

DATE IN <u>5-6-10</u>	SUSPENSE	ENGINEER <u>WJ</u>	LOGGED IN <u>5-6-10</u>	TYPE <u>SWD</u>	APP NO. <u>1012657572</u>
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ABOVE THIS LINE FOR DIVISION USE ONLY

NEW MEXICO OIL CONSERVATION DIVISION

- Engineering Bureau -

1220 South St. Francis Drive, Santa Fe, NM 87505



RECEIVED OGD
Marbob
Tana 28 SWD #1
30-015-21614

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,
to follow by e-mail
- [F] ☐ Waivers are Attached

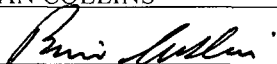
- [3] **SUBMIT ACCURATE AND COMPLETE INFORMATION REQUIRED TO PROCESS THE TYPE OF APPLICATION INDICATED ABOVE.**

- [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		PETROLEUM ENGINEER	4 May 10
Print or Type Name	Signature	Title	Date
		bcollins@marbob.com	
		e-mail Address	

APPLICATION FOR AUTHORIZATION TO INJECT

- I. PURPOSE: Secondary Recovery Pressure Maintenance X Disposal Storage
Application qualifies for administrative approval? X Yes No
- II. OPERATOR: MARBOB ENERGY CORPORATION
ADDRESS: P O BOX 227, ARTESIA, NM 88211-0227
CONTACT PARTY: BRIAN COLLINS, PETROLEUM ENGINEER PHONE: 575-748-3303
- 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: PETROLEUM ENGINEER
SIGNATURE:  DATE: 4 May 10
E-MAIL ADDRESS: bcollins@marbob.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
Tuna 28 SWD No. 1
2080' FNL, 1980' FWL
F-28-T26S-R25E, Eddy County

30-015-21614

Marbob Energy Corporation proposes re-enter the captioned well for salt water disposal service into the Delaware Sand from 3430' to 4425'. We propose to clean out to 4550', tie back 8 5/8" 0-2356', cement tie back to surface, set CIBP at 4550' and convert well to SWD service.

- V. Map is attached.
- VI. There are no wells located within the 1/2 mile radius area of review.
- VII.
 - 1. Proposed average daily injection rate = 2000 BWPD
Proposed maximum daily injection rate = 5000 BWPD
 - 2. Closed system
 - 3. Proposed maximum injection pressure = 686 psi
(0.2 psi/ft. x 3430' ft.)
 - 4. Source of injected water will be Delaware Sand and Bone Spring Sand produced water. No compatibility problems are expected. Analyses of Delaware and Bone Spring waters from analogous wells are attached. We have numerous Delaware SWD's in this area and have not encountered any compatibility issues with our Delaware and Bone Spring injected waters.
- VIII. The injection zone is the Delaware Sandstone, a fine-grained sandstone from 3430' to 4425'. Any underground water sources will be shallower than 426'. *Brushy Canyon*
- IX. The Delaware sand injection interval will be acidized with approximately 20 gal/ft of 7 1/2 % HCl acid. If necessary, the injection interval may be fraced with up to 300,000 lbs. of 20/40 mesh sand.
- X. Well logs are filed with the Division. A section of the sonic porosity log showing the injection interval is attached.
- XI. There is a stock tank within a mile of the proposed SWD well. Water analysis is attached.
- 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: Marbob Energy Corp.WELL NAME & NUMBER: Tuna 28 SWD No. 1 (Formerly Black River Federal 1)WELL LOCATION: 2080' FNL 1980' FNL FUNIT LETTER 28 SECTION 26s TOWNSHIP 25e RANGEWELLBORE SCHEMATICWELL CONSTRUCTION DATA
Surface CasingHole Size: 17 1/2" Casing Size: 13 3/8" @ 426'Cemented with: 400 sx. or - ft³Top of Cement: Surface Method Determined: CirculatedIntermediate CasingHole Size: 11" Casing Size: 8 5/8" @ 4752'
Cut @ pulled @ 2356'Cemented with: 500 sx. or - ft³Top of Cement: ± 2356' Method Determined: Casing cut @ pulled @ 2356'Production CasingHole Size: 7 7/8" Casing Size: 4 1/2" @ 9171'
Cut @ pulled @ 6700'Cemented with: 400 sx. or - ft³Top of Cement: 7475' Method Determined: EstimatedTotal Depth: 12136'Injection Interval3430' feet to 4425'

(Perforated or Open Hole; indicate which)

See attached "Before" and
"After" wellbore schematics

INJECTION WELL DATA SHEET

Tubing Size: 2 7/8" Lining Material: IPC or Duoline 20
 Type of Packer: 10K nickel plated double grip retrievable
 Packer Setting Depth: ± 3380'
 Other Type of Tubing/Casing Seal (if applicable): N/A

Additional Data

1. Is this a new well drilled for injection? Yes ☒ No ☐
 If no, for what purpose was the well originally drilled? Oil and gas

2. Name of the Injection Formation: Delaware Sand (Barshy Canyon)
3. Name of Field or Pool (if applicable): Cottonwood Spring
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. Yes
See attached wellbore schematic.
5. Give the name and depths of any oil or gas zones underlying or overlying the proposed injection zone in this area:
Overlying: None
Underlying: Bone Spring 4900-5400'

