

DATE 5/29/12	SUSPENSE	ENGINEER WWT	LOGGED IN 5/29/12	TYPE SWD	APP NO. 1215040118
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7/15/12
7/25/12

ABOVE THIS LINE FOR DIVISION USE ONLY

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



R 360 Permian B.
Avalon SWD #1D

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
2 ☒ 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

Joe B. Rodriguez
Print or Type Name

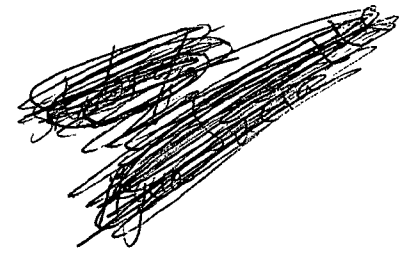
Joe B. Rodriguez
Signature

Dir. Regulatory Affairs & Development 03/19/2012
Title Date

jrodriguez@r360es.com
e-mail Address

210-275-0834

B-36-265-31E
Eddy/State





May 24, 2012

VIA: USP Overnight Priority

Mr. Richard Ezeanyim, Bureau Chief
Engineering and Geological Services Bureau
New Mexico Oil Conservation Division
1220 So. St. Francis Drive
Santa Fe, New Mexico 87505

Re: Avalon SWD #1D Revised Application, R360 Permian Basin LLC, Unit B (NW/4, NE/4), Section 36, Township 26 South, Range 31 East, Eddy County, New Mexico

Dear Mr. Ezeanyim:

This letter transmits the revised application for the referenced SWD well permit application that was originally submitted to the New Mexico Oil Conservation Division (OCD) on March 19, 2012. The application was revised to reflect the operator name change to R360 Permian Basin LLC with OGRIS number 289936). The well will be located in southeast Eddy County, approximately 45 miles southeast of Malaga, New Mexico. The well will be situated 350' FNL and 2475' FEL, in Unit B (NW/4, NE/4) Section 36, Township 26 South and Range 31 East. The well is proposed to reinject produced and frac water into the Delaware Basin Group between 4300' and 6500'.

On March 19, 2012, notification was sent to the surface owner (David Kirk) and offset lease owners, including Hanson Operating Company, Agua Sucia, LLC and Legacy Reserves Operating, L.P. Please contact Mr. Joe Rodriguez with R360 Permian Basin LLC, at (210) 275-0839 or myself at (432) 687-0901.

Sincerely,

Larson & Associates, Inc.

Mark J. Larson, P.G.

Sr. Project Manager/President

Encl.

Cc: Randy Dade – OCD District 2

Joe Rodriguez – R360

AVALON SWD #1D
PERMIT APPLICATION
Unit B (NW/4, NE/4) Section 36
Township 26 South, Range 31 East
Eddy County, New Mexico

LAI Project No. 11-0131-03

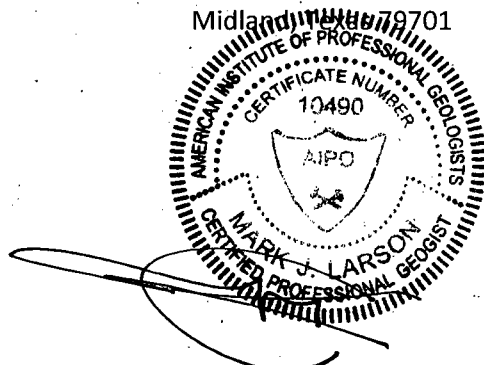
March 19, 2012

Prepared for:

R360 Environmental Solutions, Inc.
Greenspoint Plaza 4
16945 Northchase Drive, Suite 2200
Houston, TX 77060

Prepared by:

Larson & Associates, Inc.
507 North Marienfeld, Suite 200
Midland, Texas 79701



Mark J. Larson, P.G.
Certified Professional Geologist #10490

APPLICATION FOR AUTHORIZATION TO INJECT

I. PURPOSE: Secondary Recovery Pressure Maintenance ☒ Disposal Storage
Application qualifies for administrative approval? Yes No

II. OPERATOR: R360 Permian Basin, LLC

ADDRESS: 16945 Northchase Drive, Suite 2200, Houston, Texas 77060

CONTACT PARTY: Joe B. Rodriguez, Director Regulatory Affairs & Development PHONE: (210) 275-0839

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 ☒ 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: Joe B. Rodriguez

TITLE: Director Regulatory Affairs & Development

SIGNATURE: 

DATE: 03-19-2012

E-MAIL ADDRESS: jrodriguez@r360es.com

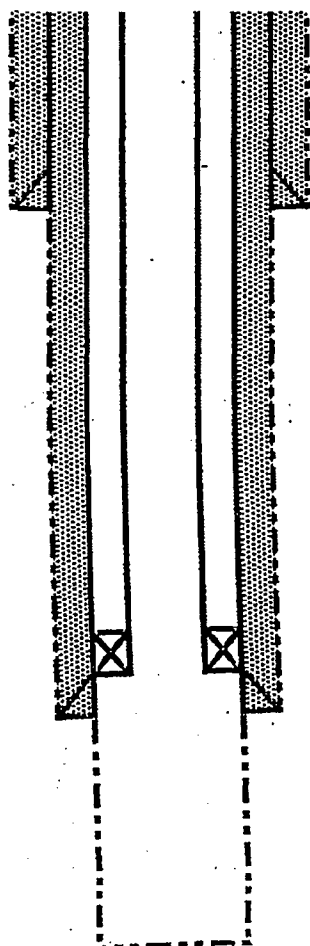
* If the information required under Sections VI, VIII, X, and XI above has been previously submitted, it need not be resubmitted.
Please show the date and circumstances of the earlier submittal: _____

DISTRIBUTION: Original and one copy to Santa Fe with one copy to the appropriate District Office

ATTACHMENT III

Injection Well Data Sheet

INJECTION WELL DATA SHEET

OPERATOR: R360 Permian Basin, LLCWELL NAME & NUMBER: Avalon SWD #1DWELL LOCATION: 350' FNL AND 2475' FEL
FOOTAGE LOCATIONUNIT LETTER
BSECTION
36TOWNSHIP
26SRANGE
31EWELLBORE SCHEMATIC

Hole 15"

10-3/4" 45.5# J-55 @ 920'

Hole 9.5"

Tubing: 4.5" IPC set @ 4250'

7" 23# J-55 @ 4300'

Hole 5.875"

TD 6500'

WELL CONSTRUCTION DATASurface CasingHole Size: 15" Casing Size: 10-3/4"Cemented with: 422 sx. or 549 ft³Top of Cement: SURFACE Method Determined: CALCULATEDIntermediate CasingHole Size: 9.5" Casing Size: 7"Cemented with: 778 sx. or 1101 ft³Top of Cement: SURFACE Method Determined: CALCULATEDProduction CasingHole Size: 5.875" Casing Size: _____Cemented with: _____ sx. or _____ ft³

Top of Cement: _____ Method Determined: _____

Total Depth: _____

Injection Interval

4300' feet to 6500'

(Perforated or Open Hole; indicate which)

INJECTION WELL DATA SHEET

Tubing Size: 4.5" Lining Material: Plastic Coated

Type of Packer: AD-1 tension

Packer Setting Depth: 4150'

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

Additional Data

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

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

2. Name of the Injection Formation: Delaware Sand, Cherry & Brushy Canyon

3. Name of Field or Pool (if applicable): North Mason Delaware is shallower field

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. _____

Not Applicable

5. Give the name and depths of any oil or gas zones underlying or overlying the proposed injection zone in this area: Shallower zones: Delaware Sand @4150' - No productive zones deeper in the area

District I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720
District III
1000 Rio Grande Road, Aztec, NM 87410
Phone: (505) 334-6175 Fax: (505) 334-6176
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico
Energy Minerals and Natural Resources
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-101
Revised December 16, 2011

Permit

APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, PLUGBACK, OR ADD A ZONE

Operator Name and Address R360 Permian Basin, LLC 16945 Northchase Drive, Suite 2200 Houston, Texas 77060		OGRID Number 289936
Property Code	Property Name Avalon SWD	Well No. ID

Surface Location									
UL - Lot B	Section 36	Township 26S	Range 31E	Lot 1/4	Feet from 350	N/S Line N	Feet from 2475	E/W Line E	County Eddy

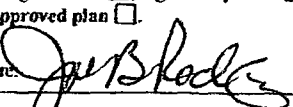
Pool Information	
Delaware sand, Cherry & Brushy Canyon	8080

