

DATE IN 11/5/12	SUSPENSE	ENGINEER WSS	LOGGED IN	TYPE SWD 1375	APP NO. PWTJ 1235450965
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T- well
12/13/12
Final 12/19/12

ABOVE THIS LINE FOR DIVISION USE ONLY

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



ADMINISTRATIVE APPLICATION CHECKLIST

THIS CHECKLIST IS MANDATORY FOR ALL ADMINISTRATIVE APPLICATIONS FOR EXCEPTIONS TO DIVISION RULES AND REGULATIONS WHICH REQUIRE PROCESSING AT THE DIVISION LEVEL IN SANTA FE

Application Acronyms:

[NSL-Non-Standard Location] [NSP-Non-Standard Proration Unit] [SD-Simultaneous Dedication]
[DHC-Downhole Commingling] [CTB-Lease Commingling] [PLC-Pool/Lease Commingling]
[PC-Pool Commingling] [OLS - Off-Lease Storage] [OLM-Off-Lease Measurement]
[WFX-Waterflood Expansion] [PMX-Pressure Maintenance Expansion]
[SWD-Salt Water Disposal] [IPI-Injection Pressure Increase]
[EOR-Qualified Enhanced Oil Recovery Certification] [PPR-Positive Production Response]

[1] TYPE OF APPLICATION - Check Those Which Apply for [A]

- [A] Location - Spacing Unit - Simultaneous Dedication
☐ NSL ☐ NSP ☐ SD

Check One Only for [B] or [C]

- [B] Commingling - Storage - Measurement
☐ DHC ☐ CTB ☐ PLC ☐ PC ☐ OLS ☐ OLM

- [C] Injection - Disposal - Pressure Increase - Enhanced Oil Recovery
☐ WFX ☐ PMX ☒ SWD ☐ IPI ☐ EOR ☐ PPR

- [D] Other: Specify _____

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

- [A] ☐ Working, Royalty or Overriding Royalty Interest Owners
[B] ☒ Offset Operators, Leaseholders or Surface Owner
[C] ☒ Application is One Which Requires Published Legal Notice
[D] ☒ Notification and/or Concurrent Approval by BLM or SLO
U.S. Bureau of Land Management - Commissioner of Public Lands, State Land Office
[E] ☒ For all of the above, Proof of Notification or Publication is Attached, and/or,
[F] ☐ Waivers are Attached

[3] SUBMIT ACCURATE AND COMPLETE INFORMATION REQUIRED TO PROCESS THE TYPE OF APPLICATION INDICATED ABOVE.

[4] CERTIFICATION: I hereby certify that the information submitted with this application for administrative approval is **accurate** and **complete** to the best of my knowledge. I also understand that **no action** will be taken on this application until the required information and notifications are submitted to the Division.

Note: Statement must be completed by an individual with managerial and/or supervisory capacity.

BRIAN COLLINS
Print or Type Name

Signature

SENIOR OPERATIONS ENGINEER
Title

Date

bcollins@concho.com
e-mail Address

10 Oct 12



RECEIVED OCD

2012 NOV -5 P 1:46

November 1, 2012

New Mexico Oil Conservation Division
Attn: William V. Jones
1220 South St. Francis Drive
Santa Fe, NM 87505

RE: Application For Authorization To Inject
West Pearl 36 State SWD No. 1
Township 19 South, Range 34 East, N.M.P.M.
Section 36: 990' FNL & 990' FEL
Lea County, New Mexico

Dear Mr. Jones:

COG Operating LLC respectfully requests administrative approval for authorization to inject for the West Pearl 36 State SWD No. 1 well as referenced above. Attached, for your review, is a copy of the C-108 application. Once we receive the newspaper publication and all certified return receipts, I will send you a copy.

Please do not hesitate to contact me at (575) 748-6940 should you have any questions.

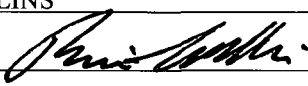
Sincerely,

A handwritten signature in black ink, appearing to read "Brian Collins".

Brian Collins
Senior Operations Engineer

BC/sw
Enclosures

APPLICATION FOR AUTHORIZATION TO INJECT

- I. PURPOSE: Secondary Recovery Pressure Maintenance X Disposal Storage
Application qualifies for administrative approval? X Yes No
- II. OPERATOR: COG OPERATING LLC
ADDRESS: 2208 W. Main Street, ARTESIA, NM 88210
CONTACT PARTY: BRIAN COLLINS PHONE: 575-748-6940
- III. WELL DATA: Complete the data required on the reverse side of this form for each well proposed for injection.
Additional sheets may be attached if necessary.
- IV. Is this an expansion of an existing project? Yes X No
If yes, give the Division order number authorizing the project: _____
- V. Attach a map that identifies all wells and leases within two miles of any proposed injection well with a one-half mile radius circle drawn around each proposed injection well. This circle identifies the well's area of review.
- VI. Attach a tabulation of data on all wells of public record within the area of review which penetrate the proposed injection zone. Such data shall include a description of each well's type, construction, date drilled, location, depth, record of completion, and a schematic of any plugged well illustrating all plugging detail.
- VII. Attach data on the proposed operation, including:
1. Proposed average and maximum daily rate and volume of fluids to be injected;
 2. Whether the system is open or closed;
 3. Proposed average and maximum injection pressure;
 4. Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and,
 5. If injection is for disposal purposes into a zone not productive of oil or gas at or within one mile of the proposed well, attach a chemical analysis of the disposal zone formation water (may be measured or inferred from existing literature, studies, nearby wells, etc.).
- *VIII. Attach appropriate geologic data on the injection zone including appropriate lithologic detail, geologic name, thickness, and depth. Give the geologic name, and depth to bottom of all underground sources of drinking water (aquifers containing waters with total dissolved solids concentrations of 10,000 mg/l or less) overlying the proposed injection zone as well as any such sources known to be immediately underlying the injection interval.
- IX. Describe the proposed stimulation program, if any.
- *X. Attach appropriate logging and test data on the well. (If well logs have been filed with the Division, they need not be resubmitted).
- *XI. Attach a chemical analysis of fresh water from two or more fresh water wells (if available and producing) within one mile of any injection or disposal well showing location of wells and dates samples were taken.
- XII. Applicants for disposal wells must make an affirmative statement that they have examined available geologic and engineering data and find no evidence of open faults or any other hydrologic connection between the disposal zone and any underground sources of drinking water.
- XIII. Applicants must complete the "Proof of Notice" section on the reverse side of this form.
- XIV. Certification: I hereby certify that the information submitted with this application is true and correct to the best of my knowledge and belief.
- NAME: BRIAN COLLINS TITLE: Senior Operations Engineer
SIGNATURE:  DATE: 10 Oct 12
E-MAIL ADDRESS: bcollins@concho.com
- * If the information required under Sections VI, VIII, X, and XI above has been previously submitted, it need not be resubmitted. Please show the date and circumstances of the earlier submittal: _____

C-108 Application for Authorization to Inject
WEST PEARL 36 STATE SWD #1
Unit A, Sec 36 T19S R34E
Lea County, NM

COG Operating, LLC, proposes to drill the captioned well to 8175' for salt water disposal service into the Delaware Sand from 6300' to 7900'. An APD will be submitted upon approval of this C-108.

- V. Map is attached.
- VI. One well within the ½ mile radius area of review penetrates the proposed injection zone. Well bore schematic is attached.
- VII.
 - 1. Proposed average daily injection rate = 4000 BWPD
Proposed maximum daily injection rate = 7500 BWPD
 - 2. Closed system
 - 3. Proposed maximum injection pressure = 1260 psi
(0.2 psi/ft. x 6300' ft.)
 - 4. Source of injected water will be Bone Spring produced water. No compatibility problems are expected. Analyses of Delaware receiving formation and Bone Spring produced waters from analogous source wells are attached.
- VIII. The injection zone is the Delaware Sandstone, a fine-grained sandstone from 6300' to 7900'. Any underground water sources will be shallower than 120' bases on State Engineer records.
- IX. The Delaware sand injection interval might be acidized with approximately 20 gal/ft of 7 ½ % HCl acid. If necessary, the injection interval may be fraced with up to 200,000 lbs. of sand.
- X. Well logs, if run, will be filed with the Division. A section of the neutron-density porosity log from an analogous well 4000' to the west showing the injection interval is attached.
- XI. Was unable to find the well listed on the State Engineer website as being SW/4 SW/4 SE/4 Sec 25 19S-34E. There is a fresh water station located SW/4 SW/4 SE/4, but it uses water pipelined in from outside this area.
- XII. After examining the available geologic and engineering data, 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 is attached.