30-015-21614

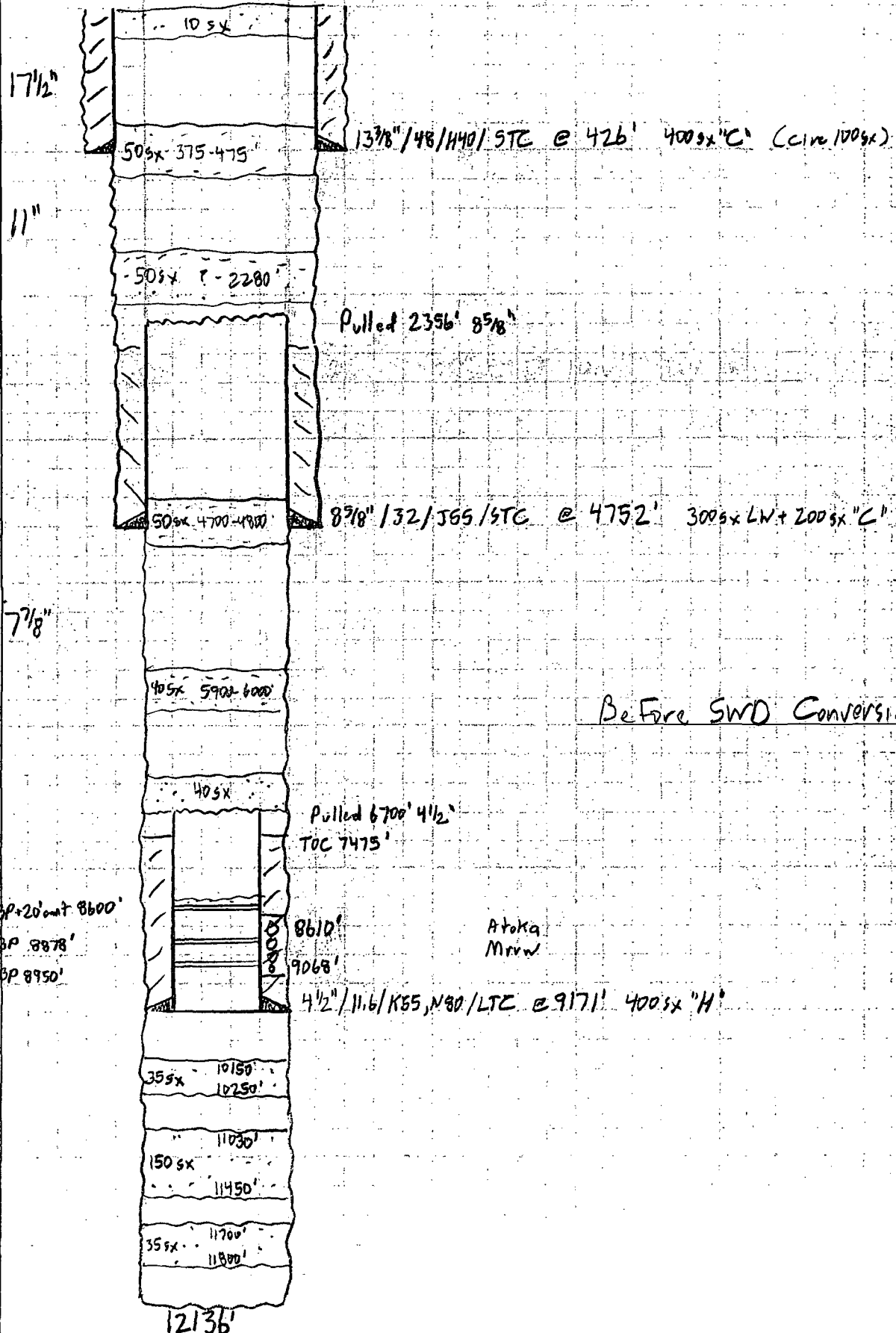
(Formerly Black River Fed. 1)

2080' FNL, 1980' FNL

F-28-26s-25e

Eddy NM

6L: 3704'



30-015-21614

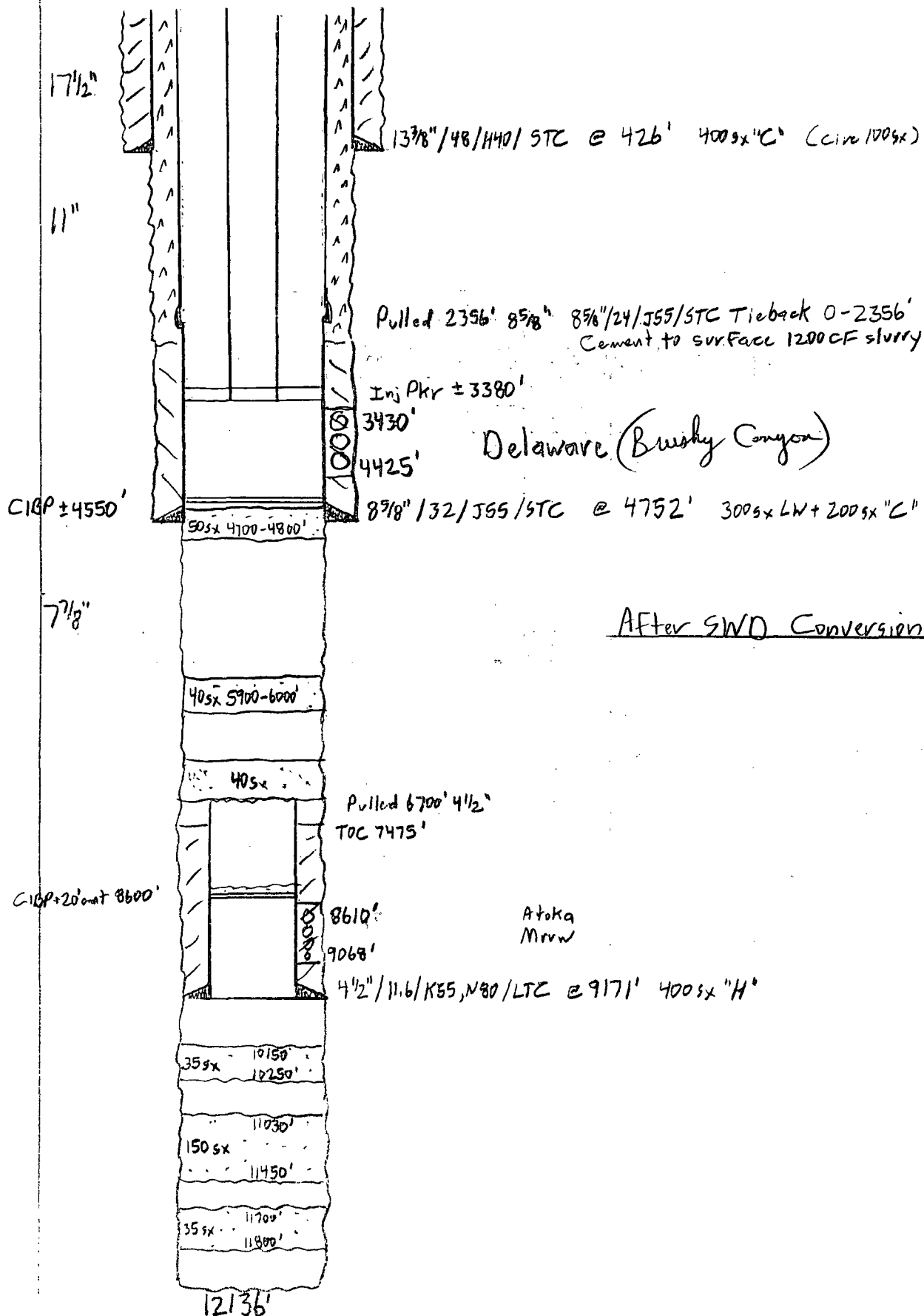
Tuna ZB SWD No. 1
(Formerly Black River Fed. 1)

