POOLS IN REGION

(Overlying Disposal Formation)



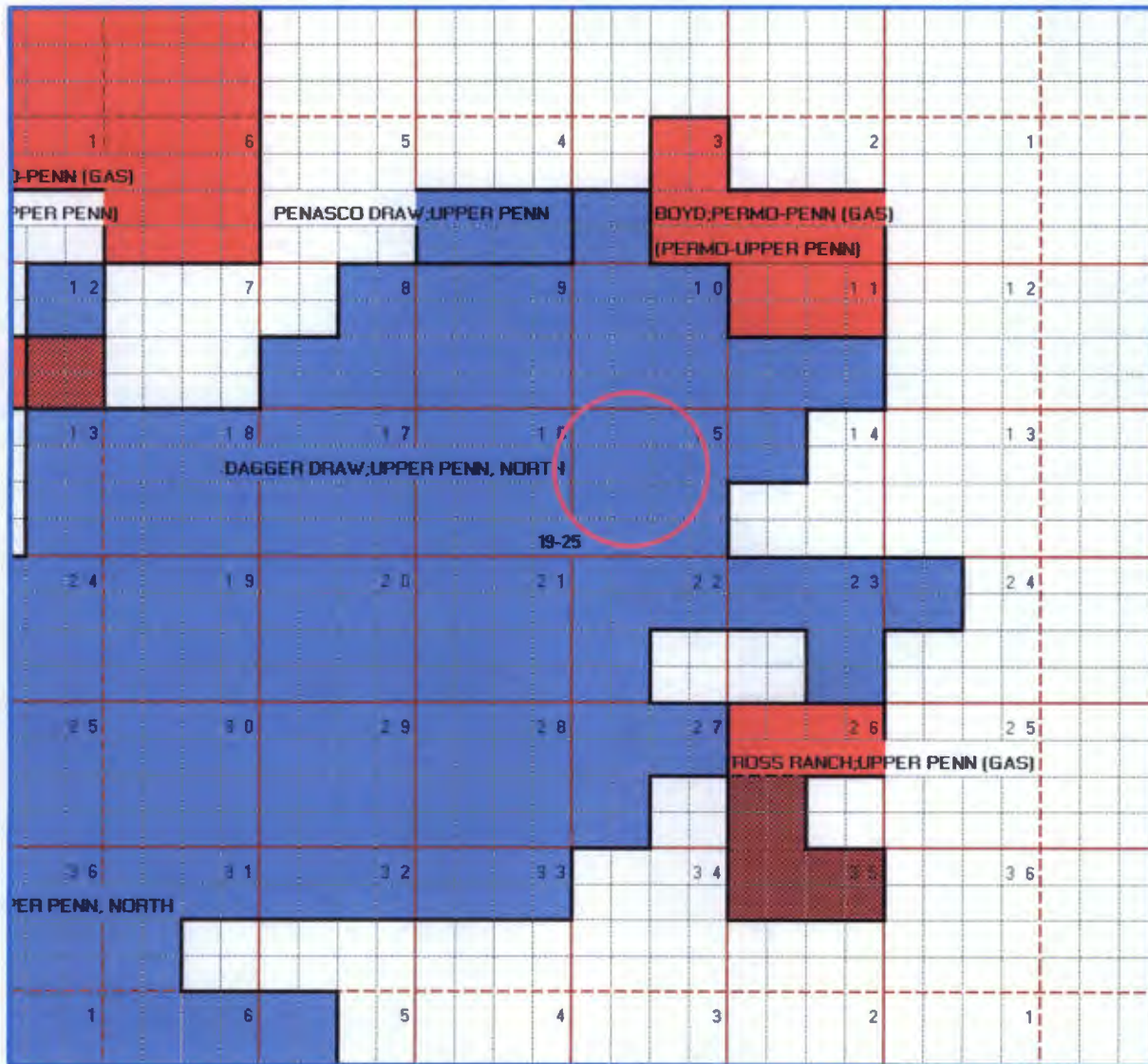
Pool Maps Courtesy of Paul Kautz

C-108 – Item VIII – Geologic Data

SUPPLEMENTAL INFORMATION – POOL DATA

PENNSYLVANIAN POOLS IN REGION

(Underlying Disposal Formation)



Pool Maps Courtesy of Paul Kautz

C-108 Item XI

Water Wells Within One Mile


Osage Boyd 15 Fed Com No.8 SWD - Water Well Locator Map

Sample at least 1 well (of 2 in circle) if possible in Area of Review.