III.

WELL DATA

INJECTION WELL DATA SHEET

OPERATOR: COG Operating, LLCWELL NAME & NUMBER: West Pearl 36 State SWD 1

WELL LOCATION: 990' FNL 990' FEL A 36 19s 34e
 FOOTAGE LOCATION UNIT LETTER SECTION TOWNSHIP RANGE

WELLBORE SCHEMATIC

See Attached Schematic
(Drill Well)

WELL CONSTRUCTION DATASurface CasingHole Size: 17 1/2" Casing Size: 13 3/8" @ 650' ±Cemented with: _____ sx. or 900 ft³Top of Cement: Surface Method Determined: DesignIntermediate CasingHole Size: 12 1/4" Casing Size: 9 5/8" @ 3475' ±Cemented with: _____ sx. or 2200 ft³Top of Cement: Surface Method Determined: DesignProduction CasingHole Size: 8 3/4" Casing Size: 7" @ 8175' ±Cemented with: _____ sx. or 1200 ft³Top of Cement: 2975' Method Determined: DesignTotal Depth: 8175' ±Injection Interval6300' feet to 7900'

(Perforated or Open Hole; indicate which)

INJECTION WELL DATA SHEET

Tubing Size: 3 1/2" or 4 1/2" Lining Material: IPC or Duxline 20

Type of Packer: Nickel plated double grip retrievable

Packer Setting Depth: 6250' ±

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

Additional Data

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

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

2. Name of the Injection Formation: Delaware Sand

3. Name of Field or Pool (if applicable): Pearl

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

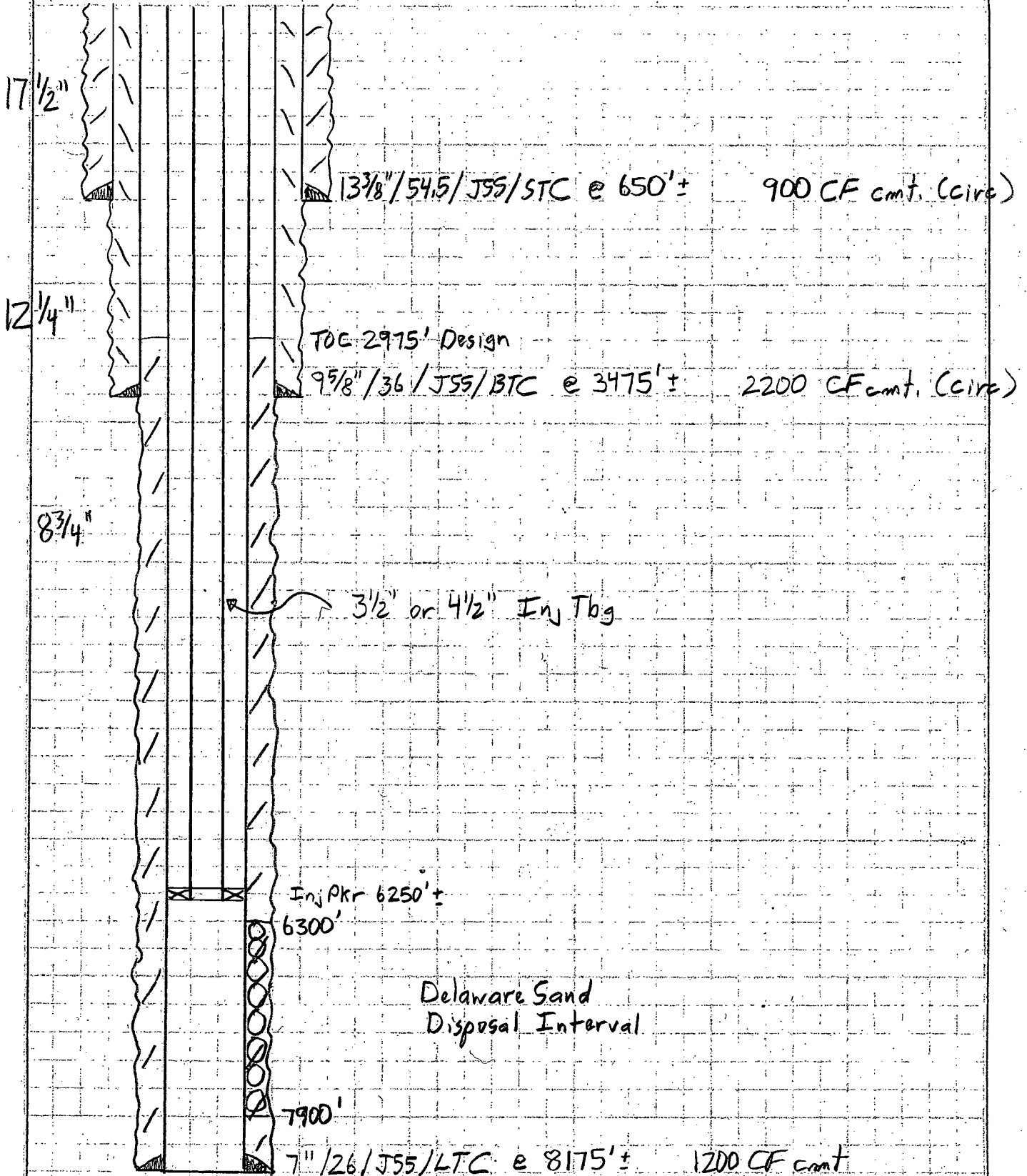
5. Give the name and depths of any oil or gas zones underlying or overlying the proposed injection zone in this area: Oil + 2250' under

Overlying: Queen $\pm 4550-5100'$ Grayburg / S. Andres $\pm 5500-5850'$

Underlying: Bone Spring $\pm 9550-10900'$
Morrow $\pm 13275-13600'$

30-025-






West Pearl 36 State SWD 1
990' FNL, 990' FEL
A-36-195-34e
Lea, NM



V.

MAP



- | | | | |
|---|--------------------------------|---|--------------------|
|  | Mobil Production TX & NM |  | Chevron USA Inc. |
|  | Rubicon Oil and Gas II, LP |  | EOG Resources Inc. |
|  | Magnum Hunter Production, Inc. | | |

West Pearl 36 State SWD No. 1
990' FNL & 990' FEL
Sec. 36; T19s - R34e
Lea county, New Mexico

VI.

Wells Penetrating Proposed Disposal Interval Within Half Mile Area of Review

30-025-38079

West Pearl 36 St. 1
1980' FNL 1740' FWL
F-36-195-34e
Lea, NM

17 1/2"
12 1/4"
13 3/8" / 48 / H40 / STC @ 605' 505sx "C" (civ 122sx)

DV 3722'
TOC 3800' CBL

9 7/8" / 40 / J95 / @ 5310' 1st: 600sx
2nd: 1400sx (civ 245sx)

8 3/4"

CIBP+35' cont 5920'

5960-5986'

Del (wet)

CIBP+35' cont 6075'

6102-6168'

Del (wet)

Within 1/2 Mile Area of Review

CIBP+35' cont 8150'

DV 8527'

CIBP+85x cont
@ 9610'

9673-9698'

BS (wet)

CIBP+35' cont 10545'

CIBP+35' cont 10635'

7" / 26 / HCL-80 / LTC @ 11100'

1st: 325sx (civ 115x)
2nd: 500sx

6 1/8"

CIBP+35' cont 13020'

Junk 13030

CIBP 13490'

13275-13315'

Mirr

13508-13542'

Mirr

4 1/2" / 13.5 / P110 /

Liner 10568-13656' 325sx

13657'

α = PKr 13047', cut to 13030'