Additional Well Information				
Work Type New Well	Well Type SWD	Cable/Rotary R	Lease Type P	Ground Level Elevation 3132
Multiple N	Proposed Depth 6500'	Formation Brushy Canyon	Contractor	Spud Date
Depth to Ground water		Distance from nearest fresh water well		Distance to nearest surface water

Proposed Casing and Cement Program						
Type	Hole Size	Casing Size	Casing Weight/ft	Setting Depth	Sacks of Cement	Estimated TOC
Surface	15"	10.75"	45.5	920'	422	Surface
Int	9.5"	7"	20	4300'	778	Surface

Casing/Cement Program: Additional Comments

Proposed Blowout Prevention Program			
Type	Working Pressure	Test Pressure	Manufacturer
Double Ram	3000	3000	

I hereby certify that the information given above is true and complete to the best of my knowledge and belief. I further certify that the drilling pit will be constructed according to NMOCD guidelines <input type="checkbox"/> , a general permit <input type="checkbox"/> , or an (attached) alternative OGD-approved plan <input type="checkbox"/> . Signature:  Printed name: Joe B. Rodriguez Title: Director, Regulatory Affairs and Development E-mail Address: jrodriguez@r360es.com Date: 03/19/2012	OIL CONSERVATION DIVISION	
	Approved By:	
	Title:	
	Approved Date:	Expiration Date:
	Conditions of Approval Attached	

District I
 1625 N. French Dr., Hobbs, NM 88240
 Phone: (575) 392-6161 Fax: (575) 392-0720
District II
 811 S. First St., Artesia, NM 88210
 Phone: (575) 746-1283 Fax: (575) 746-0720
District III
 1000 Rio Brazos Road, Alamo, NM 87410
 Phone: (505) 334-6178 Fax: (505) 334-6170
District IV
 1220 S. St. Francis Dr., Santa Fe, NM 87505
 Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico
 Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
 1220 South St. Francis Dr.
 Santa Fe, NM 87505

Form C-102
 Revised August 1, 2011
 Submit one copy to appropriate
 District Office
☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

1 API Number		2 Pool Code 44820		3 Pool Name Mason Delaware North	
4 Property Code		5 Property Name AVALON SWD			6 Well Number #1D
7 OGRID No. 289936		8 Operator Name R360 PERMAN BASIN, INC.			9 Elevation 5129'

" Surface Location

10. or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
B	36	26S	31E		333	NORTH	2482	EAST	LEA

" Bottom Hole Location if Different From Surface

10. or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County

11 Dedicated Acres	12 Joint or Infill	13 Consolidation Code	14 Order No.

No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.

GEODEIC COORDINATES NAD 83 NME SURFACE LOCATION N=366252.6 E=728207.5 LAT=32.0019009°N LONG=103.43513695°W	533'	2482'	" OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or retained mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered in the division. Signature: <i>Joe B. Rodriguez</i> Date: 6/7/2012 Printed Name: Joe B. Rodriguez E-mail Address: jrodriguez@r360es.com
			"SURVEYOR CERTIFICATION I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief. JUNE 5, 2012 Date of Survey Signature and Seal of Professional Surveyor:
			Certificate Number: <i>28251</i>

R360 Permian Basin LLC

Avalon SWD #1D

Unit B (NW/4, NE/4), Sec. 36, T-26-S, R-31-E

Eddy County, New Mexico

Equipment and Design:

R360 Permian Basin LLC (R360) will use a closed loop system to drill this well. The following equipment will be on location:

- (1) 250 bbl steel reverse tank
- (2) Roll-off bins

Operations and Maintenance:

During each day of operation, the rig's crew will inspect and closely monitor the fluids contained within the steel tank and visually monitor any release that may occur. Should a release, spill or leak occur, the New Mexico Oil Conservation Division (OCD) District 2 office in Artesia (575-748-1283) will be notified, as required in OCD rule 19.15.29.8.

Closure:

After drilling operations, fluids and solids will be hauled and disposed at Controlled Recovery, Inc. (CRI), a subsidiary of R360, which operates under OCD permit number R9166. The secondary disposal site will be Lea Land Landfill located at Mile Marker 66, U.S. Hwy 62/180, which operates under OCD NM-1-035.

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
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1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources
Department
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-144 CLEZ
Revised August 1, 2011

For closed-loop systems that only use above ground steel tanks or haul-off bins and propose to implement waste removal for closure, submit to the appropriate NMOC District Office.

Closed-Loop System Permit or Closure Plan Application

(that only use above ground steel tanks or haul-off bins and propose to implement waste removal for closure)

Type of action: ☒ Permit ☐ Closure

Instructions: Please submit one application (Form C-144 CLEZ) per individual closed-loop system request. For any application request other than for a closed-loop system that only use above ground steel tanks or haul-off bins and propose to implement waste removal for closure, please submit a Form C-144.

Please be advised that approval of this request does not relieve the operator of liability should operations result in pollution of surface water, ground water or the environment. Nor does approval relieve the operator of its responsibility to comply with any other applicable governmental authority's rules, regulations or ordinances.

1. Operator: R360 Permian Basin LLC OGRID #: 289936
Address: 16945 Northchase Drive, Suite 2200, Houston, Texas 77060
Facility or well name: Avalon SWD #1D
API Number: _____ OCD Permit Number: _____
U/L or Qtr/Qt: B Section 36 Township 26S Range 31E County: Eddy
Center of Proposed Design: Latitude 32.0050975 Longitude -103.7305068 NAD: ☐ 1927 ☒ 1983
Surface Owner: ☐ Federal ☐ State ☒ Private ☐ Tribal Trust or Indian Allotment

2. ☒ Closed-loop System: Subsection H of 19.15.17.11 NMAC
Operation: ☒ Drilling a new well ☐ Workover or Drilling (Applies to activities which require prior approval of a permit or notice of intent) ☐ P&A
☐ Above Ground Steel Tanks or ☒ Haul-off Bins

3. Signs: Subsection C of 19.15.17.11 NMAC
☒ 12"x 24", 2" lettering, providing Operator's name, site location, and emergency telephone numbers
☐ Signed in compliance with 19.15.16.8 NMAC

4. Closed-loop Systems Permit Application Attachment Checklist: Subsection B of 19.15.17.9 NMAC
Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the documents are attached.
☒ Design Plan - based upon the appropriate requirements of 19.15.17.11 NMAC
☒ Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC
☒ Closure Plan (Please complete Box 5) - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC
☐ Previously Approved Design (attach copy of design) API Number: _____
☐ Previously Approved Operating and Maintenance Plan API Number: _____

5. Waste Removal Closure For Closed-loop Systems That Utilize Above Ground Steel Tanks or Haul-off Bins Only: (19.15.17.13.D NMAC)

Instructions: Please identify the facility or facilities for the disposal of liquids, drilling fluids and drill cuttings. Use attachment if more than two facilities are required.

Disposal Facility Name: Controlled Recovery, Inc. (R360 Permian Basin LLC) Disposal Facility Permit Number: R9166
Disposal Facility Name: Lea Land Landfill Disposal Facility Permit Number: NM-1-035

Will any of the proposed closed-loop system operations and associated activities occur on or in areas that will not be used for future service and operations?
☐ Yes (If yes, please provide the information below) ☒ No

Required for impacted areas which will not be used for future service and operations:

- ☐ Soil Backfill and Cover Design Specifications - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC
☐ Re-vegetation Plan - based upon the appropriate requirements of Subsection I of 19.15.17.13 NMAC
☐ Site Reclamation Plan - based upon the appropriate requirements of Subsection G of 19.15.17.13 NMAC

6. Operator Application Certification:

I hereby certify that the information submitted with this application is true, accurate and complete to the best of my knowledge and belief.