C-108 ITEM XI – WATER WELLS IN AOR

2 WATER WELLS WITHIN ONE MILE OF PROPOSED SWD WELL.



New Mexico Office of the State Engineer

Active & Inactive Points of Diversion

(with Ownership Information)

(acre ft per annum)

WR File Nbr

Sub basin

Use

Diversion

Owner

County

POD Number

Code Grant

Source

6416 4

Sec

Tws

Rng

X

Y

RA 05333

PRO

3 JAMES H. AND BETTY R. HOWELL

ED

RA 05333

Shallow

2

2

09

19S

25E

548430

3616046

REVOCABLE TRUST

RA 09489

PRO

0 YATES PETROLEUM

ED

RA 09489

Shallow

2

2

09

19S

25E

548430

3616046

(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)







q q q

Record Count: 2

PLSS Search:

Section(s): 9, 10, 11 Township: 19S Range: 25E

Sorted by: File Number

WR File Nbr	Sub				County	POD Number	Code Grant	Source	q q q				X	Y		
	basin	Use	Diversion	Owner					6416 4	Sec	Tws	Rng				
RA 02909	DOM	3	TAYLOR ROSS		ED	RA 02909	Shallow	1	3	22	19S	25E	548804	3611989		
RA 05450	STK	0	LEATHERWOOD DRILLING CO.		CH	RA 05450	Shallow	4	2	15	19S	25E	550057	3614015*		
RA 05900	STK	3	JAMES H AND BETTY R HOWELL REVOCABLE TRUST		ED	RA 05900	Shallow	2	2	16	19S	25E	548442	3614424*		
RA 08986	PRO	0	YATES PETROLEUM CORP.		ED	RA 08986	Shallow	1	3	3	22	19S	25E	548824	3611507	
RA 10407	DOL	0	JOAN MULLARKEY		ED	RA 10407	Shallow	4	2	23	19S	25E	551678	3612409		
RA 11839	PRO	0	YATES PETROLEUM CORPORATION		ED	RA 08986	Shallow	1	3	3	22	19S	25E	548824	3611507	

Record Count: 6

PLSS Search:

Section(s): 14, 15, 16, 21 22, 23 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.

12/6/17 11:37 AM

Page 1 of 1

ACTIVE & INACTIVE POINTS OF DIVERSION



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

January 24, 2018

LELAN

PERCUSSION PETROLEUM

919 MILAM , STE 2475

HOUSTON, TX 77002

RE: B & B 22 #4 SWD

Enclosed are the results of analyses for samples received by the laboratory on 01/23/18 14:50.

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

Accreditation applies to public drinking water matrices.

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,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive style with a large, stylized 'C' and 'K'.

Celey D. Keene

Lab Director/Quality Manager

Analytical Results For:

 PERCUSSION PETROLEUM
 LELAN
 919 MILAM, STE 2475
 HOUSTON TX, 77002
 Fax To:

 Received: 01/23/2018
 Reported: 01/24/2018
 Project Name: B & B 22 #4 SWD
 Project Number: NONE GIVEN
 Project Location: NOT GIVEN

 Sampling Date: 01/21/2018
 Sampling Type: Water
 Sampling Condition: ** (See Notes)
 Sample Received By: Tamara Oldaker

Sample ID: 32.39' 44" N (H800252-01)

Chloride, SM4500Cl-B		mg/L		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride*	36.0	4.00	01/24/2018	ND	104	104	100	0.00		
TDS 160.1		mg/L		Analyzed By: AC						

Sample ID: 32.38' 52" N (H800252-02)

Chloride, SM4500Cl-B		mg/L		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride*	20.0	4.00	01/24/2018	ND	104	104	100	0.00	
TDS 160.1		mg/L		Analyzed By: AC					

Cardinal Laboratories

* = Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.