COG Operating LLC

Company: COG Operating LLC

Updated 9/17/2012 TD

Well Name: West Pearl St #1

1,980' FNL & 1,740' FWL, Sec 36, T19S, R34E

Spud Date: 10/25/2008

Lea County, New Mexico

API # 30-025- 38079

Handwritten: OK

DVT @ 3,722'
TOC @ 3,800'

+ 35' cmt
CIBP @ 5,915'

+ 35' cmt
CIBP @ 6,075'

+ 35' cmt
CIBP @ 8,150'
DVT @ 8,527'

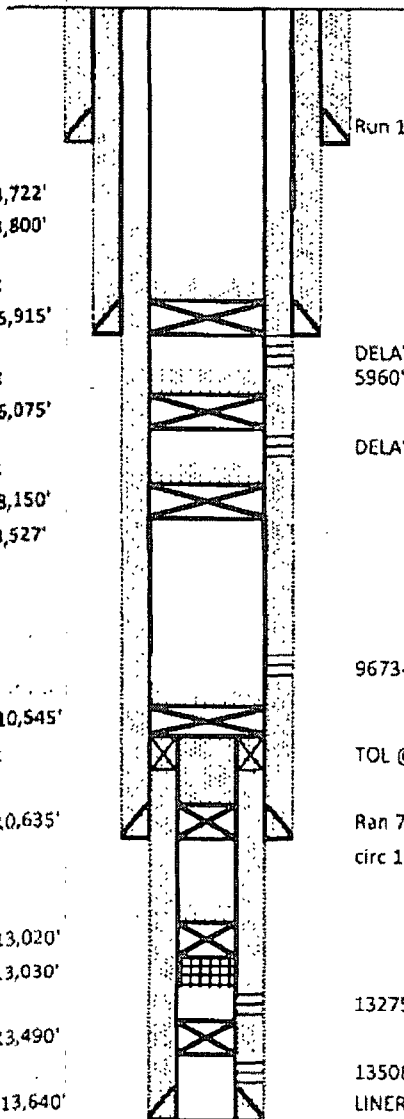
CIBP @ 10,545'
+ 35' cmt

CIBP @ 10,635'

CIBP @ 13,020'
Junk @ 13,030'

CIBP @ 13,490'

P8TD @ 13,640'



Run 15jts 13-3/8" 48# H-40 set @ 605'. Cmt'd w/ 505sx cmt, circ 122sx.

Proposed

Run 9-5/8" 40# J-55 Set @ 5,315'. Cmt'd w/ 7,000sxs,
circ 135sx off DVT, circ 245sx to surf.

DELAWARE
5960'-72' & 5976'-86'

DELAWARE @ 6102- 20, 6124-28, 6148-54, 6162-68

9673-77', 84-90', 94-98'

TOL @ 10,568'

Ran 7' 26# L-80 set @ 11,100'. Cmt'd w/ 825sxs cmt,
circ 11sx off DVT, did not circ to surf. CBL TOC @ 3,800'

13275-13315'

13508-13542'

LINER 4-1/2" 13.5# P110 f/ 10,568-13,656'.
Cmt'd w/ 325sxs, circ 70sxs f/ liner top.

*Printed From
Well-Log*

VII.

Water Analysis Produced and Receiving Formation Water

This is a detailed map of the oil and gas fields in the Pearl River and Xeric O.G. (OPER.) areas. The map is divided into numerous small sections, each containing information about the field, the operator, and the lease status. The fields are labeled with names such as PEARL W, INESCALERO RIDGE UT, DEVON ENER. (OPER.), and XERIC O.G. (OPER.). The operators listed include Chevron, ExxonMobil, Superior Govt., and others. The lease status is indicated by numbers and symbols, such as 12-1-95, 18052, and 16355. The map also shows the locations of various towns and cities, including Pearre, Illinois, and the surrounding areas. The map is a valuable resource for anyone interested in the oil and gas industry in this region.

**COG Operating, LLC
West Pearl 36 State SWD #1
Unit A, Sec 36-T19S-R34E
Lea County, NM**

Water Analysis of Bone Spring Representative of Produced Water

OIL CONSERVATION DIVISION
RECEIVED



204 MAY 9 AM 8 50
P.O. BOX 2187
BBS, N.M. 88240

PHONE: (505) 393-7726

WATER ANALYSIS REPORT

Report for: Lowell Deckert	Date sampled: 04/29/94
cc: Kenny Kearney	Date reported: 05/01/94
cc:	Lease or well #: Lea Bone Springs
cc:	County: Lea State: N.M.
Company: Subsurface Water Disp. Inc.	Formation:
Address: P.O. Box 1002	Depth:
Service Engineer: K. Kearney	Submitted by: K. Kearney

CHEMICAL COMPOSITION :	mg/L	meq/L
Chloride (Cl)	160000	4513
Iron (Fe) (total)	3.0	
Total hardness	87000	
Calcium (Ca)	23458	1171
Magnesium (Mg)	6925	556
Bicarbonates (HCO3)	36	1
Carbonates (CO3)	0	
Sulfates (SO4)	548	11
Hydrogen sulfide (H2S)	n/a	
Carbon dioxide (CO2)	n/a	
Sodium (Na)	64373	2799
Total dissolved solids	255342	
Barium (Ba)	n/a	
Strontium (Sr)	n/a	

Specific Gravity	1.182
Density (#/gal.)	9.850
pH	5.750
IONIC STRENGTH	5.39

Stiff-Davis (CaCO3) Stability Index :
 $SI = pH - pCa - pAlk - K$

SI @ 86 F = +0.41
104 F = +0.64
122 F = +0.90
140 F = +1.19
158 F = +1.51

This water is 90 mg/l (-10.38%) under ITS CALCULATED
CaSO4 saturation value at 82 F.
SATURATION= 867 mg/L PRESENT= 777 mg/L

REPORTED BY ROBERT C MIDDLETON *Ran*
TECHNICAL SERVICES REPRESENTATIVE

Water Analysis of Delaware Sand Representative of Receiving Formation Water

VII. PROPOSED OPERATION:

VOLUME OF FLUID TO BE INJECTED

SYSTEM TYPE:

INJECTION PRESSURE:

WATER SOURCE:

WATER ANALYSIS:

PRODUCED DELAWARE WATER FROM WELLS IN SECTIONS 1, 2, 3 & 10
T20S-R34E

MOBIL LEA STATE #1 12/9/92

TOTAL HARDNESS	1820.00	me/l
CALCIUM	32076.98	mg/l
MAGNESIUM	2673.31	mg/l
IRON	30.00	mg/l
SODIUM	44604.19	mg/l
CHLORIDE	1321995.38	mg/l 132,995
SULFATE	550.00	mg/l
CARBONATE	0.00	mg/l
BICARBONATE	183.04	mg/l
TOTAL SOLIDS	213112.90	mg/l
CARBON DIOXIDE	217.80	mg/l
pH	6.65	
SPECIFIC GRAVITY	1.14	
TDS	213115.89	
RESISTIVITY	0.057	@ 70 DEGREES

X.