2080' FNL, 1980' FNL

F-2B-26s-25e

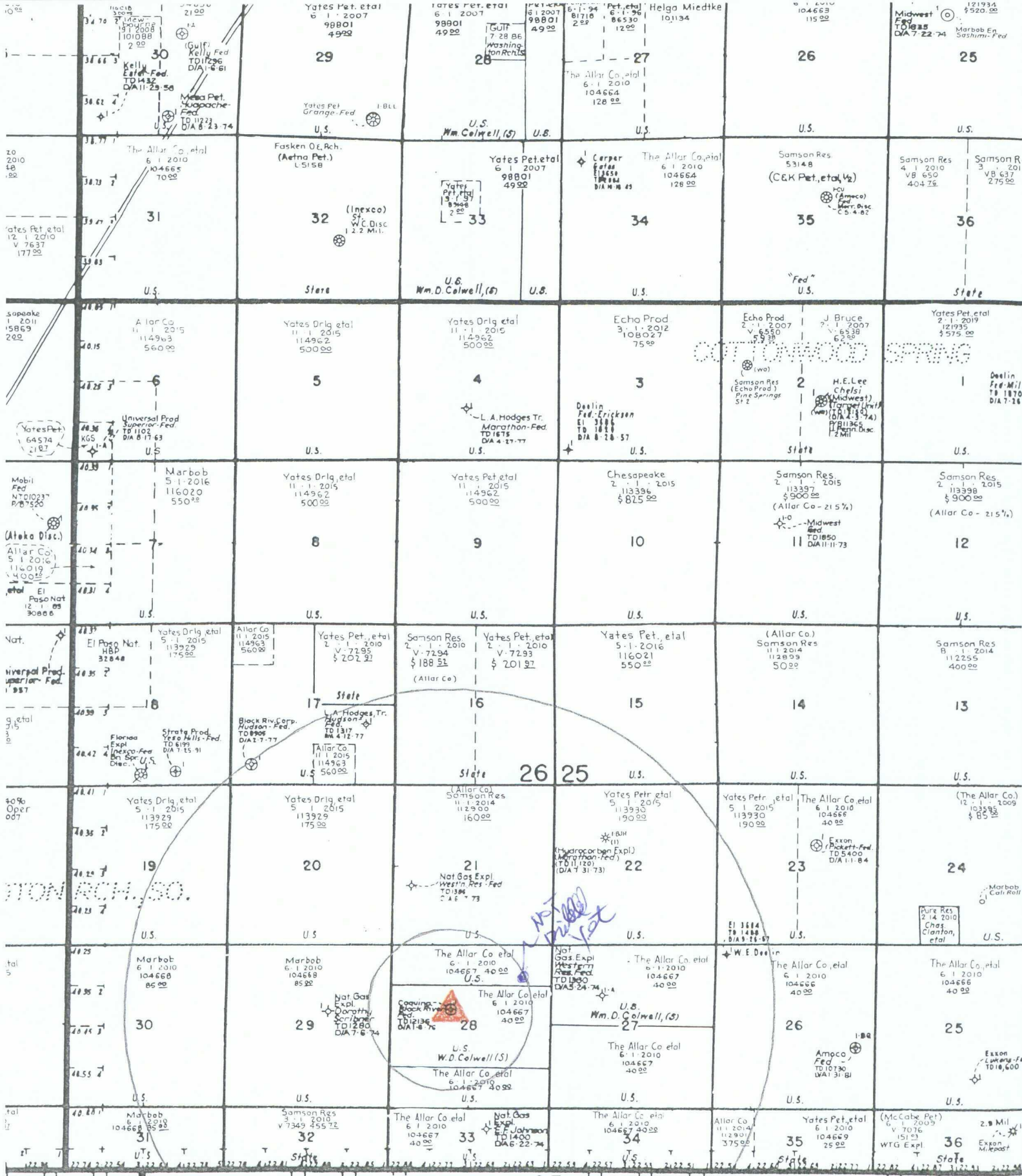
Eddy NM

GL: 3704'



V.

MAP



Marbob Energy Corporation
Tuna 28 SWD No. 1
2080 FNL 1980 FWL
Sec. 28-T26S-R25E
Eddy County, NM

Ownership Map


West Port of

VII.

Water Analysis Produced and Receiving Formation Water

Water Analysis Produced Water

----- Forwarded by Bill Polk/BJSCHEMICALSERVICES on 02/11/2010 07:58 AM -----

Analytical Laboratory Report for:	 BJ Chemical Services
MARBOB ENERGY CORPORATION	Account Representative: William D Polk

Production Water Analysis

Listed below please find water analysis report from: Sro, State Unit Com Well #2

Lab Test No:	2010106750	Sample Date:	02/01/2010
Specific Gravity:	1.135		
TDS:	207535		
pH:	6.25		
Resistivity:	.095@73F	ohms/M	