Celey D. Keene, Lab Director/Quality Manager

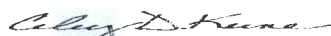
Notes and Definitions

QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
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

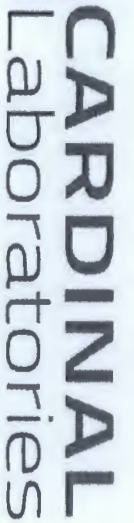
Cardinal Laboratories

*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.



Celey D. Keene, Lab Director/Quality Manager



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

Page 4 of 4

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 08986			ED	1	3	3	22	19S	25E	548825	3611507	320	220	100

Average Depth to Water: 175 feet

Minimum Depth: 130 feet

Maximum Depth: 220 feet

Record Count: 2

PLSS Search:

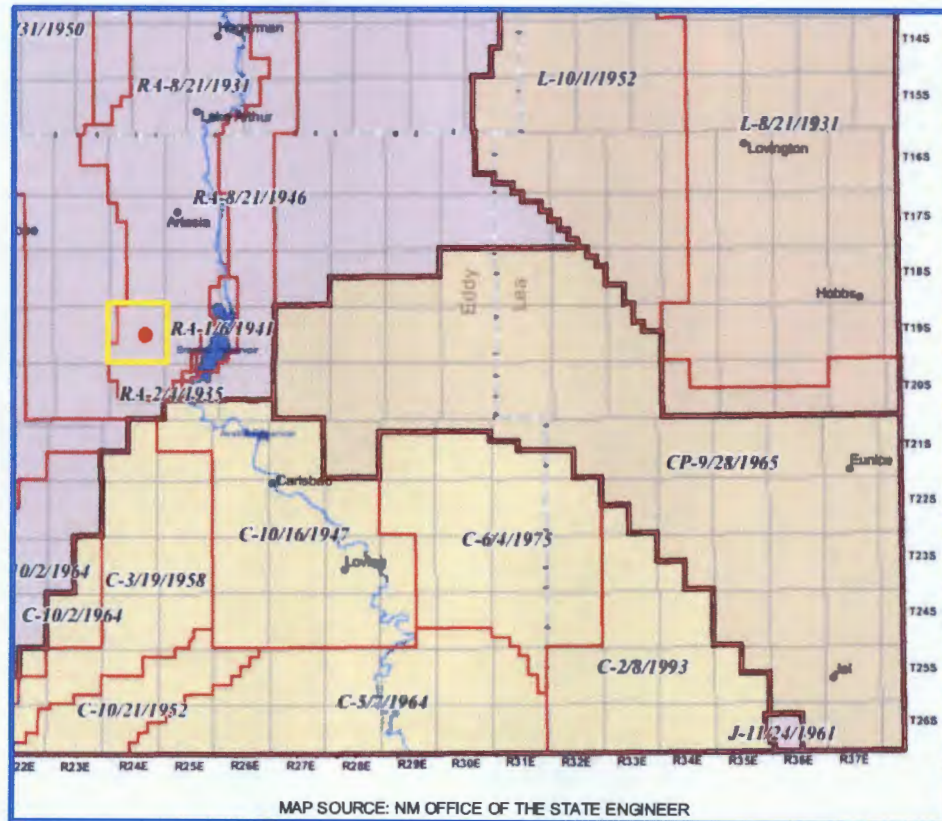
Section(s): 21, 22

Township: 19S

Range: 25E

C-108 - Item XI

Groundwater Basins - Water Column / Depth to Groundwater



The subject well is located within the Roswell Artesian Basin.