**Log Across Proposed
Delaware Sand
Injection Interval**

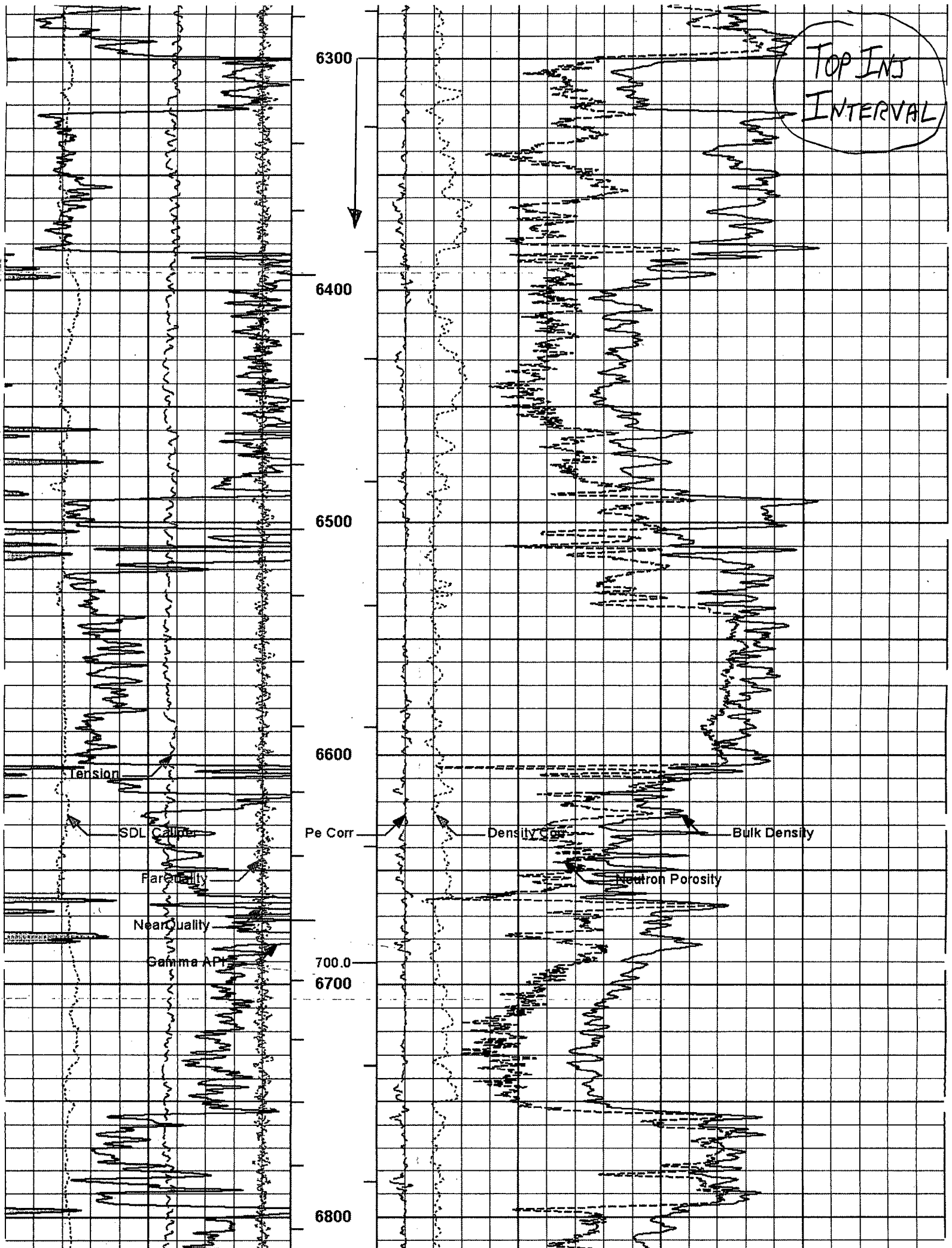
FALLIBURTON

SPECTRAL GAMMA RAY
DUAL SPACED NEUTRON
SPECTRAL DENSITY

WEST PEARL 36 STATE No. 2H		COMPANY		COG OPERATING, LLC	
LEA; BONE SPRING		WELL		WEST PEARL 36 STATE No. 2H	
LEA		FIELD		LEA; BONE SPRING	
NEW MEXICO		COUNTY		LEA	
STATE		STATE		NEW MEXICO	
API No.	30-025-40425	Location	380' FNL AND 330' FWL	Other Services:	DLL TMGRD
Well	Field	County	State	Sect. 36	Twp. 19S Rge. 34E
Parent Datum	GL	Elev. 3724.0 ft	Elev. K.B.	3741.0 ft	
Measured from	KB	17.0 ft above perm. Datum	D.F.	3740.0 ft	
Log measured from	KB		GL	3724.0 ft	
Log - Driller	10282.00 ft				
Log - Logger	10282.0 ft				
Log - Logged Interval	10226 ft				
Log - Driller	190 ft				
Log - Logger	9.625 in @ 3520.0 ft				
Log - Logged Interval	3467.0 ft				
Log - Driller	7.875 in				
Log - Logger	BRINE				
Fluid in Hole	9.6 ppq	29.00 s/qt			
Viscosity	8.00 pH	0.0 cpdm			
Fluid Loss	FLOWLINE				
Meas. Temperature	0.070 ohmm @ 75.00 degF				
Meas. Temperature	0.05 ohmm @ 75.00 degF				
Meas. Temperature	0.066 ohmm @ 75.00 degF				
Meas. Temperature	MEAS				
Meas. Temperature	MEAS				
Meas. Temperature	0.03 ohmm @ 161.0 degF				
Meas. Temperature	8.0 hr				
Meas. Temperature	25-May-12 03:09				
Meas. Temperature	161.0 degF @ 10282.0 ft				
Meas. Temperature	700				
Meas. Temperature	JORDAN MALLOY				
Meas. Temperature	WARD WHITEMAN				

Fold here

Service Ticket No.: 9540898		API Serial No.: 30-025-40425		PGM Version: WL INSITE R3.4.0 (Build 4)	
CHANGE IN MUD TYPE OR ADDITIONAL SAMPLE			RESISTIVITY SCALE CHANGES		
Date	Sample No.		Type Log	Depth	Scale Up Hole
Depth-Driller					
Type Fluid in Hole					
Density	Viscosity				
Ph	Fluid Loss				
Source of Sample			RESISTIVITY EQUIPMENT DATA		
Rm @ Meas. Temp	@	@	Run No.	Tool Type & No.	Pad Type
Rmf @ Meas. Temp.	@	@			
Rmc @ Meas. Temp.	@	@			
Source Rmf	Rmc				
Rm @ BHT	@	@			
Rmf @ BHT	@	@			
Rmc @ BHT	@	@			
EQUIPMENT DATA					
GAMMA		ACOUSTIC		DENSITY	
Run No.	ONE	Run No.		Run No.	ONE
Serial No.	11830519BK	Serial No.		Serial No.	90078467OR
Model No.	CSNG	Model No.		Model No.	SDLT
Diameter	3.625"	No. of Cent.		Diameter	4.5"
Detector Model No.	T-102A	Spacing		Log Type	GAM-GAM
Type	SCINT			Source Type	Cs137
Length	12"	LSA [Y/N]		Serial No.	5069GW
Distance to Source	10'	FWDA [Y/N]		Strength	1.5 Ci
LOGGING DATA					
GENERAL		GAMMA		ACOUSTIC	
				DENSITY	
				NEUTRON	