Name (Print): Joe b. Rodriguez Title: Director Regulatory Affairs and Development

Signature: [Signature] Date: March 19, 2012

e-mail address: jrodriguez@r360es.com Telephone: (210) 275-0839

7. **OCD Approval:** ☐ Permit Application (including closure plan) ☐ Closure Plan (only)
OCD Representative Signature: _____ Approval Date: _____
Title: _____ OCD Permit Number: _____

8. **Closure Report (required within 60 days of closure completion):** Subsection K of 19.15.17.13 NMAC
Instructions: Operators are required to obtain an approved closure plan prior to implementing any closure activities and submitting the closure report. The closure report is required to be submitted to the division within 60 days of the completion of the closure activities. Please do not complete this section of the form until an approved closure plan has been obtained and the closure activities have been completed.
☐ Closure Completion Date: _____

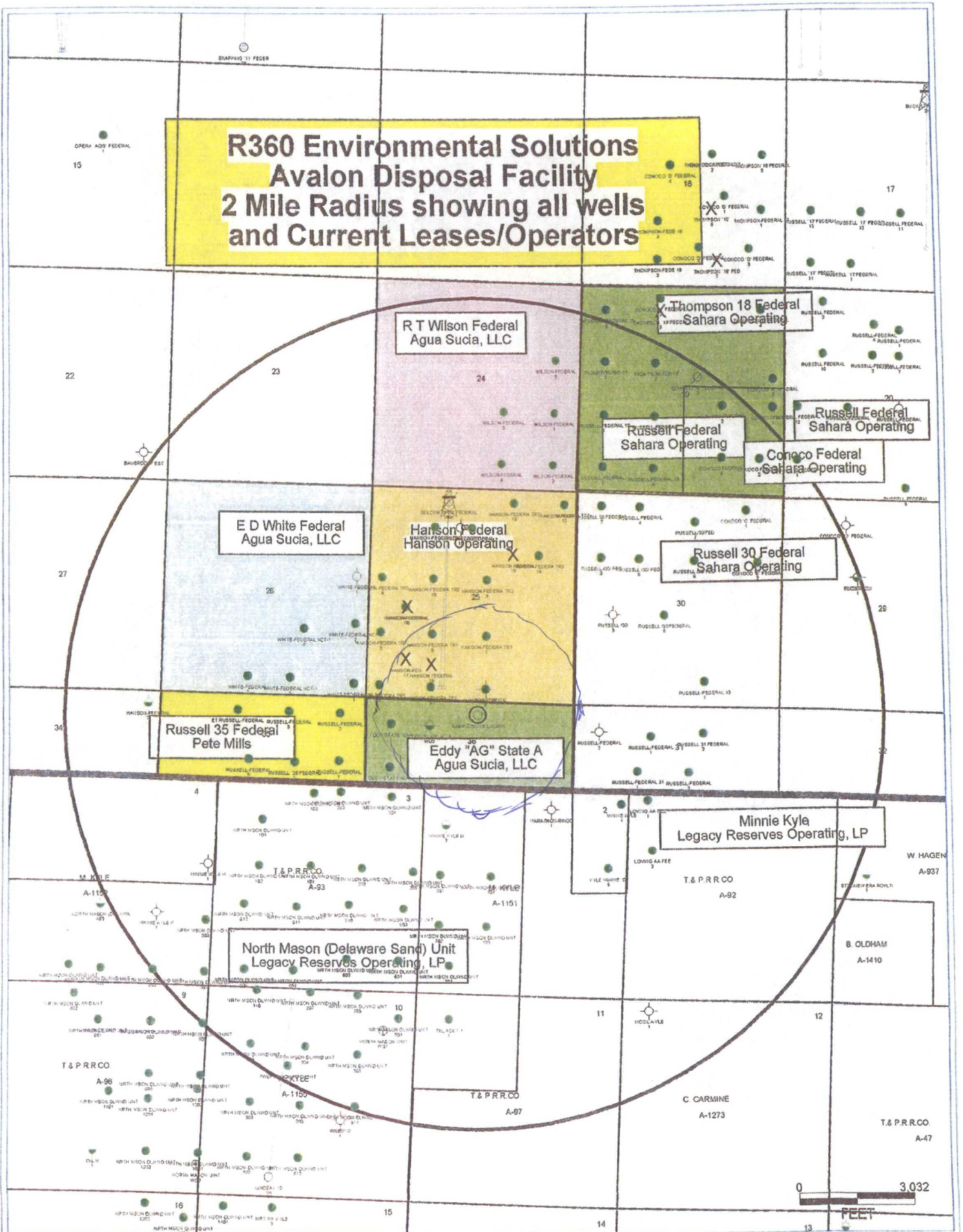
9. **Closure Report Regarding Waste Removal Closure For Closed-loop Systems That Utilize Above Ground Steel Tanks or Haul-off Bins Only:**
Instructions: Please indentify the facility or facilities for where the liquids, drilling fluids and drill cuttings were disposed. Use attachment if more than two facilities were utilized.
Disposal Facility Name: _____ Disposal Facility Permit Number: _____
Disposal Facility Name: _____ Disposal Facility Permit Number: _____
Were the closed-loop system operations and associated activities performed on or in areas that will *not* be used for future service and operations?
☐ Yes (If yes, please demonstrate compliance to the items below) ☐ No
Required for impacted areas which will not be used for future service and operations:
☐ Site Reclamation (Photo Documentation)
☐ Soil Backfilling and Cover Installation
☐ Re-vegetation Application Rates and Seeding Technique

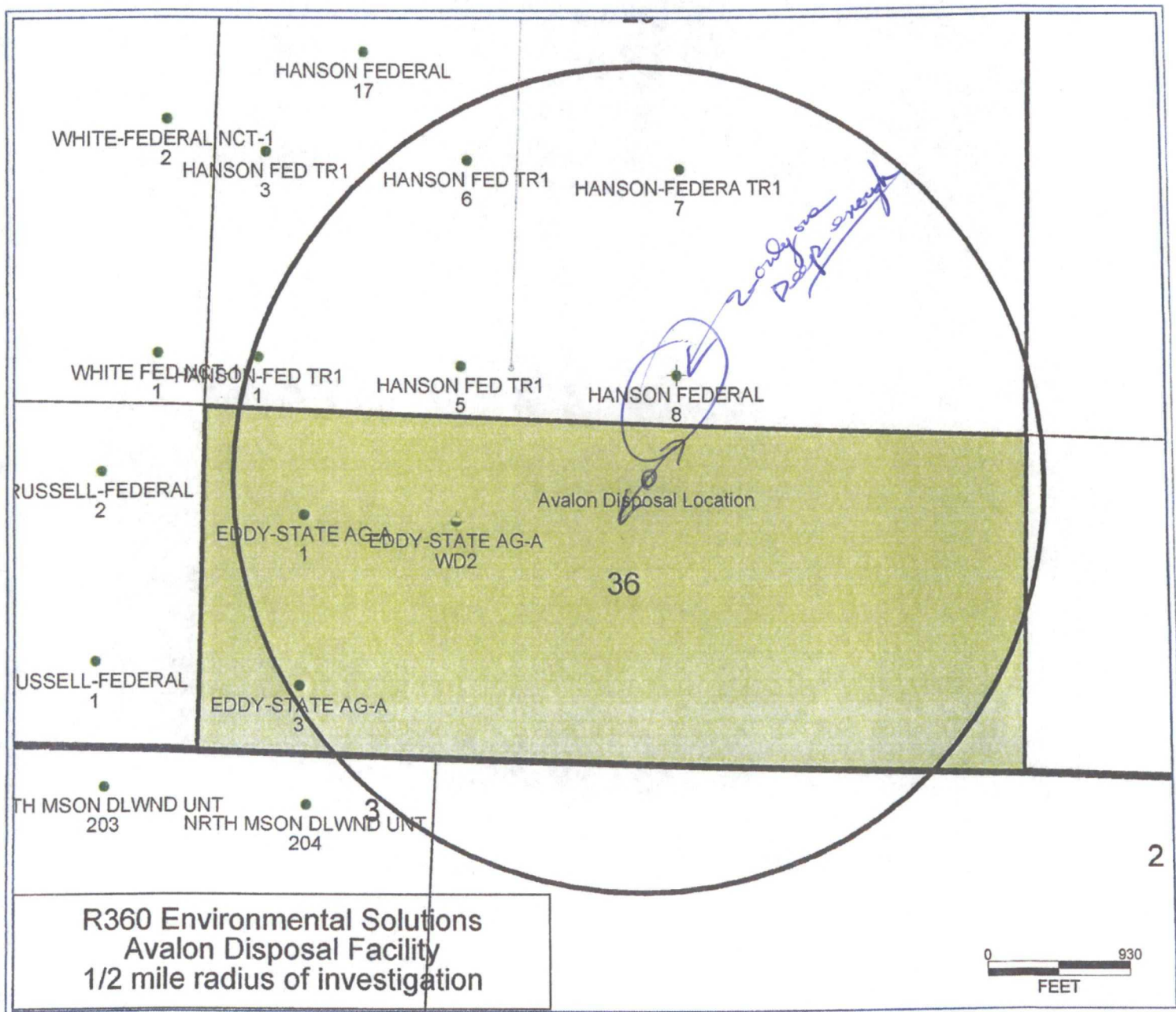
10. **Operator Closure Certification:**
I hereby certify that the information and attachments submitted with this closure report is true, accurate and complete to the best of my knowledge and belief. I also certify that the closure complies with all applicable closure requirements and conditions specified in the approved closure plan.
Name (Print): _____ Title: _____
Signature: _____ Date: _____
e-mail address: _____ Telephone: _____