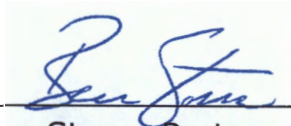
Fresh water in the area is generally available from the karstic San Andres limestone formation which is a prime example of an artesian recharged aquifer.

State Engineer's records show there is fresh water wells in the area with an depth of 200 feet and average depth to water at 175 feet.

There are 3 water wells 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.

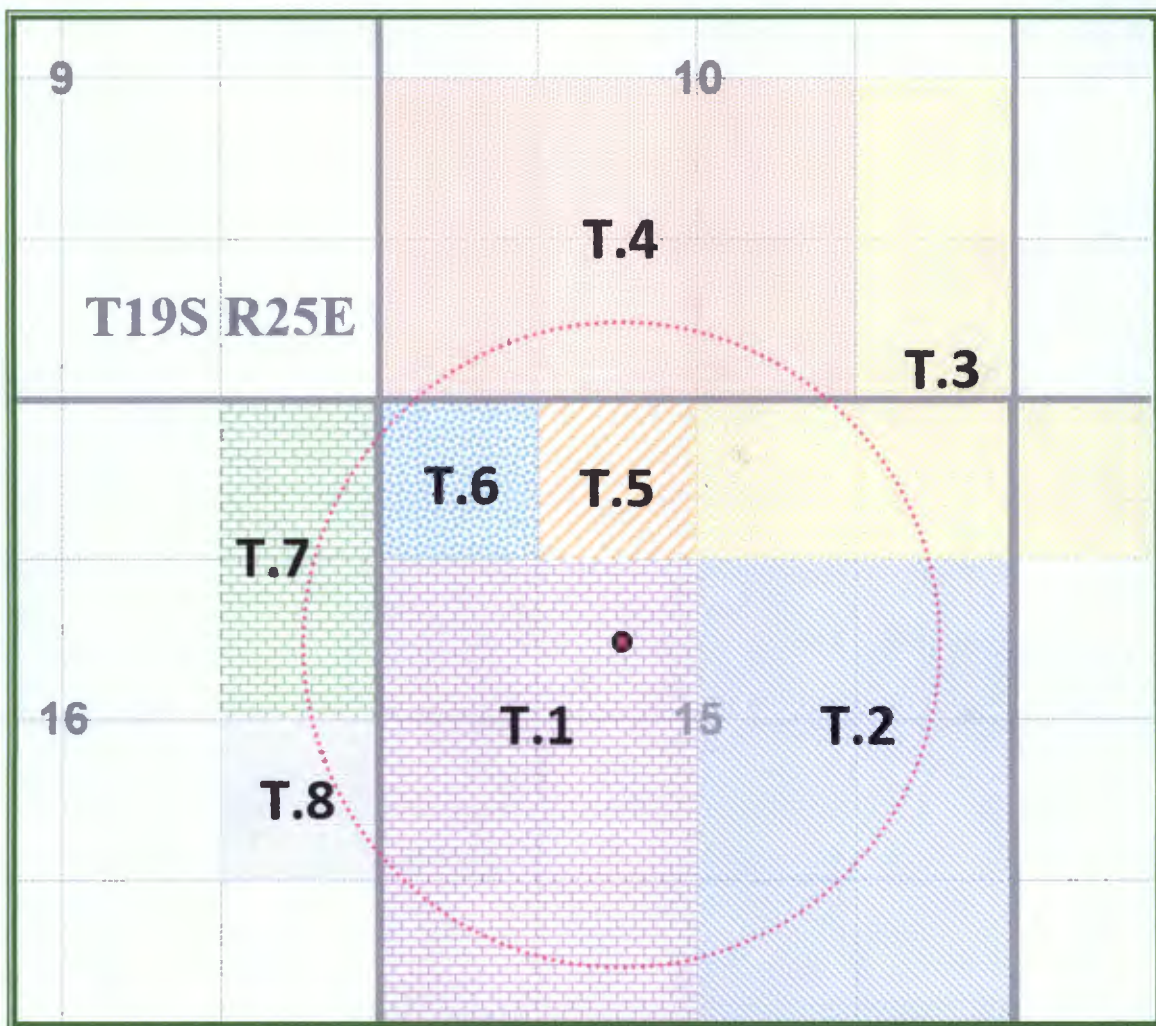


Ben Stone, Partner
SOS Consulting, LLC

Project: Percussion Petroleum Operating, LLC
Osage Boyd 15 Federal Com No.8 SWD
Reviewed 1/25/2017

Osage Boyd 15 Fed Com No.8 SWD – Affected Parties Map

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



LEGEND

- T.1 – Jerome Hugh Jones, et al – Ralph Nix, et al
- T.2 – Private – EOG 'Y' Resources
- T.3 – NMNM-0023855B – Oxy USA WTP, LP
- T.4 – NMNM-082845 – EOG 'Y' Resources
- T.5 – NMNM-060341 – St. Devote, LLC,
- T.6 – NMNM-012833 – Occidental Permian, LP
- T.7 – E1-0167-0004 – EOG 'Y' Resources
- T.8 – LG-0864-0001 – Unit Petroleum

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

JEROME HUGH JONES
10611 Railroad Court
Fairfax, VA 22030-3933
Certified: 7015 3010 0001 3789 9095

2 ESTATE OF MYRA JONES PARTRIDGE
c/o Shawn Partridge P/R
13314 E. 37th Street
Tulsa, OK 74134
Certified: 7015 3010 0001 3789 9101

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

Private Lease (T.1 & T.2 on Affected Parties Map)

Lessee

EOG 'Y' RESOURCES, INC.
104 S. 4th Street
Artesia, NM 88210
Certified: 7015 3010 0001 3789 9125

Operator

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

BLM Lease NMNM-0023855B (T.3 on Affected Parties Map)

Lessee

OXY USA WTP, LP
6001 Deauville
Midland, TX 79706-2671
Certified: 7015 3010 0001 3789 9118