TOP INS
INTERVAL

6300

6400

6500

6600

700.0

6700

6800

Tension

SDL Caliper

Porosity

Near Quality

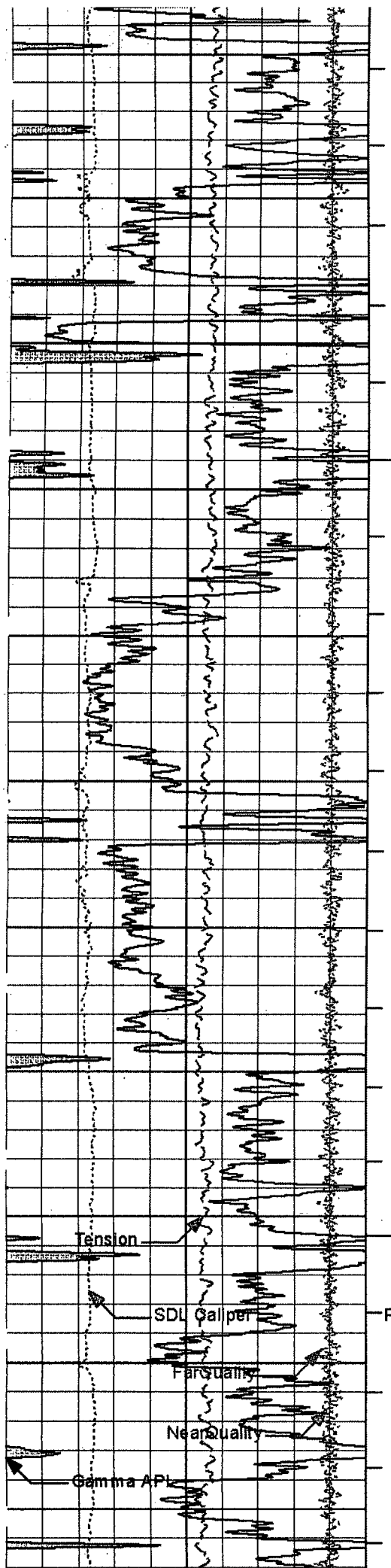
Gamma API

Pe Corr

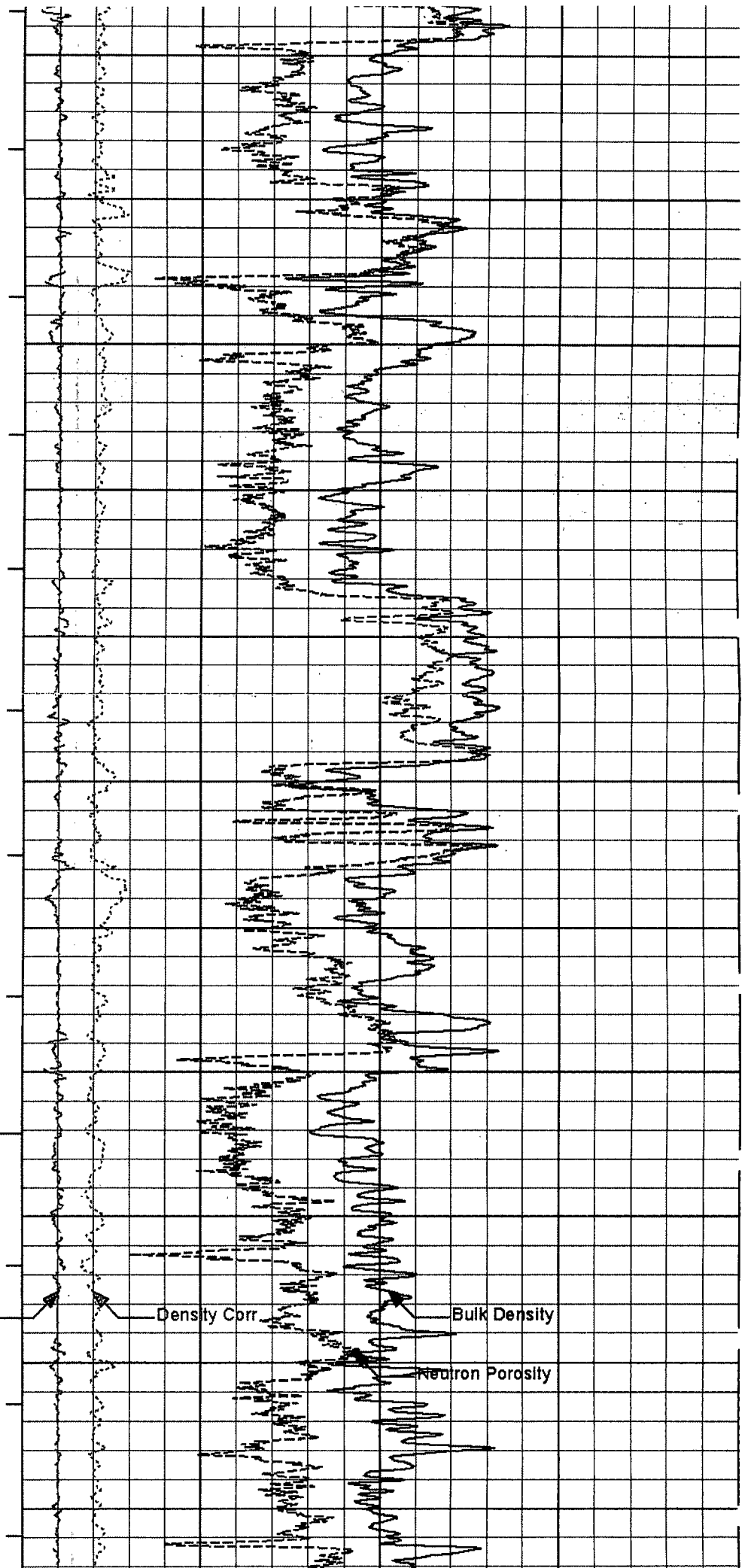
Density Corr

Bulk Density

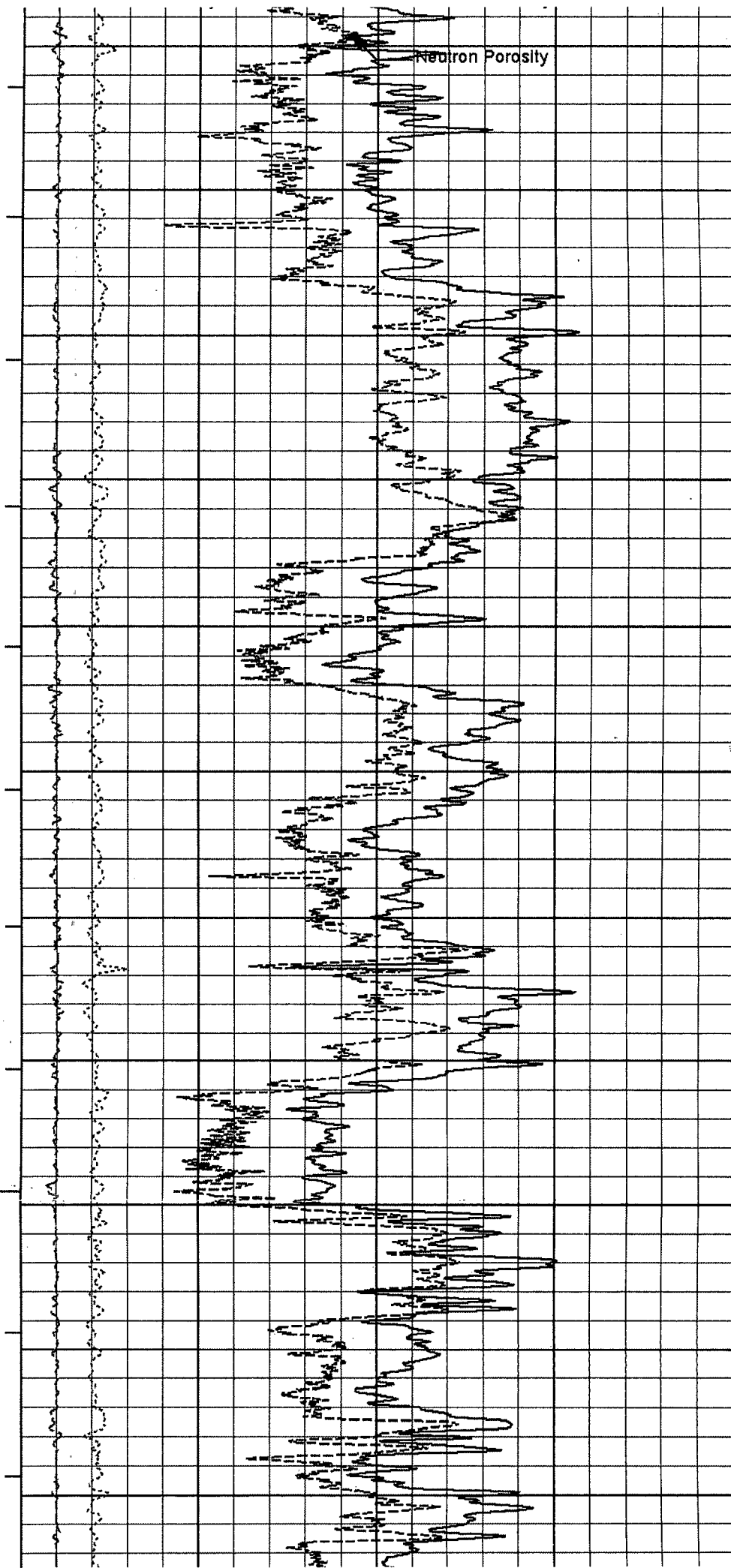
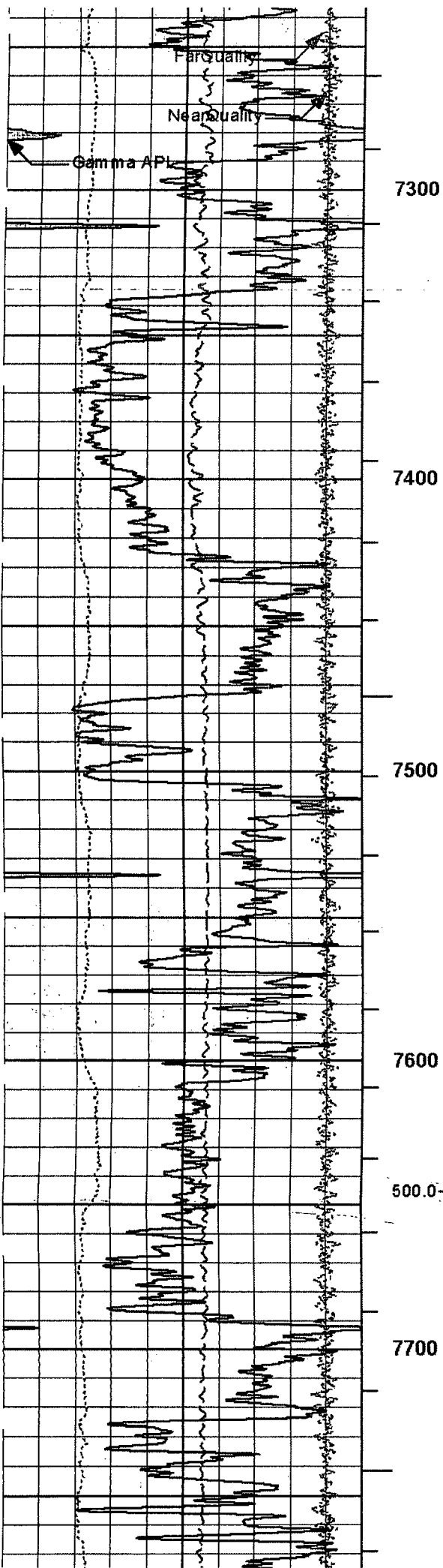
Neutron Porosity