Cations:	mg/L	as:
Calcium	3281	(Ca ⁺⁺)
Magnesium	1376	(Mg ⁺⁺)
Sodium	75076	(Na ⁺)
Iron	22.44	(Fe ⁺⁺)
Potassium	1592.0	(K ⁺)
Barium	3.51	(Ba ⁺⁺)
Strontium	975.00	(Sr ⁺⁺)
Manganese	1.21	(Mn ⁺⁺)
Anions:	mg/L	as:
Bicarbonate	708	(HCO ₃ ⁻)
Sulfate	500	(SO ₄ ⁼)
Chloride	124000	(Cl ⁻)
Gases:		
Carbon Dioxide	410	(CO ₂)
Hydrogen Sulfide	0	(H ₂ S)

MARBOB Lab Test
ENERGY No:
CORPORATION 2010106750

DownHole SAT™
Scale Prediction
@ 100 deg. F

Water Analysis Receiving Formation

Analytical Laboratory Report for:

MARBOB ENERGY CORPORATION**Chemical Services**Account Representative:
Polk, Bill**Partial Water Analysis**

Listed below please find water analysis report from: WILLOW STATE, 2

Lab Test No: 2008125125 Sample Date: 06/24/2008

Cations:	mg/L	as:
Calcium	30900.00	(Ca ⁺⁺)
Magnesium	4910.00	(Mg ⁺⁺)
Sodium	60300	(Na ⁺)
Iron	23.00	(Fe ⁺⁺)
Potassium	1260.0	(K ⁺)
Barium	1.76	(Ba ⁺⁺)
Strontium	981.00	(Sr ⁺⁺)
Manganese	10.50	(Mn ⁺⁺)
Anions:	mg/L	as:
Sulfate	0	(SO ₄ ⁼)
Chloride	229000	(Cl ⁻)
Gases:		
Carbon Dioxide		(CO ₂)
Hydrogen Sulfide		(H ₂ S)

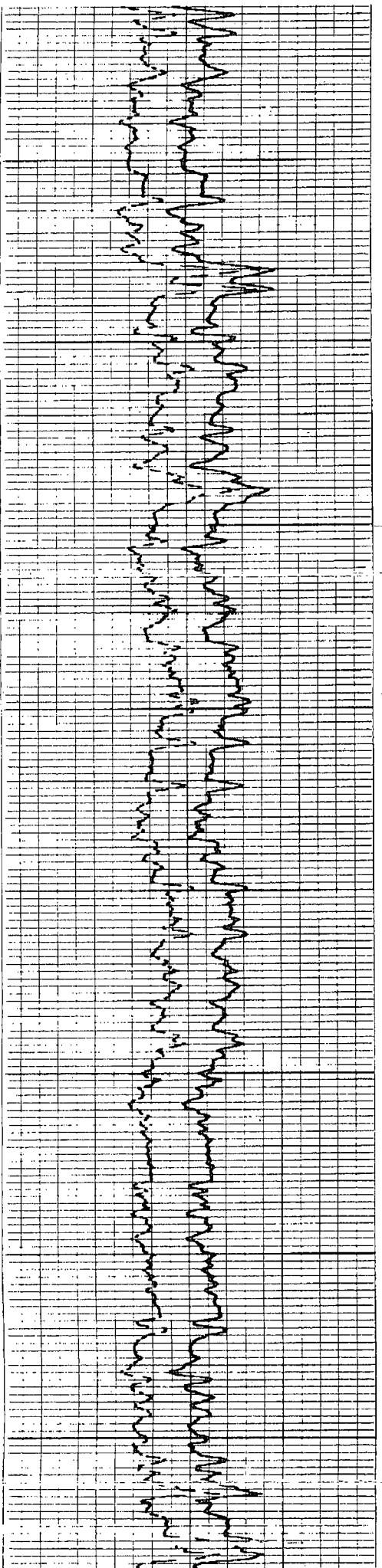
X.

**Sonic Log Across
Proposed Delaware
Sand Injection Interval**

COMPOSITED BOREHOLE, COMPENSATED SONIC LOG AND COMPENSATED NEUTRON-FORMATION DENSITY LOG.

TWO (CNL+FOC)		THREE (CNL+FOC)		SCALE CHANGES			
Type	Log	Type	Log	Type Log	Depth	Scale Up Hole	Scale Down Hole
41951							
FULL		FULL					
NA		58000					
30		30					
DATA				REMARKS:			
EH-1124		724		IGNEOUS BED AT AND AROUND 9900'			
AX-317		269					
D-1234		70					
EG-278		489					
B-3272		2472					
1045		684					
A-252		475					
A-240		300					
F-304		354					
AB-248		293					
KG-169		1126					
B-242		573					
TR		-					
JRE		-					
CPW		-					
Type	BOW SPRING		BOW SPRING				
No.	1		1				
S.O. -- Inches							
NONE							
DATA							
CPS	50		50				
ice CPS	520		520				
Cal	165		165				
Cal	6		6				
Before Log	RATIO		RATIO =				
Before Log	2.16		2.25				
After Log	RATIO		RATIO =				
After Log	2.16		2.25				
92	468		504				
92	740		808				
92	468		504				
92	740		808				

[illegible]