ATTACHMENT V

Well and Lease Maps

R360 Environmental Solutions Avalon Disposal Facility 2 Mile Radius showing all wells and Current Leases/Operators





R360 Environmental Solutions
Avalon Disposal Facility
1/2 mile radius of investigation

ATTACHMENT VI

Tabulation of Wells

Penetrating Injection Zone

R360 ENVIRONMENTAL SERVICES
AVALON DISPOSAL FACILITY
1/2 MILE WELL REVIEW

API	LEASE NAME	WELL	LOCATION				DATE DRILLED	TD	COMPLETION	STATUS	CURRENT OPERATOR
30-015-05896	Eddy State "AG" A	1	660 FNL	660 FWL	36 26-S	31-E	Feb-55	4124	4075- 4124 OH	ACTIVE	AGUA SUCIA LLC
30-015-05898	Eddy State "AG" A	2	660 FNL	1650 FWL	36 26-S	31-E	May-55	4158	4130-4158 OH	P&A	12/11/83
30-015-05897	Eddy State "AG" A	3	1757 FNL	660 FWL	36 26-S	31-E	Nov-55	4115	4090- 4115 OH	ACTIVE	AGUA SUCIA LLC
30-015-05869	Hanson Federal Tr 1	1	330 FSL	330 FWL	25 26-S	31-E	Aug-54	4147	4140-4147 OH	P&A	6/28/94
30-015-05872	Hanson Federal Tr 1	5	330 FNL	1650 FEL	25 26-S	31-E	Jun-55	4168	4161-4168 OH	P&A	5/8/09
30-015-05878	Hanson Federal Tr 1	6	1650 FSL	1650 FWL	25 26-S	31-E	Jul-55	4164	4155-4164 OH	P&A	5/6/09
30-015-05873	Hanson Federal Tr 1	7	1650 FSL	2310 FEL	25 26-S	31-E	Aug-55	4185	4177-4185 OH	P&A	10/18/96
30-015-05874	Hanson Federal Tr 1	8	330 FSL	2310 FEL	25 26-S	31-E	Oct-55	8400	various	P&A	2/15/92

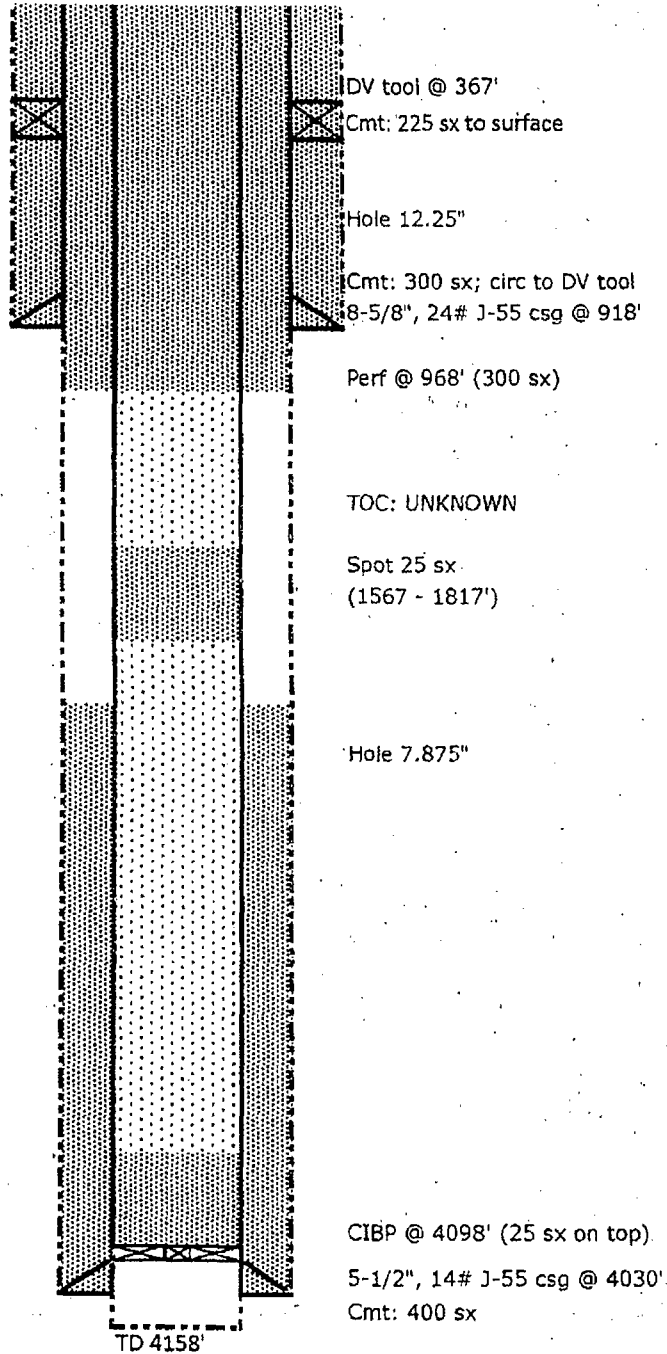
EDDY STATE "AG" #2

30-015-05898

660 FNL 1650 FWL SECTION 36 T-26-S, R-31-E

EDDY COUNTY, NEW MEXICO

P&A 12/11/83



OIL CONSERVATION DIVISION

P. O. BOX 3088

SANTA FE, NEW MEXICO 87500

0+6-NMOCD-Artesial-Mr. J.A. Midland

1-Pile

1-Laura Richardson-Midland

1-Engr Jim

1-JA, 1-BD

1-Foreman CK

1-CB, 1-CF

RECEIVED BY

DEC 14 1983

O. C. D.

ARTESIAL OFFICE, TX

Form 0-121
Revised 1-1-77

NO. OF COPIES REQUIRED	
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DATE	
FILE	
U.C.D.	
LEAD OFFICE	
OPERATOR	

SUNDY NOTICES AND REPORTS ON WELLS

DO NOT USE THIS FORM FOR REPORTING ON WELLS OPERATING UNDER A PERMIT OR LICENSE.

1. <input type="checkbox"/> OIL WELL <input type="checkbox"/> GAS WELL	2. Name of Operator Getty Oil Company	3. Well No. 2
4. Address of Operator P.O. Box 730, Hobbs, NM 88240	5. Well Loc. 2	6. Name of Owner or Lessee Eddy State AG-A
7. Location of Well UNIT LETTER C 1650 FEET FROM THE West LINE AND 660 FEET FROM North LINE SECTION 36 TOWNSHIP 26S RANGE 31E	8. Depth and Foot, or Assent N. Mason Delaware	9. County Eddy
10. Elevation (Show marker of, RT, GR, etc.) 3119' DT		

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

NOTICE OF INTENTION TO:

SUBSEQUENT REPORT OF:

PERFORM REMEDIAL WORK <input type="checkbox"/>	PLUG AND ABANDON <input type="checkbox"/>	REMEDIAL WORK <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
TEMPORARILY ABANDON <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>	COMPLETE DRILLING OPER. <input type="checkbox"/>	PLUG AND ABANDONMENT <input checked="" type="checkbox"/>
PULL OR ALTER CASING <input type="checkbox"/>	OTHER <input type="checkbox"/>	CASING TEST AND ELEMENT JOB <input type="checkbox"/>	

11. Describe Summary of Completed Operations (Briefly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work) SEE RULE 1102.

12/8/83 Set CIBP @ 4098'. Ran GR/CBL from 2000-1600', no bond. Perf 5 1/2" csq @ 968' w/ 2 shots. TIR w/ 2 7/8" tng and spotted 25 rxn. cmt. @ 4098'. Spot 25 sxs class "C" plug from 1877-1567'.