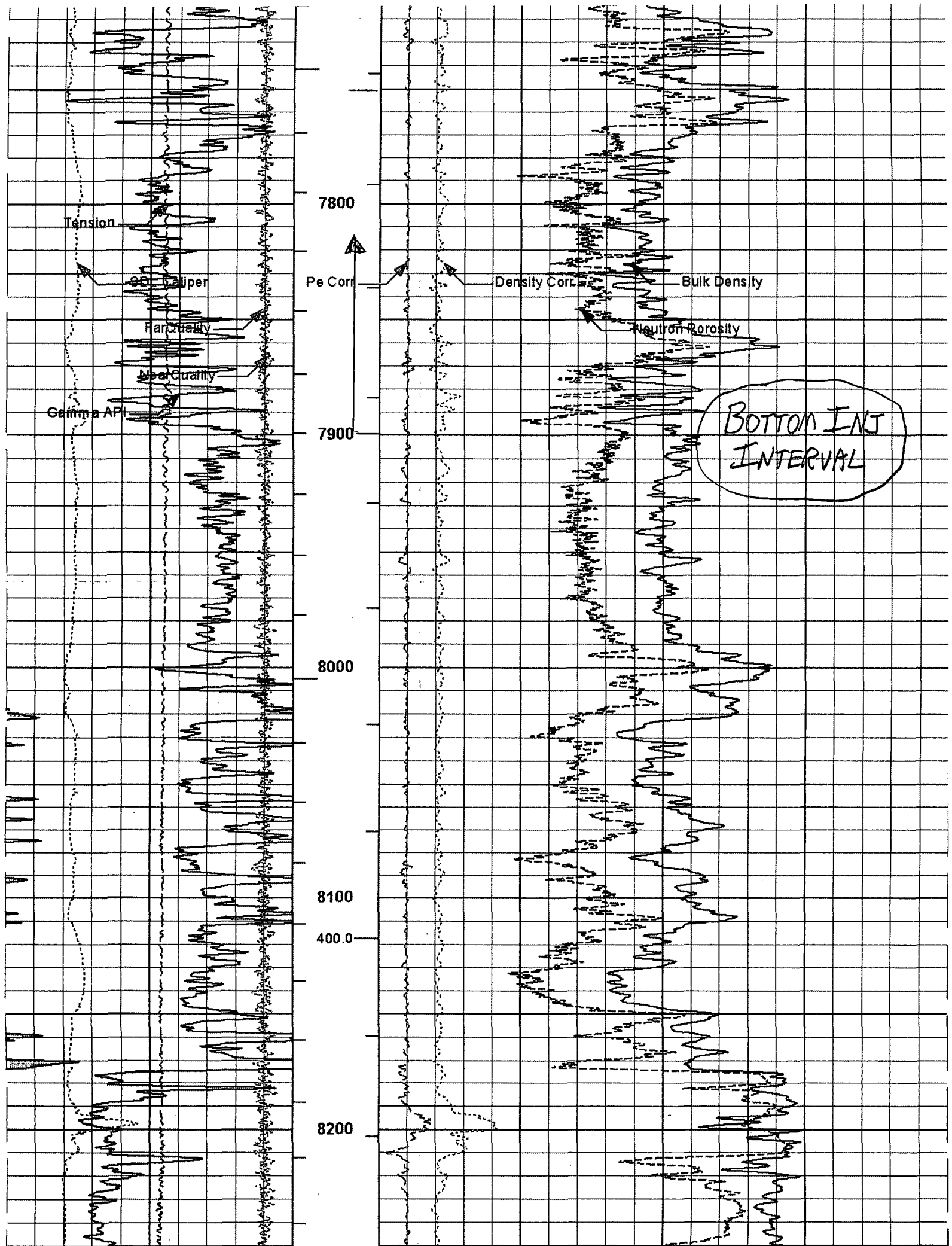


6800
6900
7000
7100
600.0
7200
7300



Pe Corr
Density Corr
Bulk Density
Neutron Porosity





Tension

Caliper

Far Gravity

Near Gravity

Gamma API

7800

Pe Corr.

Density Corr.

Bulk Density

Neutron Porosity

7900

8000

8100

400.0

8200

BOTTOM INT
INTERVAL

XI.

Fresh Water Sample Analyses



New Mexico Office of the State Engineer Active & Inactive Points of Diversion

(with Ownership Information)

(acre ft per annum)						(R=POD has been replaced and no longer serves this file, (quarters are 1=NW 2=NE 3=SW 4=SE) C=the file is closed) (quarters are smallest to largest) (NAD83 UTM in meters)											
Sub										q q q							
WR File Nbr	basin	Use	Diversion	Owner	County	POD Number	Code	Grant	Source	6416 4	Sec	Tws	Rng	X	Y		
<u>CP 00680</u>		OBS		C. W. TRAINER	LE	<u>CP 00680 EXP</u>	No Data			3	3	4	25	19S	34E	639530	3610685*
<u>CP 00683</u>		OBS		3 C. W. TRAINER	LE	<u>CP 00683</u>	120' Deep		Shallow	3	3	4	25	19S	34E	639530	3610685*

Record Count: 2

PLSS Search:

Section(s): 25, 26, 35, 36 Township: 19S Range: 34E

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.



New Mexico Office of the State Engineer

Point of Diversion Summary

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

(quarters are smallest to largest)

(NAD83 UTM in meters)

POD Number

Q64 Q16 Q4 Sec Tws Rng

X

Y

CP 00683

3 3 4 25 19S 34E

639530 3610685*

Driller License: ABBOTT BROTHERS COMPANY

Driller Name:

Drill Start Date: 07/18/1985

Drill Finish Date: 07/20/1985

Plug Date:

Log File Date: 08/16/1985

PCW Rcv Date:

Source: Shallow

Pump Type:

Pipe Discharge Size:

Estimated Yield:

Casing Size:

Depth Well: 120 feet

Depth Water: 28 feet

*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.



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

No PODs found.

PLSS Search:

Section(s): 30, 31

Township: 19S

Range: 35E



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

No PODs found.