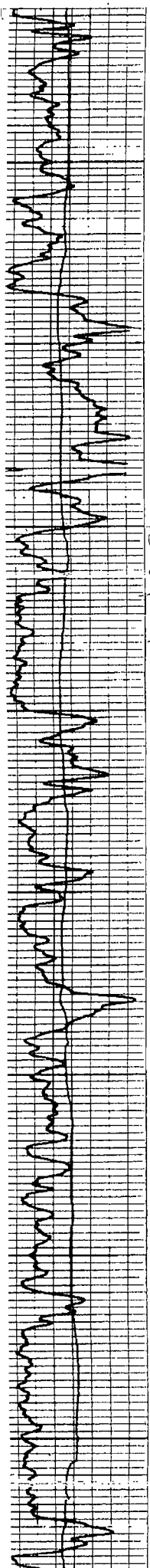
3500

3600

Brushy Camp

3700

3800



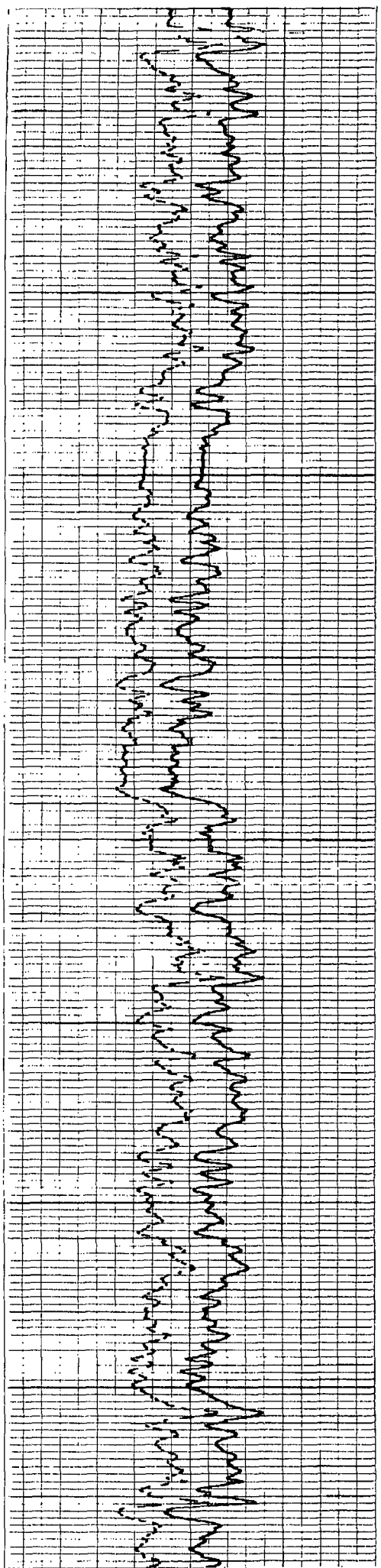
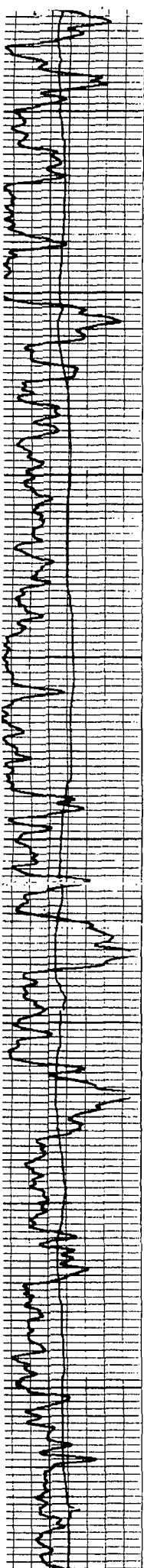
3500

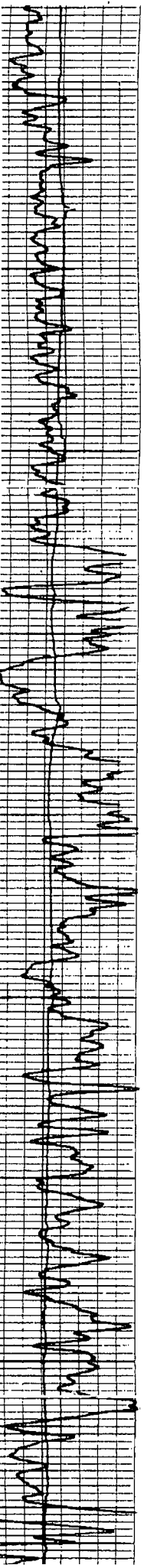
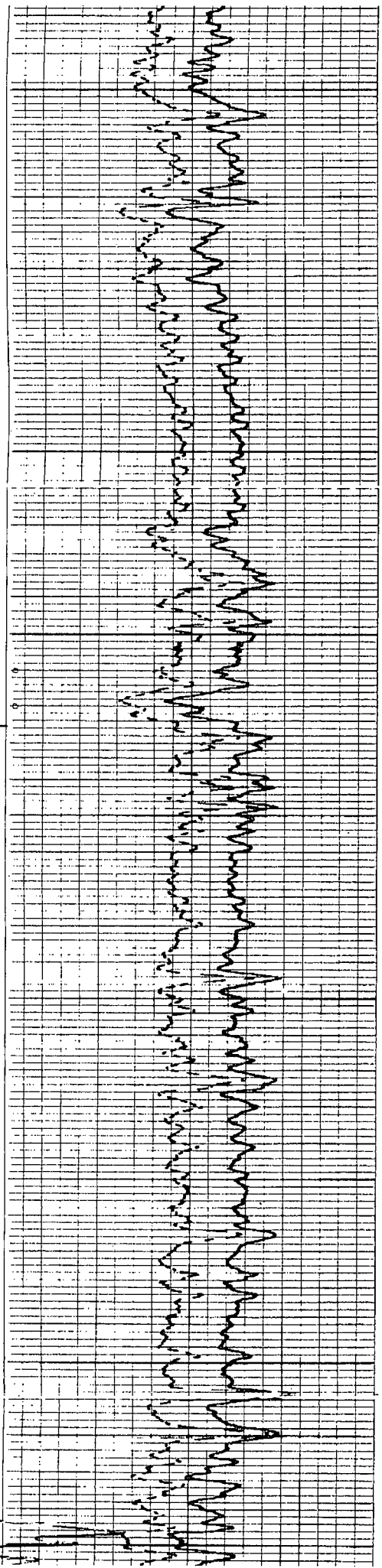
4000

4500

4200

43





XI.