12/9/83 Pump down 5 1/2" csq. and broke circ. Pump 300 sxs. class "C" cmt. from 968' to surface on 5 1/2" csq. and circ. cmt. thru 8 5/8" braden head.

12/10/83 Cut off wellhead & install dry hole marker. Plugged and abandoned. 12-11-83

12. I hereby certify that the information given is true and correct to the best of my knowledge and belief.

Daniel R. Carter
Area Superintendent

December 12, 1983

ORIGINAL SIGNED

GILARRY BROOKS

0+6-NMOCD

4/20/84

CONDITIONS OF ABANDONMENT, IF ANY

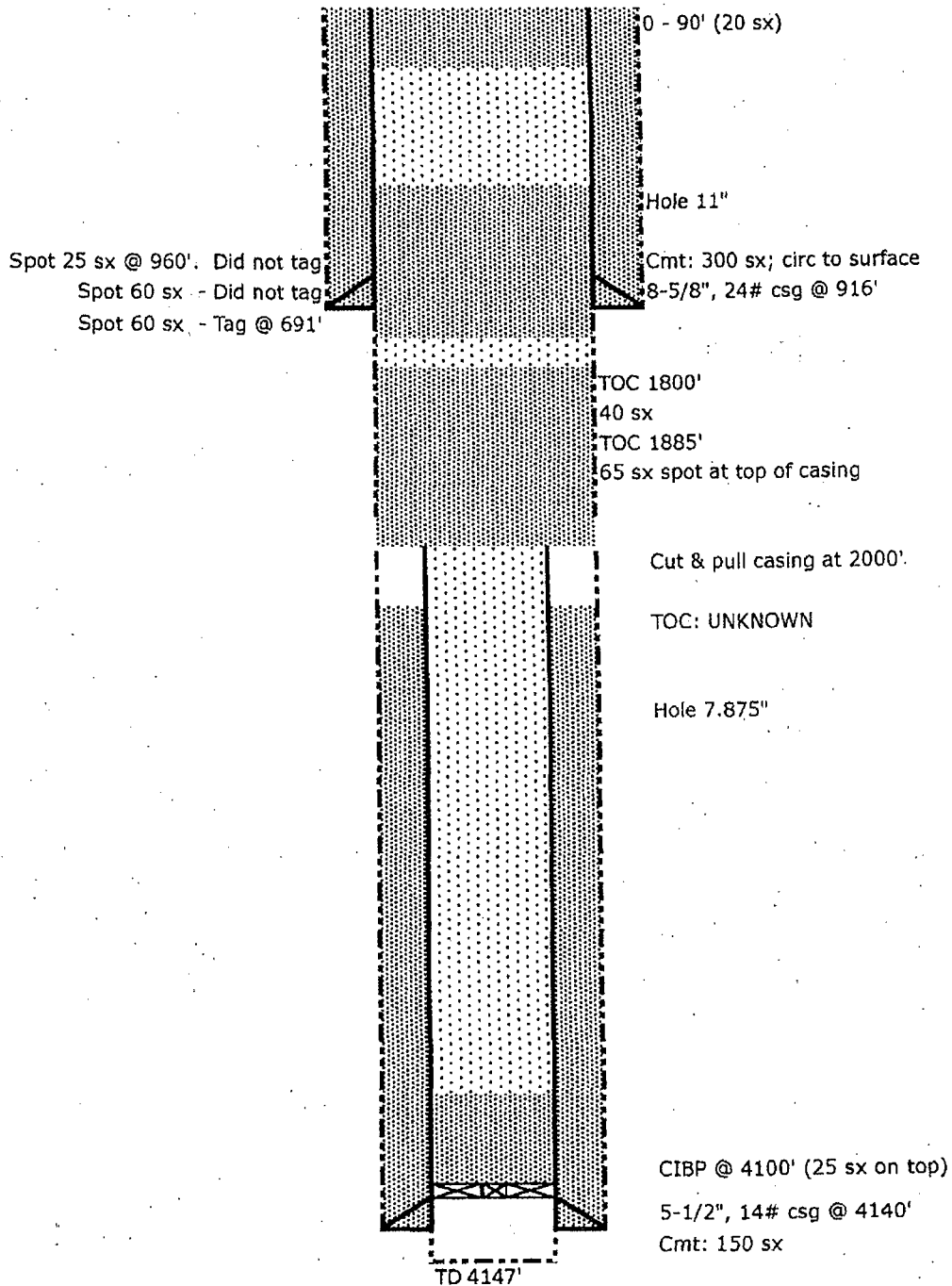
HANSON FEDERAL TR 1 #1

30-015-05869

330 FNL 330 FEL SECTION 25 T-26-S, R-31-E

EDDY COUNTY, NEW MEXICO

P&A 6/28/94



UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

NM OIL CONS COMMISSION
Drawer DD
Artesia

FORM APPROVED
Budget Bureau NM 88310 004-0135
Expires March 31, 1993

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to deepen or reentry to a different reservoir.
Use "APPLICATION FOR PERMIT—" for such proposals

SUBMIT IN TRIPLICATE

RECEIVED

1. Type of Well

☒ Oil Well ☐ Gas Well ☐ Other

2. Name of Operator

Hanson Operating Company, Inc.

3. Address and Telephone No.

P.O. Box 1515, Roswell, New Mexico 88202-1515

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

Unit M, SW $\frac{1}{4}$ SW $\frac{1}{4}$, 330' FSL & 330' FWL, Sec.25,T.26S,R.31E

5. Lease Designation and Serial No.

LC-068282-B

6. If Indian, Allottee or Tribe Name

7. If Unit or CA, Agreement Designation

8. Well Name and No.

Hanson Federal #1

9. API Well No.

30-015-05869

10. Field and Pool, or Exploratory Area

North Mason, Delaware

11. County or Parish, State

Eddy, New Mexico

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

TYPE OF SUBMISSION	TYPE OF ACTION
<input type="checkbox"/> Notice of Intent	<input checked="" type="checkbox"/> Abandonment
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Recompletion
<input checked="" type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Plugging Back
	<input type="checkbox"/> Casing Repair
	<input type="checkbox"/> Altering Casing
	<input type="checkbox"/> Other
	<input type="checkbox"/> Change of Plans
	<input type="checkbox"/> New Construction
	<input type="checkbox"/> Non-Routine Fracturing
	<input type="checkbox"/> Water Shut-Off
	<input type="checkbox"/> Conversion to Injection
	<input type="checkbox"/> Dispose Water

(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

13. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)

Hanson Operating Company, Inc. Plugged and Abandoned the above captioned well as follows:

- On 6-22-94, set a CIBP at 4100' to isolate Delaware open hole from(4140'-4147'). Circulated wellbore with 10# mud laden fluid, capped with 10sx of Class "C" cement, top of cement at 4000'.
- On 6-23-94, Free Point 5 $\frac{1}{2}$ " casing at 2000' F.S. and cut off. Pulled casing from well. Ran in hole with tubing to 2000' and set 65 sxs of Class "C" cement.
- On 6-24-94, ran in hole and tagged cement at 1885'. Pumped 40sx of Class "C" cement and waited 3 hours. Tagged cement at 1800'. Pulled tubing to 960'. Pumped 25 sx of Class "C" cement 50' inside and 50' outside 8 5/8" casing shoe.
- On 6-27-94, ran in hole with tubing. Did not tag plug. Pumped 60 sxs of Class "C" cement. Waited 4 hours. Did not tag plug. Pumped 60 sxs of Class "C" cement and SD.
- On 6-28-94, Ran in hole and tagged plug at 691'. Pulled tubing to 90' and circulated 20 sxs of Class "C" cement to surface.
- Cut off wellhead, anchors, installed Dry Hole Marker and cleaned location.

Part IV 2
9-30-94
RFA

NO OTHER OPERATIONS TO BE PERFORMED.
NO OTHER WORK TO BE COMPLETED.
NO OTHER INFORMATION IS COMPLETED.

14. I hereby certify that the foregoing is true and correct

Signed

Arthur A. M. [Signature]

Title

Production Analyst

Date

August 16, 1994

(This space for Federal or State office use)

Approved by

Conditions of approval, if any.