PLSS Search:

Section(s): 1, 2

Township: 20S

Range: 34E



New Mexico Office of the State Engineer

Active & Inactive Points of Diversion

(with Ownership Information)

WR File Nbr	Sub	basin	Use	Diversion	Owner	County	POD Number	Code	Grant	Source	q q q	Sec	Tws	Rng	X	Y	
L 04157		L	DOL		3 VIRGIL LINAM	LE	L 04157			Shallow	64164	3	3	06	20S	35E	640483 3607561*

(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)

↖ Outside 1 mile Area of Review

Record Count: 1

PLSS Search:

Section(s): 6 Township: 20S Range: 35E

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.



New Mexico Office of the State Engineer

Point of Diversion Summary

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

(quarters are smallest to largest)

(NAD83 UTM in meters)

POD Number

Q64 Q16 Q4 Sec Tws Rng

X

Y

L 04157

3 3 06 20S 35E

640483 3607561*

Driller License: VAN NOY, W.L.

Driller Name:

Drill Start Date: 12/12/1959

Drill Finish Date: 12/13/1959

Plug Date:

Log File Date: 12/18/1959

PCW Rcv Date:

Source: Shallow

Pump Type:

Pipe Discharge Size:

Estimated Yield:

Casing Size: 5.00

Depth Well: 70 feet

Depth Water: 64 feet

Water Bearing Stratifications:

Top Bottom Description

65 68 Sandstone/Gravel/Conglomerate

Casing Perforations:

Top Bottom

50 70

*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.



November 1, 2012

Hobbs News-Sun
P.O. Box 850
Hobbs, NM 88240

Re: Legal Notice
Salt Water Disposal Well
West Pearl 36 State SWD No. 1

To Whom It May Concern:

Enclosed is a legal notice regarding New Mexico Oil Conservation Division C-108
Application for Authorization to Inject for a salt water disposal well.

Please run this notice and return the proof of notice to the undersigned at:

COG Operating LLC, 2208 W. Main St., Artesia, NM 88210

Sincerely,

A handwritten signature in cursive script, appearing to read "Brian Collins".

Brian Collins
Senior Operations Engineer

BC/sw
Enclosures

HOBBS NEWS-SUN
LEGAL NOTICES

COG Operating LLC, 2208 W. Main Street, Artesia, New Mexico, 88210, has filed Form C-108 (Application for Authorization to Inject) with the New Mexico Oil Conservation Division seeking administrative approval for a salt water disposal well. The proposed well, the West Pearl 36 State SWD No. 1 is located 990' FNL and 990' FEL, Sec. 36, Township 19 South, Range 34 East, Lea County, New Mexico. Disposal water will be sourced from area wells producing from the Bone Spring formation. The disposal water will be injected into the Delaware formation at a depth of 6300' to 7900' at a maximum surface pressure of 1260 psi and a maximum rate of 7,500 BWPD. The proposed SWD well is located approximately 25 miles west of Hobbs. Any interested party who has an objection to this must give notice in writing to the Oil Conservation Division, 1220 South Saint Francis Street, Santa Fe, New Mexico, 87505, within fifteen (15) days of this notice. Any interested party with questions or comments may contact Brian Collins at COG Operating LLC, 2208 W. Main Street, Artesia, New Mexico 88210, or call 575-748-6940.

Published in the Hobbs News-Sun Hobbs, New Mexico
_____, 2012.



RECEIVED OGD

2012 DEC 13 P 1:35

December 7, 2012

New Mexico Oil Conservation Division
Attn: William V. Jones
1220 South St. Frances Drive
Santa Fe, NM 87505

Re: Affidavit of Publication/Certified Return Receipts
West Pearl 36 State SWD No. 1
Township 19 South, Range 34 East, N.M.P.M.
Section 36: 990' FNL & 990' FEL
Lea County, New Mexico

Dear Mr. Jones:

Enclosed, per your request, please find one copy of the affidavit of publication and one copy of the certified return receipts from each party that was notified. Please note the Certified Mailers were sent out on November 1, 2012.

Please do not hesitate to contact us at 575-748-6940 should you have any questions.

Sincerely,

A handwritten signature in cursive script, appearing to read "Brian Collins".

Brian Collins
Senior Operations Engineer

BC/bg
Enclosures

Affidavit of Publication

State of New Mexico,
County of Lea.

I, JUDY HANNA
PUBLISHER

of the Hobbs News-Sun, a
newspaper published at Hobbs, New
Mexico, do solemnly swear that the
clipping attached hereto was
published in the regular and entire
issue of said newspaper, and not a
supplement thereof for a period

of 1 issue(s).

Beginning with the issue dated
November 10, 2012
and ending with the issue dated
November 10, 2012

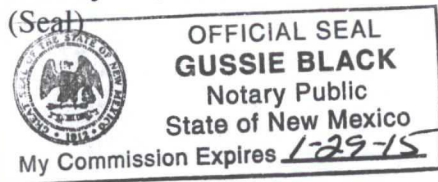

PUBLISHER

Sworn and subscribed to before me
this 12th day of
November, 2012



Notary Public

My commission expires
January 29, 2015



This newspaper is duly qualified to
publish legal notices or
advertisements within the meaning of
Section 3, Chapter 167, Laws of
1937 and payment of fees for said
publication has been made.

LEGAL	LEGAL
LEGAL NOTICES November 10, 2012	
COG Operating LLC, 2208 W. Main Street, Artesia, New Mexico, 88210, has filed Form C-108 (Application for Authorization to Inject) with the New Mexico Oil Conservation Division seeking administrative approval for a salt water disposal well. The proposed well, the West Pearl 36 State SWD No. 1 is located 990' FNL and 990' FEL, Sec. 36, Township 19 South, Range 34 East, Lea County, New Mexico. Disposal water will be sourced from area wells producing from the Bone Spring formation. The disposal water will be injected into the Delaware formation at a depth of 6300' to 7900' at a maximum surface pressure of 1260 psi and a maximum rate of 7,500 BWPD. The proposed SWD well is located approximately 25 miles west of Hobbs. Any interested party who has an objection to this must give notice in writing to the Oil Conservation Division, 1220 South Saint Francis Street, Santa Fe, New Mexico, 87505, within fifteen (15) days of this notice. Any interested party with questions or comments may contact Brian Collins at COG Operating LLC, 2208 W. Main Street, Artesia, New Mexico 88210, or call 575-748-6940. #27701	

02107967

00103920

COG OPERATING LLC
FASKEN CENTER, TOWER II
550 W. TEXAS AVE., STE 1300
MIDLAND, TX 79701

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

EOG RESOURCES INC
P O BOX 2267
MIDLAND TX 79702

2. Article Number

(Transfer from service label)

7011 1570 0000 7781 3264

PS Form 3811, February 2004

Domestic Return Receipt

102595-02-M-1540

COMPLETE THIS SECTION ON DELIVERY

A. Signature

X Robert Jom

☐ Agent☐ Addressee

B. Received by (Printed Name)

R. Foree

C. Date of Delivery

11-13-12

D. Is delivery address different from item 1? ☐ YesIf YES, enter delivery address below: ☐ No

3. Service Type

☒ Certified Mail☐ Express Mail☐ Registered☒ Return Receipt for Merchandise☐ Insured Mail☐ C.O.D.

4. Restricted Delivery? (Extra Fee)

☐ Yes

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

MAGNUM HUNTER PRODUCTION INC
600 N MARIENFELD ST STE 600
MIDLAND TX 79701

2. Article Number

(Transfer from service label)

7011 1570 0000 7781 3240

PS Form 3811, February 2004

Domestic Return Receipt

102595-02-M-15

COMPLETE THIS SECTION ON DELIVERY

A. Signature

X Sadi Garcia

☐ Agent☐ Addressee

B. Received by (Printed Name)

Sadi Garcia

C. Date of Delivery

11-8-12

D. Is delivery address different from item 1? ☐ YesIf YES, enter delivery address below: ☐ No

3. Service Type

☒ Certified Mail☐ Express Mail☐ Registered☒ Return Receipt for Merchandise☐ Insured Mail☐ C.O.D.