**Fresh Water Sample
Analyses**



New Mexico Office of the State Engineer

Point of Diversion by Location

(with Owner Information)

WR File Nbr C 02369	Sub basin	Use STK	Diversion 3	Owner TOMMY D. WATSON	County POD Number ED C 02369	Grant	Source 6416 4	Sec 3 1	Tws 27	Rng 26S 25E	X	Y 557611 3542260*
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(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are smallest to largest) (NAD83 UTM in meters)

Record Count: 1

PLSS Search:

Section(s): 20, 21, 22, 27, Township: 26S Range: 25E
28, 29, 32, 33, 34

Sorted by: File Number

*UTM location was derived from PLSS - see Help

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

4/13/10 12:46 PM

Page 1 of 1

POINT OF DIVERSION BY LOCATION



Stock Tank Well
SW/4 NW/4 27-26S-25E

Date: 04/22/10

2708 West County Road, Hobbs NM 88240
Phone (505) 392-5556 Fax (505) 392-7307

Source Water

1

Analyzed For

Company	Well Name	County	State
Marbob	SESESE 5-265-25E	Eddy	New Mexico

Specific Gravity	1.005	SG @ 60 °F	1.007
pH	7.79	Sulfides	Not Tested
Temperature (°F)	72	Reducing Agents	Not Tested

Cations

Sodium (Calc)	in Mg/L	1,722	in PPM	1,710
Calcium	in Mg/L	292	in PPM	290
Magnesium	in Mg/L	22	in PPM	21
Soluable Iron (FE2)	in Mg/L	0.0	in PPM	0

Anions

Chlorides	in Mg/L	160	in PPM	159
Sulfates	in Mg/L	4,000	in PPM	3,971
Bicarbonates	in Mg/L	210	in PPM	208

Total Hardness (as CaCO3)	in Mg/L	820	in PPM	814
Total Dissolved Solids (Calc)	in Mg/L	6,406	in PPM	6,359

Remarks

Fresh Water
RW = .95 @ 75F

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB No. 1004-0137
Expires: July 31, 2010

SUNDRY NOTICES AND REPORTS ON WELLS
Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.

5. Lease Serial No.
NMNM104667

6. If Indian, Allottee or Tribe Name

SUBMIT IN TRIPLICATE – Other instructions on page 2.

7. If Unit of CA/Agreement, Name and/or No.

1. Type of Well

☐ Oil Well ☐ Gas Well ☒ Other SWD

8. Well Name and No.
TUNA 28 SWD #1

2. Name of Operator

MARBOB ENERGY CORPORATION

9. API Well No.
30-015-21614

3a. Address

P O BOX 227
ARTESIA NM 88211-0227

3b. Phone No. (include area code)

575-748-3303

10. Field and Pool or Exploratory Area
DELAWARE

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)
SEC. 28-T26S-R25E, SE/4NW/4
2080 FNL 1980 FWL, UNIT F

11. Country or Parish, State
EDDY COUNTY, NM

12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
<input checked="" type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input checked="" type="checkbox"/> Other <u>CONVERT TO SWD</u>
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

13. Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleat in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has determined that the site is ready for final inspection.)

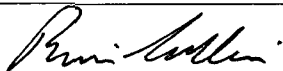
SUBMITTED FORM C-108 TO NMOCD - COPY ATTACHED

14. I hereby certify that the foregoing is true and correct. Name (Printed/Typed)

BRIAN COLLINS

Title PETROLEUM ENGINEER

Signature



Date

4 May 10

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by

Title

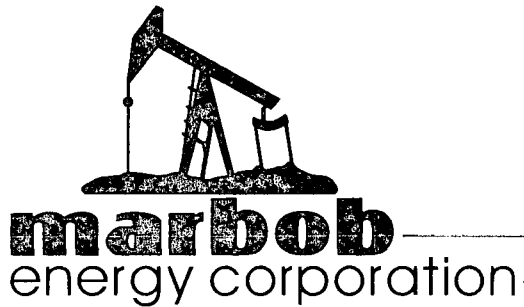
Date

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Office

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on page 2)



May 4, 2010

Artesia Daily Press
P. O. Box 190
Artesia, NM 88211-0190

Re: Legal Notice
Water Disposal Well

Gentlemen:

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 Marbob Energy Corporation, P. O. Box 227, Artesia, NM 88211-0227.

Sincerely,

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

Brian Collins
Petroleum Engineer

BC/dlw

enclosure

ARTESIA DAILY PRESS
LEGAL NOTICES

Marbob Energy Corporation, Post Office Box 227, Artesia, New Mexico, 88211-0227, 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 Tuna 28 SWD #1, is located 2080' FNL 1980' FWL, Sec. 28, Township 26 South, Range 25 East, Eddy County, New Mexico. Disposal water will be sourced from area wells producing from the Delaware and Bone Spring formations. The disposal water will be injected into the Delaware formation at a depth of 3430-4425' at a maximum surface pressure of 686 psi and a maximum rate of 5000 BWPD. 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 Marbob Energy Corporation, Post Office Box 227, Artesia, New Mexico 88211-0227, or call 575-748-3303.

Published in the Artesia Daily Press, Artesia, New Mexico
_____, 2010.



May 4, 2010

Cimarex Energy Company
15 E. 5th Street, Ste. #1000
Tulsa, OK 74103-4346

Re: Application to Inject
Tuna 28 SWD No. 1
Township 26 South, Range 25 East, NMPM
Section 28: 2080 FNL 1980 FWL, Unit F
Eddy County, New Mexico

Ladies and Gentlemen:

Enclosed for your review is a copy of Marbob Energy Corporation's application to convert the referenced well to salt water disposal. As a requirement of the New Mexico Oil Conservation Division, we are notifying you because you have been identified as an operator or surface owner. Any objections must be submitted in writing to NMOCD, 1220 S. St. Francis Drive, Santa Fe, New Mexico 87505. Objections must be received within fifteen (15) days of receipt of this letter.

Please do not hesitate to contact us should you have any questions.

Sincerely,

A handwritten signature in black ink, appearing to read 'Brian Collins', is written over a horizontal line.

Brian Collins
Petroleum Engineer

BC/dlw
enclosure



May 4, 2010

Samson Resources Company
2 W. Second Street
Tulsa, OK 74103

Re: Application to Inject
Tuna 28 SWD No. 1
Township 26 South, Range 25 East, NMPM
Section 28: 2080 FNL 1980 FWL, Unit F
Eddy County, New Mexico

Ladies and Gentlemen:

Enclosed for your review is a copy of Marbob Energy Corporation's application to convert the referenced well to salt water disposal. As a requirement of the New Mexico Oil Conservation Division, we are notifying you because you have been identified as an operator or surface owner. Any objections must be submitted in writing to NMOCD, 1220 S. St. Francis Drive, Santa Fe, New Mexico 87505. Objections must be received within fifteen (15) days of receipt of this letter.