Title

PETROLEUM ENGINEER

Date

8/18/94

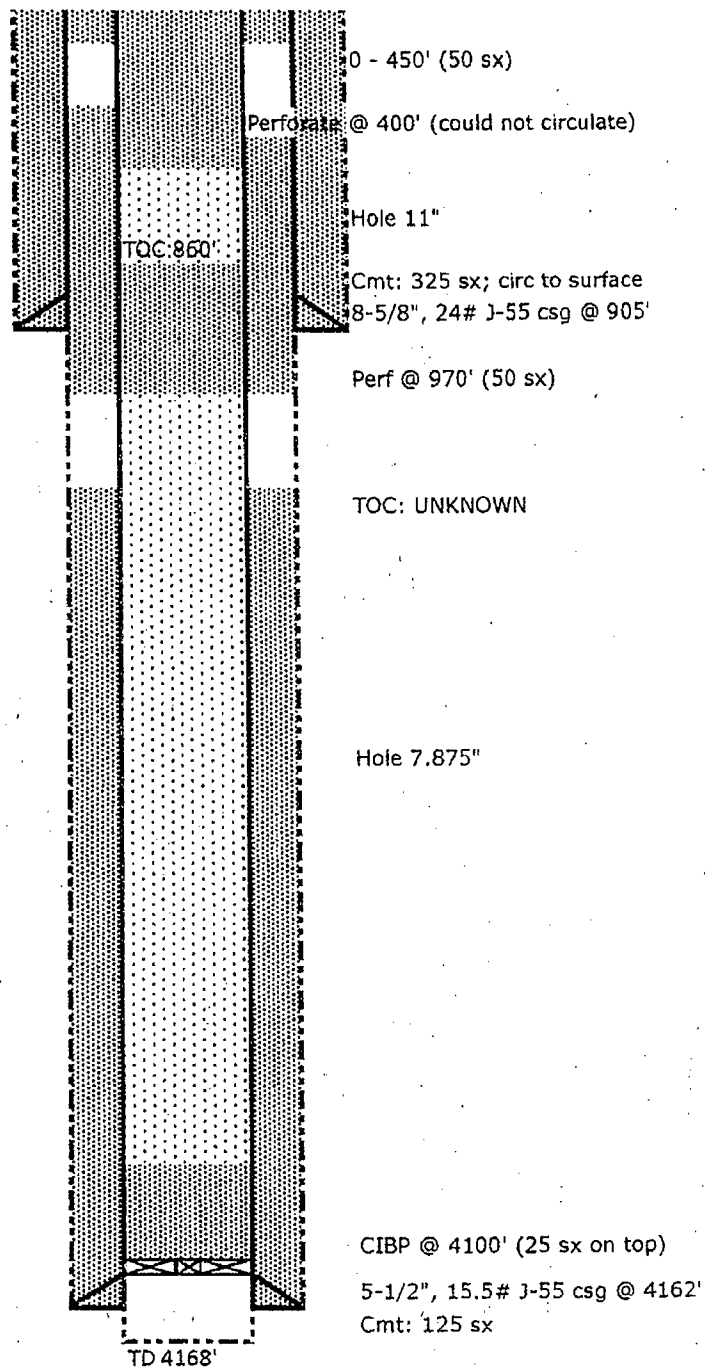
HANSON FEDERAL TR 1 #5

30-015-05872

330 FSL 1650 FWL SECTION 25 T-26-S, R-31-E

EDDY COUNTY, NEW MEXICO

P&A 5/8/09



UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

OCD-ARTESIA

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

JUL 17 2009

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.

SUBMIT IN TRIPLICATE - Other instructions on page 2

1 Type of Well <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other		5 Lease Serial No. LC068282B
2 Name of Operator Hanson Operating company, Inc.		6 If Indian, Allottee or Tribe Name
3a Address PO Box 1515, Roswell, NM 88202-1515	3b Phone No. (include area code) 575-622-7330	7 If Unit or CA/Agreement, Name and/or No.
4 Location of Well (Footage, Sec., T., R., M., or Survey Description) 330' FSL & 1650' FWL Sec. 25 - T-26-S, R-31-E Unit N, SE/4SW/4		8 Well Name and No. Hanson Federal #5
		9 API Well No. 30-015-05872
		10 Field and Pool, or Exploratory Area North Mason Delaware
		11 County or Parish, State Eddy, NM

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

TYPE OF SUBMISSION	TYPE OF ACTION			
<input 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 checked="" type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input checked="" type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input type="checkbox"/> Other
	<input type="checkbox"/> Change Plans	<input checked="" 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 shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

05/06/09 Move in plugging equipment rig up. POH w/ 163 rods. Dug out cellar. SDFN.

05/07/09 NU BOP. POH w/ 136 jts. tbg. RIH w/ 5 1/2 CIBP on tbg. Set CIBP @ 4100'. Circulated hole w/ mud laden fluid. Spotted 25 sx class C cement on top of CIBP. POH w/ tbg. Perf. 5 1/2 csg. @ 970'. RIH w/ 5 1/2 packer and set @ 570'. Sqz. 50 sx class C cement. WOC. SDFN.

05/08/09 Tagged plug @ 860'. Perf'd 5 1/2 csg. @ 400'. Could not pump into perfs. BLM ok'd to RIH w/ tbg to 450' and circulate 50 sx class C cement to surface. did so. Cut off well head and Weld on Dry hole Marker. cleaned location rigged down moved off.

Witnessed by BLM representative Terry Wilson.

ACCEPTED FOR RECORD

JUL 14 2009

BUREAU OF LAND MANAGEMENT
CARLSBAD FIELD OFFICE

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

Ben Montgomery

Title Agent

Signature

Date 05/12/09

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)

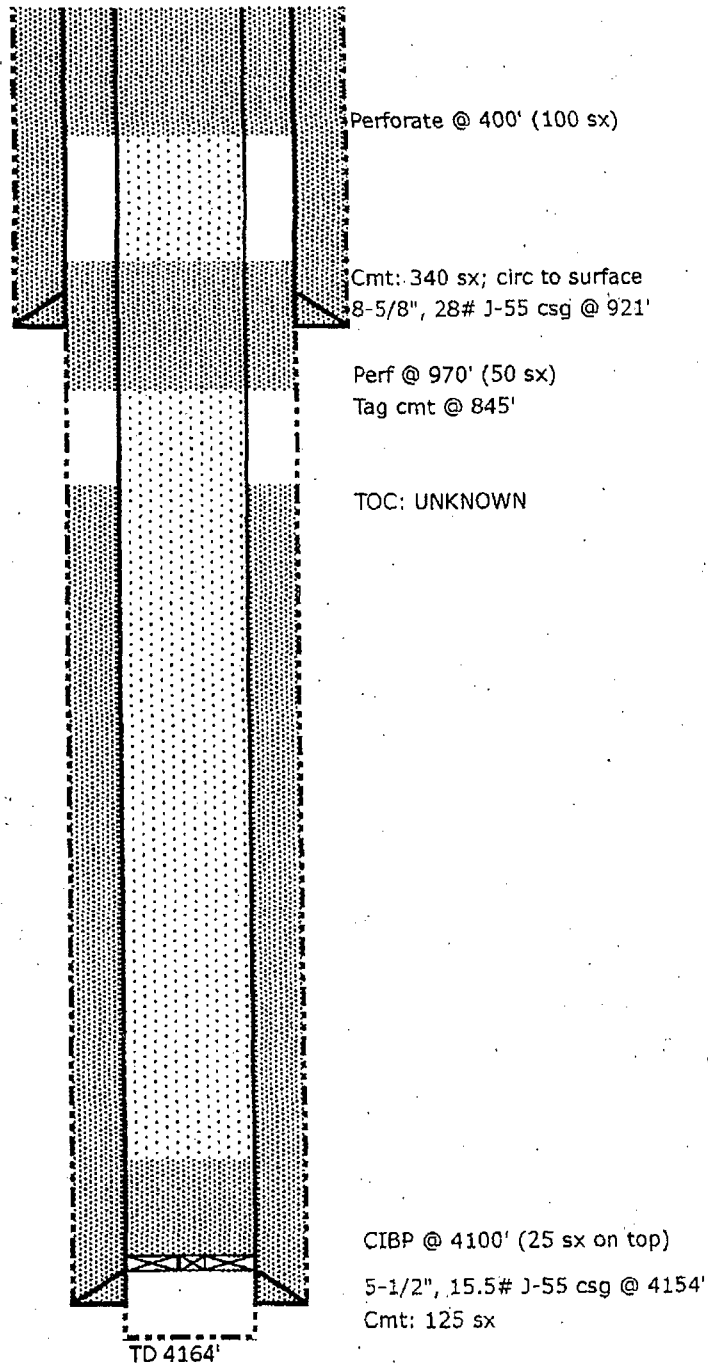
HANSON FEDERAL TR 1 #6

30-015-05878

1650 FSL 1650 FWL SECTION 25 T-26-S, R-31-E

EDDY COUNTY, NEW MEXICO

P&A 5/6/09



UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

OCD-ARTESIA

JUL 17 2009

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.