Operator

EOG 'Y' RESOURCES, INC.
104 S. 4th Street
Artesia, NM 88210

BLM Lease NMNM-082845 (T.4 on Affected Parties Map)

Lessee & Operator

EOG 'Y' RESOURCES, INC.
104 S. 4th Street
Artesia, NM 88210

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

BLM Lease NMNM-060341 (T.5 on Affected Parties Map)

Lessee

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

Operator

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

BLM Lease NMNM-012866 (T.6 on Affected Parties Map)

Lessee

- 5 OCCIDENTAL PERMIAN, LP
6001 Deauville
Midland, TX 79706-2671
Certified: 7015 3010 0001 3789 9149

State Lease E1-0167-0004 (T.7 on Affected Parties Map)

Lessee & Operator

EOG 'Y' RESOURCES, INC.
104 S. 4th Street
Artesia, NM 88210

State Lease LG-0864-0001 (T.8 on Affected Parties Map)

Lessee

- 6 UNIT PETROLEUM COMPANY
P.O. Box 702500
Tulsa, OK 74170-2500
Certified: 7015 3010 0001 3789 9156

OFFSET MINERALS OWNERS (Notified via USPS Certified Mail)

- 7 U.S. DEPARTMENT OF INTERIOR
Bureau of Land Management
Oil & Gas Division
620 E. Greene St.
Carlsbad, NM 88220
Certified: 7015 3010 0001 3789 9163
- 8 STATE OF NEW MEXICO
Oil, Gas and Minerals Division
310 Old Santa Fe Trail
Santa Fe, NM 87504
Certified: 7015 3010 0001 3789 9170

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

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

BUREAU OF LAND MANAGEMENT (FedEx'ed copy)
Oil & Gas Division
620 E. Greene St.
Carlsbad, NM 88220



January 26, 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 convert and complete for salt water disposal the Osage Boyd 15 Federal Com Well No.8. 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 15, Township 19 South, Range 25 East in Eddy County, New Mexico.