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Brian Collins
Petroleum Engineer

BC/dlw
enclosure

31 U.S. A. H. Co 6-1-2015 114963 56092	32 Store U.S. Votes Orig et al 6-1-2015 114962 50092	33 U.S. Votes Orig et al 6-1-2015 114962 50092	34 U.S. Echo Prod 3-1-2012 108027 7599	35 U.S. Echo Prod 2-1-2007 V-6530 6299	36 State J Bar Cane 6-1-2000 100837 2999
5 U.S. Universal Prod Superior Fed. 19-11-07 BIA 8-14-63	4 U.S. L. A. Hodges Tr. Marathon Fed. TD 1875 DA 4-21-77	3 U.S. Oaklin Fed. Crick 11-11-08 DA 8-24-37	2 State Samson Res (Echo Prod) Fine Springs St 2	1 U.S. J. Bruce 7-1-2007 V-6530 6299	1 U.S. J Bar Cane 6-1-2000 100837 2999
17 U.S. Marbob 5-1-2016 116020 55092	8 U.S. Votes Orig et al 6-1-2015 114962 50092	9 U.S. Votes Orig et al 6-1-2015 114962 50092	10 U.S. Chesapeake 2-1-2015 113396 \$82592	11 U.S. Samson Res 2-1-2015 113397 \$90092 (Allor Co - 21.5%) Midwest TD 1880 DA 11-11-73	12 U.S. Samson Res 2-1-2015 113398 \$90092 (Allor Co - 21.5%)
18 U.S. El Paso Nat HBP 32448	17 State A. Hodges Tr. Marathon Fed. TD 1875 DA 4-21-77	16 U.S. Samson Res 2-1-2010 V-7294 \$18892 (Allor Co)	15 U.S. Votes Orig et al 6-1-2016 116021 55092	14 U.S. Allor Co Samson Res 6-1-2010 112853 5099	13 U.S. Samson Res 6-1-2010 112855 40092
19 U.S. Votes Orig et al 6-1-2015 113929 17592	20 U.S. Votes Orig et al 6-1-2015 113929 17592	21 U.S. The Allor Co et al 6-1-2010 104657 4092	22 U.S. Votes Orig et al 6-1-2015 113930 19092	23 U.S. The Allor Co et al 6-1-2010 104657 4092	24 U.S. The Allor Co et al 6-1-2010 104657 4092
30 U.S. Marbob 6-1-2010 104650 2592	29 U.S. Marbob 6-1-2010 104656 2592	28 U.S. The Allor Co et al 6-1-2010 104657 4092	27 U.S. The Allor Co et al 6-1-2010 104657 4092	26 U.S. The Allor Co et al 6-1-2010 104657 4092	25 U.S. The Allor Co et al 6-1-2010 104657 4092
31 U.S. Marbob 6-1-2010 104650 2592	32 U.S. Marbob 6-1-2010 104656 2592	33 U.S. The Allor Co et al 6-1-2010 104657 4092	34 U.S. The Allor Co et al 6-1-2010 104657 4092	35 U.S. The Allor Co et al 6-1-2010 104656 4092	36 U.S. The Allor Co et al 6-1-2010 104656 4092

Exhibit #4

• Tuna 28 Federal #1

5. Proposed Cement Program: *See COA*

- a. 13 3/8" Surf Cement to surface with 350 sk "C" wt 14.8 ppg yield 1.34.
- b. 9 5/8" Int *See COA* Cement to surface with 200 sk "C" Light wt 12.7 yield 1.91, tail in with 100 sk "C" wt 14.8 yield 1.34
- d. 5 1/2" Prod *See COA* Cement 1st stage with 600 sk "H" Light wt 12.7 yield 1.91, Tail in with 200 sk "H" wt 13.0 yield 1.64
Cement 2nd stage with 700 sk "C" Light wt 12.7 yield 1.91 Tail in with 100 sk "H" wt 13.0 yield 1.64. DV @ 5600'. TOC 600'

The above cement volumes could be revised pending the caliper measurement from the open hole logs. The top of cement is designed to reach approximately 200' above the 9 5/8" casing shoe. **All casing is new and API approved.**

6. Minimum Specifications for Pressure Control:

Nipple up on 13 3/8" with 2m system and test to 2000# with independent tester. Nipple up on 9 5/8" with 5m system and test to 5000# with ind. Tester.

BOP will be operationally checked each 24 hour period. BOP will be operationally checked on each trip out of the hole. These checks will be noted on the daily tour sheets. A 2" kill line and a 3" choke line will be included in the drilling spool located below the BOP. Other accessories to the BOP equipment will include a Kelly cock and floor safety valve (inside BOP) and choke lines and choke manifold with 5000 psi WP rating.

7. Estimated BHP: 4,409.6 psi

8. Mud Program: *See COA* The applicable depths and properties of this system are as follows:

Depth	Type System	Mud Weight	Viscosity (sec)	Waterloss (cc)
0' - 300'	Fresh Water	8.4	29	N.C.
300' - 1200'	Brine	9.9 - 10.0	29	N.C.
1200' - 9200'	Cut Brine	8.9 - 9.0	29	N.C.
9200' - 10600'	Cut Brine	8.9 - 9.0	29-30	6CC

The necessary mud products for weight addition and fluid loss control will be on location at all times.

9. Auxiliary Well Control and Monitoring Equipment:

- A Kelly cock will be in the drill string at all times.
- A full opening drill pipe stabbing valve having the appropriate connections will be on the rig floor at all times.
- Hydrogen Sulfide detection equipment will be in operation after drilling out the 13 3/8" casing shoe until the 5 1/2" casing is cemented. Breathing equipment will be on location upon drilling the 13 3/8" shoe until total depth is reached.