4. Restricted Delivery? (Extra Fee)

☐ Yes

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

RUBICON OIL ADN GAS II LP
508 W WALL AVE STE 500
MIDLAND TX 79701

2. Article Number

(Transfer from service label)

7011 1570 0000 7781 3233

PS Form 3811, February 2004

Domestic Return Receipt

102595-02-M-1540

COMPLETE THIS SECTION ON DELIVERY

A. Signature

X Ruby Tear

☐ Agent☐ Addressee

B. Received by (Printed Name)

Ruby Tear

C. Date of Delivery

11-8-12

D. Is delivery address different from item 1? ☐ YesIf YES, enter delivery address below: ☐ No

3. Service Type

☒ Certified Mail☐ Express Mail☐ Registered☒ Return Receipt for Merchandise☐ Insured Mail☐ C.O.D.

4. Restricted Delivery? (Extra Fee)

☐ Yes

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

ATTN WILLIAM V JONES
NM OIL CONSERVATION DIVISION
1220 S ST FRANCIS DR
SANTA FE NM 87505

2. Article Number

(Transfer from service label)

7011 1570 0000 7781 3172

PS Form 3811, February 2004

Domestic Return Receipt

102595-02-M-1540

COMPLETE THIS SECTION ON DELIVERY

A. Signature

X *[Signature]*☐ Agent☐ Addressee

B. Received by (Printed Name)

Heather Muniz

C. Date of Delivery

11/5/12

D. Is delivery address different from item 1? ☐ YesIf YES, enter delivery address below: ☐ No

NOV - 5 2012

3. Service Type

☒ Certified Mail☒ Express Mail☐ Registered☒ Return Receipt for Merchandise☐ Insured Mail☐ C.O.D.

4. Restricted Delivery? (Extra Fee)

☐ Yes

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

MOBIL PRODUCING TEXAS & NM INC
P O BOX 2305
HOUSTON TX 77210-2305

2. Article Number

(Transfer from service label)

7011 1570 0000 7781 3226

PS Form 3811, February 2004

Domestic Return Receipt

102595-02-M-1540

COMPLETE THIS SECTION ON DELIVERY

A. Signature

X *[Signature]*

NOV 12 2012

☐ Agent☐ Addressee

B. Received by (Printed Name)

James Feines

C. Date of Delivery

11/12/12

D. Is delivery address different from item 1? ☐ YesIf YES, enter delivery address below: ☐ No

3. Service Type

☒ Certified Mail☒ Express Mail☐ Registered☒ Return Receipt for Merchandise☐ Insured Mail☐ C.O.D.

4. Restricted Delivery? (Extra Fee)

☐ Yes

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

ATTN SANDY STEDMAN-DANIEL
CHEVRON USA INC
P O BOX 2100
HOUSTON TX 77252

2. Article Number

(Transfer from service label)

7011 1570 0000 7781 3257

PS Form 3811, February 2004

Domestic Return Receipt

102595-02-M-1540

COMPLETE THIS SECTION ON DELIVERY

A. Signature

X *[Signature]*☐ Agent☐ Addressee

B. Received by (Printed Name)

Anthony Alley

C. Date of Delivery

11-12-12

D. Is delivery address different from item 1? ☐ YesIf YES, enter delivery address below: ☐ No

3. Service Type

☒ Certified Mail☒ Express Mail☐ Registered☒ Return Receipt for Merchandise☐ Insured Mail☐ C.O.D.

4. Restricted Delivery? (Extra Fee)

☐ Yes

Jones, William V., EMNRD

From: Jones, William V., EMNRD
Sent: Wednesday, December 19, 2012 2:21 PM
To: 'Brian Collins'
Cc: Kautz, Paul, EMNRD; Warnell, Terry G. (twarnell@slo.state.nm.us)
Subject: Disposal applications from COG Operating LLC: West Pearl 36 State SWD #1 30-025-NA A/36/19S/34E/Lea County

Hello Brian,

I saw the Brush Canyon picked on one of the logs in this area just to the west of your proposed well....
Is the upper Delaware in this area considered to be the Cherry Canyon? Or do you just call the whole strat section, the "Delaware"?

Please send proof of notice (Copy of the C-108) to the State Land Office as the surface owner.
(And for the Wild Cobra 1 State SWD #1 which probably has the SLO as surface owner)

Thank You Sir

Will Jones

Injection Permit Checklist (11/15/2010)

WFX _____ PMX _____ SWD 1375 Permit Date 12/12 UIC Qtr 04/10

Wells 1 Well Name(s): West Pearl 36 State SWD #1

API Num: 30-025 Spud Date: Not Yet New/Old: N (UIC primacy March 7, 1982)

Footages 990 FNL/FEL Unit A Sec 36 Tsp 19S Rge 34E County LEA

General Location: _____

Operator: COG OPERATIONS LLC Contact BRIAN COLLINS

OGRID: 229137 RULE 5.9 Compliance (Wells) 0/3755 (Finan Assur) OK IS 5.9 OK? OK

Well File Reviewed None yet Current Status: Not Drilled

Planned Work to Well: DRILL/EQP/DISPOSE

Diagrams: Before Conversion _____ After Conversion ✓ Elogs in Imaging File: Not Drilled

Well Details:	Sizes		Setting Depths	Stage Tool	Cement Sx or Cf	Cement Top and Determination Method
	Hole.....	Pipe				
New <u>✓</u> Existing _____ Surface	17 1/2 - 13 3/8		650'		900 CF	Surf
New <u>✓</u> Existing _____ Interm	12 1/4 - 9 5/8		3475'		2200 CF	Surf
New <u>✓</u> Existing _____ LongSt	8 3/4 - 7"		8,175 TD		1200 CF	2975'
New _____ Existing _____ Liner						
New _____ Existing _____ OpenHole						

Depths/Formations:

	Depths, Ft.	Formation	Tops?
Formation(s) Above	5350 - 025027 5806015560	G B G Dal	<u>✓</u> <u>✓</u>
Injection TOP:	6300	Cherry Dal	<u>✓</u>
Injection BOTTOM:	7900	Brushy C.	<u>✓</u>
Formation(s) Below	8650 - 8175	Brushy C. B.S.	<u>✓</u> <u>✓</u>

Capitan Reef? NO Potash? NO Noticed? _____ [WIPP? _____ Noticed? _____] Salado Top/Bot 2085 Cliff House? _____

Fresh Water: Depths: 420' Formation: ? Wells: NONE Analysis? _____ Affirmative Statement ✓

Disposal Fluid Analysis? ✓ Sources: B.S.

Disposal Interval: Analysis? ✓ Production Potential/Testing: Total wet UP Hole in well to S.W.

Notice: Newspaper Date 11/10/12 Surface Owner SLO Mineral Owner(s) _____

RULE 26.7(A) Affected Persons: EOG / RUBicon / Brown / Charing / Magn Harte

AOR: Maps? ✓ Well List? ✓ Producing in Interval? NO Wellbore Diagrams? ✓

.....Active Wells 1 Repairs? 0 Which Wells? _____

.....P&A Wells 0 Repairs? _____ Which Wells? _____

Issues: _____ Request Sent _____ Reply: _____

Jones, William V., EMNRD

From: Brian Collins <BCollins@concho.com>
Sent: Thursday, December 20, 2012 3:00 PM
To: Jones, William V., EMNRD
Cc: Tim Smith
Subject: FW: Disposal applications from COG Operating LLC: West Pearl 36 State SWD #1 30-025-NA A/36/19S/34E/Lea County

Will:

Here's the geologic top info you requested for the West Pearl 36 St SWD 1. Thanks. ---Brian

From: David DaGian
Sent: Thursday, December 20, 2012 3:37 PM
To: Brian Collins
Cc: Pat Welch
Subject: FW: Disposal applications from COG Operating LLC: West Pearl 36 State SWD #1 30-025-NA A/36/19S/34E/Lea County

Brian,

The Cherry Canyon is considered the top of the Delaware in this area.

Estimated shallow formations tops

Rustler: 1760'

Top of salt: 1848'

Base of salt: 3291'

Seven Rivers: 3902'

Delaware (Cherry Canyon): 5498'

Brushy Canyon: 6637'

Thanks,

David DaGian
Geologist – New Mexico Basin Team
COG OPERATING LLC
One Concho Center
600 W. Illinois Avenue
Midland, TX 79701
Office: 432-221-0415
Cell: 432-488-9133
ddagian@concho.com



From: Pat Welch
Sent: Thursday, December 20, 2012 9:09 AM