The published notice states that the interval will be from 7640 feet to 7916 feet.

Following is the notice published in the Artesia Daily Press, New Mexico on or about January 26, 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 convert the Osage Boyd 15 Fed Com No.8 for salt water disposal; located 1980' FNL and 1980' FWL, Section 15, Township 19 South, Range 25 East, Eddy County, New Mexico; approximately 13.9 miles south/ southeast of Artesia, NM.

Produced water from Percussion's area production will be privately disposed into the Cisco and Canyon formations at a maximum interval depth of 7654 feet to 8023 feet at a maximum surface pressure of 1530 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-sdf03c73923241459>

(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 "**Osage Boyd SWD Jan 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.

* You will be asked for your email, name and company.

This will not be used by anyone except keeping track of the file downloads.

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



C-108 - Item XIV

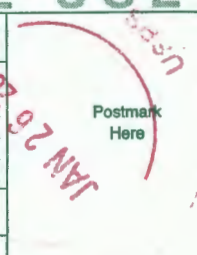
Proof of Notice (Certified Mail Receipts)

7015 3010 0001 3789 9095

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

For delivery information, visit our website at www.usps.com

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	
Sent To		
Street address	JEROME HUGH JONES	
City, State	10611 Railroad Court	
PS Form	Fairfax, VA 22030-3933	


Instructions

7015 3010 0001 3789 9101

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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	
Sent To		
Street address	Estate of Myra Jones Partridge	
City, State	c/o Shawn Partridge P/R	
PS Form	13314 E. 37th Street	
	Tulsa, OK 74134	

Instructions

7015 3010 0001 3789 9118

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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	
Sent To		
Street address	EOG 'Y' RESOURCES, INC.	
City, State	104 S. 4th Street	
PS Form	Artesia, NM 88210	

Instructions

7015 3010 0001 3789 9125

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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	
Sent To		
Street address	OXY USA WTP, LP	
City, State	6001 Deauville	
PS Form	Midland, TX 79706-2671	

Instructions

C-108 - Item XIV

Proof of Notice (Certified Mail Receipts – cont.)

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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

Sent To
Street and
City, State
PS Form

OCCIDENTAL PERMIAN, LP
6001 Deauville
Midland, TX 79706-2671

Postmark Here

COMO TX 75131
JAN 26 2018
USPS

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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

Sent To
Street and
City, State
PS Form

UNIT PETROLEUM COMPANY
P.O. Box 702500
Tulsa, OK 74170-2500

Postmark Here

COMO TX 75131
JAN 26 2018
USPS

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CERTIFIED MAIL® RECEIPT**
Domestic Mail Only

For delivery information, visit our website at www.usps.com

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

Sent To
Street and
City, State
PS Form

U.S. DEPARTMENT OF INTERIOR
Oil & Gas Division
620 E. Greene St.
Carlsbad, NM 88220

Postmark Here

COMO TX 75131
JAN 26 2018
USPS

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

For delivery information, visit our website at www.usps.com

OFFICIAL USE

Certified Mail Fee
\$ 3.45

Extra Services & Fees (check box, add fee as appropriate)

<input type="checkbox"/> Return Receipt (hardcopy)	\$
<input type="checkbox"/> Return Receipt (electronic)	\$ <u>2.75</u>
<input type="checkbox"/> Certified Mail Restricted Delivery	\$
<input type="checkbox"/> Adult Signature Required	\$
<input type="checkbox"/> Adult Signature Restricted Delivery	\$

Postage
\$.50

Total Postage and Fees 6.70

Sent To
Street and
City, State
PS Form 3

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

Postmark Here

COMO TX 75131
JAN 26 2018
USPS

C-108 - Item XIV

Proof of Notice – Legal Notice
Newspaper of General Circulation

Legal Notice

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Produced water from Percussion's area production will be privately disposed into the Cisco and Canyon formations at a maximum interval depth of 7640 feet to 7916 feet at a maximum surface pressure of 1528 psi and a rate limited only by such pressure.