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:

**SAMSON RESOURCES COMPANY
2 W SECOND STREET
TULSA OK 74103**

2. Article Number

(Transfer from service label)

7006 0810 0000 8979 7145

PS Form 3811, February 2004

DW

Domestic Return Receipt

Tuna 28 SWD

102595-02-M-1540

COMPLETE THIS SECTION ON DELIVERY

A. Signature

X

Jim Pfeiffer

☐ Agent

☐ Addressee

B. Received by (Printed Name)

Jim Pfeiffer

C. Date of Delivery

D. Is delivery address different from item 1? ☐ Yes

If YES, enter delivery address below: ☐ No

MAY 14 2010

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:

**BUREAU OF LAND MANAGEMENT
620 E GREENE ST
CARLSBAD NM 88220**

2. Article Number

(Transfer from service label)

7006 0810 0000 8979 7149

PS Form 3811, February 2004

DW

Domestic Return Receipt

102595-02-M-15

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:

**CIMAREX ENERGY CORPORATION
15 E 5TH STREET, STE. #1000
TULSA, OK 74103-4346**

COMPLETE THIS SECTION ON DELIVERY

A. Signature

X

Jim Pfeiffer

☐ Agent

☐ Addressee

B. Received by (Printed Name)

Jim Pfeiffer

C. Date of Delivery

D. Is delivery address different from item 1? ☐ Yes

If YES, enter delivery address below: ☐ No

MAY 10 2010

3. Service Type

☒ Certified Mail

☐ Express Mail

☐ Registered

☐ Return Receipt for Merchandise

☐ Insured Mail

☐ C.O.D.

Affidavit of Publication

NO. 21158

STATE OF NEW MEXICO

County of Eddy:

GARY D. SCOTT being duly

sworn, says: That he is the **PUBLISHER** of The

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

Legal Notice

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 week/days on the same day as follows:

First Publication May 7, 2010

Second Publication

Third Publication

Fourth Publication

Fifth Publication

Subscribed and sworn to before me this

7 Day May 2010



OFFICIAL SEAL
Jo Morgan
NOTARY PUBLIC - STATE OF NEW MEXICO

My commission expires: 6/16/2012

Jo Morgan

Jo Morgan
Notary Public Eddy County, New Mexico

Copy of Publication:

Marbob Energy Corporation, Post Office Box 227, Artesia, New Mexico, 88211-0227, has filed Form C-100 (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 Tuna 28 SWD #1, is located 2080' FNL 1000' FWL, Sec. 28, Township 28 South, Range 25 East, Eddy County, New Mexico. Disposal water will be sourced from area wells producing from the Delaware and Bone Spring formations. The disposal water will be injected into the Delaware formation at a depth of 3430-4425' at a maximum surface pressure of 686 psi and a maximum rate of 5000 BWPD. 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 Marbob Energy Corporation, Post

Office Box 227, Artesia, New Mexico 88211-0227, or call 575-748-3303.

Published in the Artesia Daily Press, Artesia, NM May 7, 2010.
Legal No. 21158

MAY 12 2010

Injection Permit Checklist (03/15/2010)

Case _____ R- _____ SWD 1225 WFX _____ PMX _____ IPI _____ Permit Date 6/8/10 UIC Qtr (A/M/J)
 # Wells 1 Well Name: Tuna 28 SWD #1 (was Black River Fed #1)
 API Num: (30-) 05-21614 Spud Date: 8/10/75 New/Old: (0) (UIC primacy March 7, 1982)
 Footages 2080 FNL/1980 FUL Unit F Sec 28 Tsp 265 Rge 25E County Eddy
 Operator: Marble Energy Corp Contact Brian Collins
 OGRID: 14049 RULE 5.9 Compliance (Wells) 4/1300 (Finan Assur) OK IS 5.9 OK? OK
 Operator Address: P.O. Box 227, Artesia, NM 88211-0227
 Current Status: PEA 1976

Planned Work to Well: Clamout, Tieback 8 5/8 Planned Tubing Size/Depth: 2 7/8 @ 3380

	Sizes Hole.....Pipe	Setting Depths	Cement Sx or Cf	Cement Top and Determination Method
Existing Surface	<u>17 1/2 13 3/8</u>	<u>426</u>	<u>400</u>	<u>CRC</u>
Existing Intermediate	<u>11 8 5/8</u>	<u>2356</u>	<u>500</u>	<u>2356 ext.</u>
Existing Long String	<u>7 7/8 4 1/2</u>	<u>6700-9171</u>	<u>400</u>	<u>7475 ext.</u>

Drill Tool _____ Liner _____ Oper Hole _____ Total Depth 13136
 Well File Reviewed ☒
 Diagrams: Before Conversion ☒ After Conversion ☒ Elogs in Imaging File: ☒

Intervals:	Depths	Formation	Producing (Yes/No)
Above (Name and Top)	<u>1250</u>	<u>Del.</u>	
Above (Name and Top)	<u>2130</u>	<u>Cherry C.</u>	
Injection.....	<u>3260</u>	<u>Del (Brushy)</u>	
Interval TOP:	<u>3430</u>	<u>Del (Brushy)</u>	
Injection.....	<u>4425</u>	<u>Del (Brushy)</u>	
Interval BOTTOM:	<u>4425</u>	<u>Del (Brushy)</u>	
Below (Name and Top)	<u>4900-5400</u>	<u>B.S.</u>	
	<u>4668</u>	<u>TOP B.S.</u>	

GENERAL LOCATION
S. of WHITE CITY
686 PSI Max. WHIP
 Open Hole (Y/N) _____
 Deviated Hole? _____

Sensitive Areas: Capitan Reef Cliff House Salt Depths _____
 Potash Area (R-111-P) _____ Potash Lessee _____ Noticed? _____

Fresh Water: Depths: _____ Wells 1 Analysis? Yes Affirmative Statement ☒

Disposal Fluid Sources: Del / B.S. Analysis? Yes

Disposal Interval Production Potential/Testing/Analysis: PEA 1976

Notice: Newspaper (Y/N) ☒ Surface Owner BLM Mineral Owner(s) _____

RULE 26.7(A) Affected Parties: Allen or Sonson C. S. Wray

Area of Review: Adequate Map (Y/N) ☒ and Well List (Y/N) ☒

Active Wells 0 Num Repairs _____ Producing in Injection Interval in AOR _____

P&A Wells 0 Num Repairs _____ All Wellbore Diagrams Included? _____

Questions/Required Work:

~~one well planned~~ one well planned
not drilled yet

Report Testing to Division

Request Sent _____ Reply: _____

Request Sent _____ Reply: _____

Request Sent _____ Reply: _____