SUBMIT IN TRIPLICATE - Other instructions on page 2

1 Type of Well

☒ Oil Well ☐ Gas Well ☐ Other

2 Name of Operator

Hanson Operating company, Inc.

3a Address

PO Box 1515, Roswell, NM 88202-1515

3b Phone No. (include area code)

575-622-7330

4 Location of Well (Footage, Sec., T., R., M., or Survey Description)

1650' FSL & 1650' FWL

Sec. 25 - T-26-S. R-31-E Unit K, NE/4SW/4

5 Lease Serial No.

LC068282B

6 If Indian, Allottee or Tribe Name

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

8 Well Name and No.

Hanson Federal #6

9 API Well No.

30-015-05878

10 Field and Pool, or Exploratory Area

North Mason Delaware

11 Country or Parish, State

Eddy, NM

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

TYPE OF SUBMISSION	TYPE OF ACTION			
<input 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 checked="" type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input checked="" type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input type="checkbox"/> Other
	<input type="checkbox"/> Change Plans	<input checked="" 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 recomplete 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 shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

05/04/09 Move in plugging equipment rig up. POH w/ 163 rods. Dug out cellar. SDFN.

05/05/09 NU BOP. POH w/ 130 jts. tbg. RIH w/ 5 1/2 CIBP on tbg. Set CIBP @ 4100'. Circulated hole w/ mud laden fluid. Spotted 25 sx class C cement on top of CIBP. POH w/ tbg. Perf. 5 1/2 csg. @ 970'. RIH w/ 5 1/2 packer and set @ 650'. Sqz. 50 sx class C cement. WOC. SDFN.

05/06/09 Tagged plug @ 845'. Perf'd 5 1/2 csg. @ 400'. Sqz'd 100 sx class C cement down 5 1/2 csg. and up back side to surface. Cut off well head and weld on Dry Hole Marker. clean location Rigged down moved off.

Witnessed by BLM representative Terry Wilson.

ACCEPTED FOR RECORD

JUL 14 2009

BUREAU OF LAND MANAGEMENT
CARLSBAD FIELD OFFICE

14 I hereby certify that the foregoing is true and correct.

Name (Printed/Typed)

Ben Montgomery

Title Agent

Signature

Date 05/12/09

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)

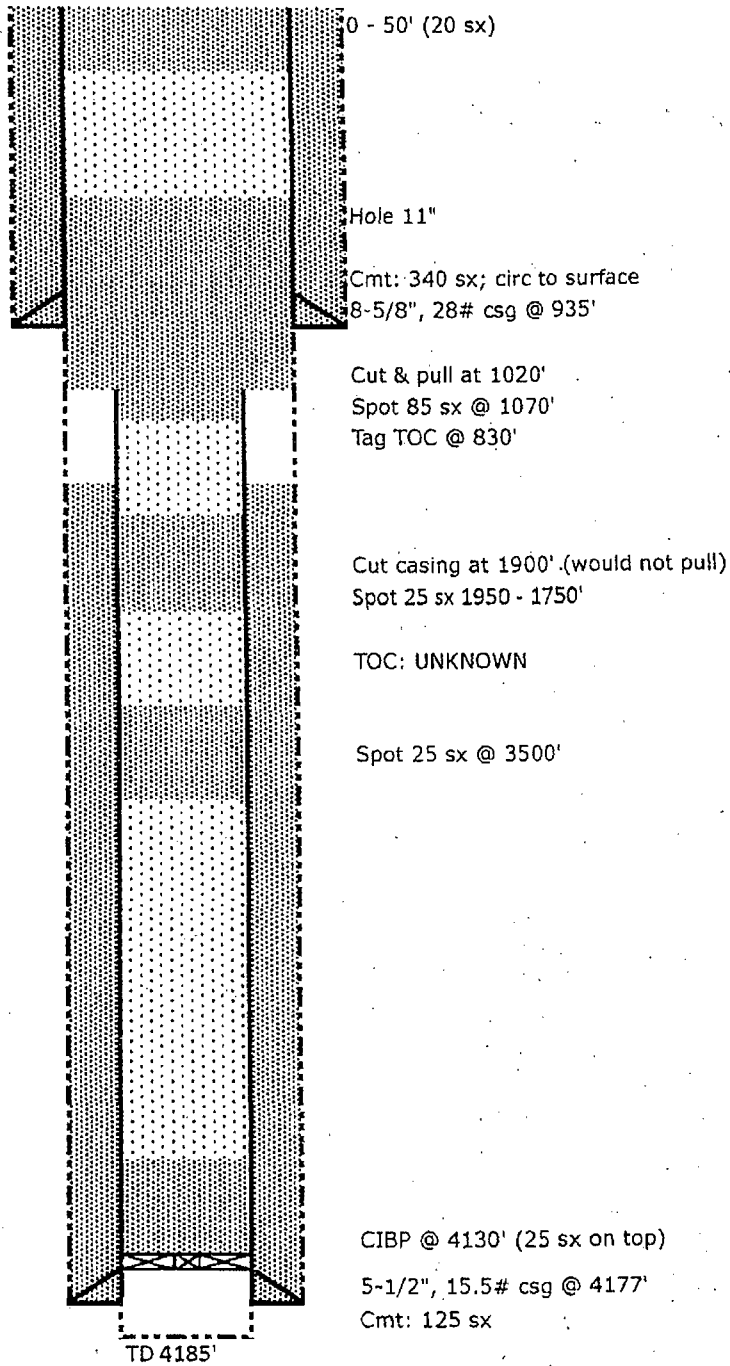
HANSON FEDERAL TR 1 #7

30-015-05873

1650 FSL 2310 FEL SECTION 25 T-26-S, R-31-E

EDDY COUNTY, NEW MEXICO

P&A 10/18/96



UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

N.M. Oil Cons. Division
811 S. 1st Street
Artesia, NM 88210-2834

FORM APPROVED
Budget Bureau No. 1004-0135
Expires: March 31, 1993
Lease Designation and Serial No.
LC-068282-B

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to deepen or reentry to a different reservoir.
Use "APPLICATION FOR PERMIT—" for such proposals

SUBMIT IN TRIPLICATE

1. Type of Well

☐ Oil Well ☐ Gas Well ☒ Other P & A

2. Name of Operator

Hanson Operating Company, Inc.

3. Address and Telephone No.

P.O. Box 1515, Roswell, NM 88202-1515

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

NW 1/4 SE 1/4 Unit J 1650' FSL & 2310' FEL Sec. 25 T26S R31E

6. If Indian, Allottee or Tribe Name

7. If Unit or CA, Agreement Designation

8. Well Name and No.

Hanson Federal #7

9. API Well No.

30-015-05873

10. Field and Pool, or Exploratory Area

North Mason Delaware

11. County or Parish, State

Eddy

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

TYPE OF SUBMISSION

- ☐ Notice of Intent
☒ Subsequent Report
☐ Final Abandonment Notice

TYPE OF ACTION

- ☒ Abandonment
☐ Recompletion
☐ Plugging Back
☐ Casing Repair
☐ Altering Casing
☐ Other
☐ Change of Plans
☐ New Construction
☐ Non-Routine Fracturing
☐ Water Shut-Off
☐ Conversion to Injection
☐ Dispose Water

(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

13. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)

On October 15, 1996 the above well was plugged & abandoned as follows:

10-15-96 MIRU-NDWH-NUBOP set 5 1/2" CIBP @ 4130' POH-CION

10-16-96 Dump 35' cement on top of CIBP RIH with tubing to 4050' circulated 10# mud POH to 3500' spot 25 sxs cement POH rig to cut casing cut @ 1900' could not pull, pressure test cut to 500# spot 25 sxs cement @ 1950'-1750' CION

10-17-96 Open well cut casing @ 1020' POH RIH to 1070' Spot 85 sxs cement WOC Tag @ 830' POH spot 20 sxs @ 50' to surface rig down

10-18-96 Install dry hole marked- move rigs

Not ID'd
10-21-96
P. H.