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Published in the Artesia Daily Press, Artesia, N.M., Jan. 26, 2018 Legal No. 24548.

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.

McMillan, Michael, EMNRD

From: McMillan, Michael, EMNRD
Sent: Wednesday, January 31, 2018 12:06 PM
To: Ben Stone
Cc: Goetze, Phillip, EMNRD
Subject: Percussion Operating Osage Boyd 15 Federal Well No. 8 Suspended application

Ben:
The OCD received your administrative application for the Osage Boyd 15 Federal Well No. 8 On January 30, 2018. Your application will be suspended until the OCD receives the affidavit of publication..

Thanks
Mike

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

Affidavit of Publication

No. 24548

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 January 26, 2018

Second Publication

Third Publication

Fourth Publication

Fifth Publication

Sixth Publication

Seventh Publication

Subscribed and sworn before me this

29th day of January 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:

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Subscribed and sworn before me this

29th day of January 2018



OFFICIAL SEAL
Latisha Romine
NOTARY PUBLIC-STATE OF NEW MEXICO

My commission expires: 5/12/2019

Copy of Publication:

Legal Notice

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Published in the Artesia Daily Press, Artesia, N.M., Jan. 26, 2018 Legal No. 24548.

FEB 06 2018 PM 02:31

Latisha Romine

Latisha Romine

Notary Public, Eddy County, New Mexico

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

State of New Mexico
Energy, Minerals and Natural Resources

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

Form C-103
Revised July 18, 2013

WELL APINO.

30-015-28992

5. Indicate Type of Lease

STATE ☐ FEE ☒

6. State Oil & Gas Lease No.

7. Lease Name or Unit Agreement Name

Osage Boyd 15 Federal Com

8. Well Number 008

9. OGRID Number

371755

10. Pool name or Wildcat

Dagger Draw; Upper Penn, North

SUNDRY NOTICES AND REPORTS ON WELLS
(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A
DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH
PROPOSALS.)

1. Type of Well: Oil Well ☒ Gas Well ☐ Other

2. Name of Operator
Percussion Petroleum Operating, LLC

3. Address of Operator
919 Milam, Ste.2475, Houston, TX 77002

4. Well Location

Unit Letter F : 1980 feet from the North line and 1980 feet from the West line
Section 15 Township 19-S Range 25-E NMPM County Eddy

11. Elevation (Show whether DR, RKB, RT, GR, etc.)
3454' G.R.

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

NOTICE OF INTENTION TO:

PERFORM REMEDIAL WORK ☐ PLUG AND ABANDON ☐
TEMPORARILY ABANDON ☐ CHANGE PLANS ☐
PULL OR ALTER CASING ☐ MULTIPLE COMPL ☐
DOWNHOLE COMMINGLE ☐
CLOSED-LOOP SYSTEM ☐
OTHER: NAME CHANGE ☒

SUBSEQUENT REPORT OF:

REMEDIAL WORK ☐ ALTERING CASING ☐
COMMENCE DRILLING OPNS. ☐ P AND A ☐
CASING/CEMENT JOB ☐
OTHER: ☐

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 19.15.7.14 NMAC. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

Percussion Petroleum Operating proposes to change the name and number of this well. When approved as an SWD, this well will no longer be part of the federal com unit.

The complete well name shall be the **Osage Boyd 15 SWD No.1**.

Change will be implemented immediately upon approval of pending SWD permit and C-101.

Spud Date:

Rig Release Date:

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

SIGNATURE

TITLE Agent/consultant

DATE 2/28/2018

Type or print name

E-mail address: ben@sosconsulting.us

PHONE: 903-488-9850

For State Use Only

APPROVED BY:

TITLE

DATE

Conditions of Approval (if any):



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

DATE RECORD: First Rec: 1/30/2018 Admin Complete: 2/01/2018 or Suspended: _____ Add. Request/Reply: _____

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

Well No. #8 Well Name(s): Osage Boyd 15 Fed com

API: 30-0 15-28992 Spud Date: 6-20-1994 New or Old (EPA): N (UIC Class II Primacy 03/07/1982)

Footages 1980 FNL 1980 FWL Lot _____ or Unit F Sec 15 Tsp 195 Rge 295 County Eddy

General Location: E 15 South / Antesi Pool: SWD Liscu Canyon Pool No.: 96186

BLM 100K Map: Antesi Operator: Percussion Petroleum LLC OGRID: 37155 Contact: Stoney, Agent

COMPLIANCE RULE 5.9: Total Wells: 143 Inactive: 3 Fincl Assur: OK Compl. Order? NA IS 5.9 OK? X Date: 3-27-2018

WELL FILE REVIEWED ☐ Current Status: Expired T/A

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

Planned Rehab Work to Well: _____

Well Construction Details		Sizes (in)	Setting	Cement	Cement Top and
		Borehole / Pipe	Depths (ft)	Sx or Cf	Determination Method
Planned ___ or Existing ___ Surface	<u>14 3/4" / 98'</u>	<u>1132</u>	Stage Tool	<u>1150</u>	<u>Surface / 1134</u>
Planned ___ or Existing ___ Interm/Prod	<u>8 3/4" / 71'</u>	<u>8135</u>		<u>1200</u>	<u>Surface / 1134</u>
Planned ___ or Existing ___ Interm/Prod					
Planned ___ or Existing ___ Prod/Liner					
Planned ___ or Existing ___ Liner					
Planned ___ or Existing ___ OH/PEBF	<u>76 1/2" / 7410'</u>		Inj Length		

Injection Lithostratigraphic Units:	Depths (ft)	Injection or Confining Units	Tops
Adjacent Unit: Litho. Struc. Por.		<u>CSEC</u>	<u>7610</u>
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	<u>8135</u> PBDT <u>8115</u>
NEW TD	NEW PBDT
NEW Open Hole <input type="radio"/> or NEW Perfs <input checked="" type="radio"/>	
Tubing Size <u>3 1/2</u> in. Inter Coated? <input type="radio"/>	
Proposed Packer Depth <u>7540</u> ft	
Min. Packer Depth <u>7340</u> (100-ft limit)	
Proposed Max. Surface Press. <u>1528</u> psi	
Admin. Inj. Press. <u>1528</u> (0.2 psi per ft)	

AOR: Hydrologic and Geologic Information

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

FRESH WATER: Aquifer Antesi Max Depth 220 HYDRO AFFIRM STATEMENT By Qualified Person ☒

NMOSE Basin: Antesi CAPTAN REEF: thru _____ adj _____ NA No. GW Wells in 1-Mile Radius? 2 FW Analysis? ☒

Disposal Fluid: Formation Source(s) B-5 Analysis? ☒ On Lease ☐ Operator Only ☒ or Commercial ☐

Disposal Interval: Inject Rate (Avg/Max BWPD): 1500 Protectable Waters? NA Source: _____ System: Closed or Open

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

AOR Wells:

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

Penetrating Wells: No. Active Wells 4 Num Repairs? _____ on which well(s)? _____ Diagrams? _____

Penetrating Wells: No. P&A Wells 4 Num Repairs? _____ on which well(s)? _____ Diagrams? _____

NOTICE: Newspaper Date 1-26-2018 Mineral Owner Tanow Huch Surface Owner Tanow Huch N. Date 1-26-2018

RULE 26.7(A): Identified Tracts? ☒ Affected Persons: OXF, EOG, NMSW, BLM N. Date 1-26-2018

Order Conditions: Issues: SWAB TEST

Additional COAs: _____