14. I hereby certify that the foregoing is true and correct

Signed

Betsy Sear

Title Production Analyst

Date 10-22-96

(This space for Federal or State office use)

Approved by (ORIG. SGD.) ALEXIS C. SWOBODA
Conditions of approval, if any:

Title PETROLEUM ENGINEER

Date 11/16/96

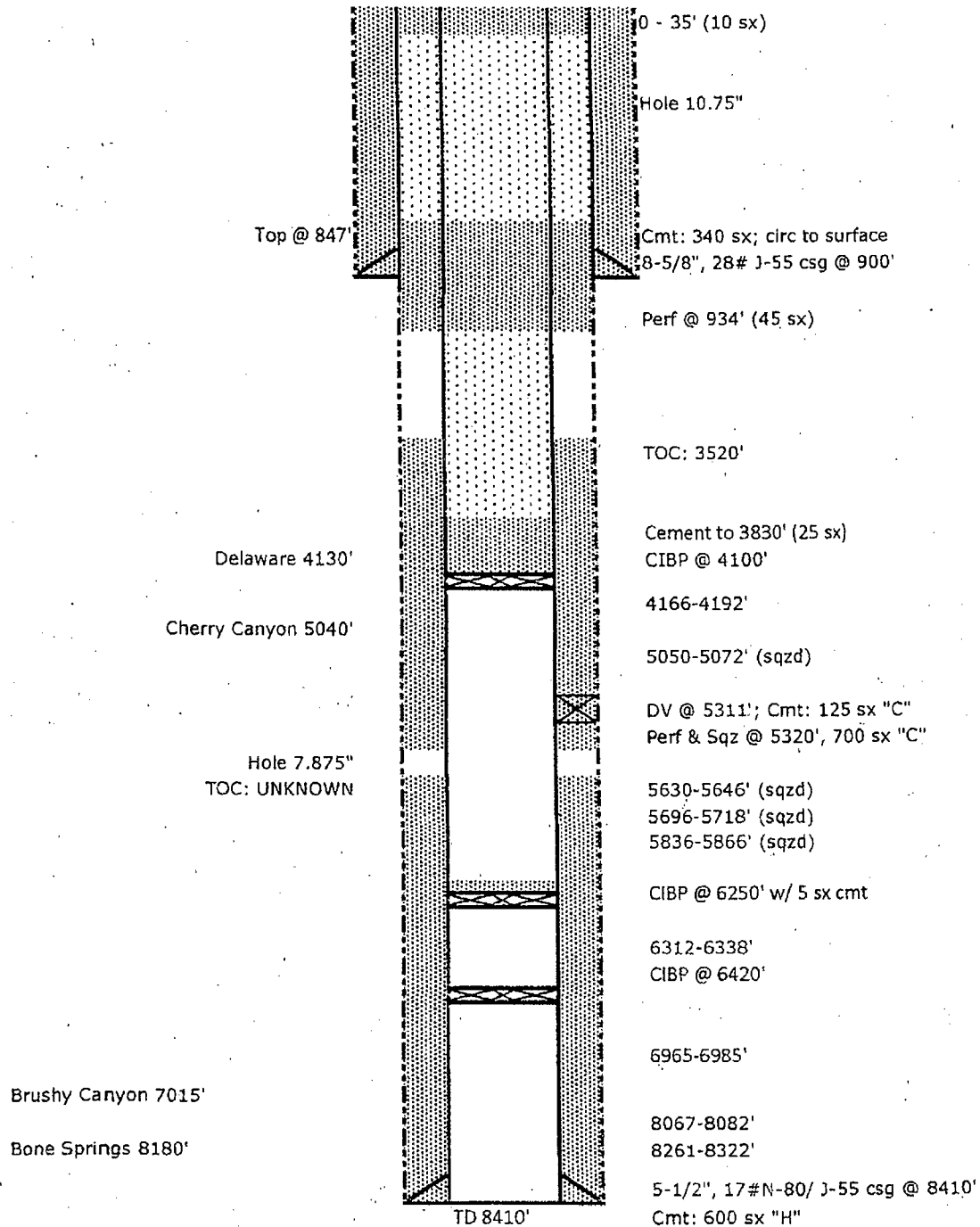
HANSON FEDERAL TR 1 #8

30-015-05874

330 FSL 2310 FEL SECTION 25 T-26-S, R-31-E

EDDY COUNTY, NEW MEXICO

P&A 2/15/82



Form 1004-0135
November 1983
Formerly 9-311

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUBMIT IN TRIE
(Other instructions
reverse side)

Budget Bureau No. 1004-0135
Expires August 31, 1985

LEASE DESIGNATION AND SERIAL NO.

LC-068282-B

IF INDIAN, ALLOTTEE OR TRIBE NAME

N/A

UNIT AGREEMENT NAME

N/A

FARM OR LEASE NAME

Hanson Federal Batt. #2

WELL NO.

#8

FIELD AND POOL, OR WILDCAT

North Mason (Delaware)

SEC., T., R., OR BLK. AND
SUBDIVISION AREA

Sec 25, T. 26S, R. 31E

COUNTY OR PARISH

Eddy

STATE

New Mexico

OIL WELL ☒ GAS WELL ☐ OTHER ☐

NAME OF OPERATOR

Hanson Operating company, Inc.

ADDRESS OF OPERATOR

P. O. Box 1515, Roswell, New Mexico 88202-1515

LOCATION OF WELL (Report location clearly and in accordance with any State requirements.
See also space 17 below.)
At surface

Sec. 25, T. 26S, R. 31E, Unit O, 330' FSL & 2310' FEL

PERMIT NO

30-015-05874

ELEVATIONS (Show whether DF, ET, CR, etc.)

3145' GR

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

NOTICE OF INTENTION TO:

TEST WATER SHUT-OFF

WELL OR ALTER CASING

FRACTURE TREAT

MULTIPLE COMPLETE

SHOOT OR ACIDIZE

ABANDON*

REPAIR WELL

CHANGE PLANT

(Other)

SUBSEQUENT REPORT OF:

WATER SHUT-OFF

FRACTURE TREATMENT

SHOOTING OR ACIDIZING

(Other)

REPAIRING WELL

ALTERING CASING

ABANDONMENT*

(Note: Report results of multiple completion on Well
Completion or Recompletion Report and Log form.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Credibly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and source pertinent to this work.)

This well was plugged & abandoned in the following manner on 02-15-92:

- 1). Tag cem @6203' on top of CIBP @6250'.
- 2). Set CIBP @4100'±. Circ hole w/9# gelled fluid. Pmp 25 sx Class C cem w/2% CaCl₂ from 4100' to 3830'±. Tagged plug @3830'.
- 3). Perf @ 934'. Pmp 45 sx Class C cem w/@2%CaCl₂ 100' in & 100' out of 5½" csg. Tagged plug @847'. RIH & pmp 5 sx Class C cem w/2% CaCl₂ from 847' to 798'.
- 4). Pmp 10 sx Class C cem from 35' to surface. All plugs witnessed & approved by BLM inspector Don Early.
- 5). RD well service unit. Cut off anchors. Install dry hole marker.

Part ID-2
3-30-92
PFA

18. I hereby certify that the foregoing is true and correct

SIGNED

TITLE Production Analyst

DATE 02-18-92

(This space for Federal or State signature)

APPROVED BY

TITLE

DATE

CONDITIONS OF APPROVAL, IF ANY:

*See instructions on Reverse Side

Title 18 U.S.C. Section 1001, makes 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.

November 1983
Form only 9-301

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUBMIT IN TRIPPLICATE
(Other 1st 2nd 3rd
copy side)

Expires August 31, 1985

5. LEASE DESIGNATION AND SERIAL NO.

LC-068282-B

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

NM OIL CONS COMMISSION

Drawn by

7. UNIT AGREEMENT NAME

Artesia, NM 88210

8. FARM OR LEASE NAME

Hanson Federal

9. WELL NO.

#8

10. FIELD AND POOL, OR WILDCAT

North Mason (Delaware)

11. SEC., T., R., E., OR B.E. AND
SUBST. OR AREA

Sec. 25, T. 26S, R. 31E

14. PERMIT NO

30-015-05874

15. ELEVATIONS (Show whether Dr. Rt. Or. etc.)

3145' GR

12. COUNTY OR PARISH

Eddy

13. STATE

New Mexico

16

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

NOTICE OF INTENTION TO:

TEST WATER SHUT-OFF

FRACTURE TREAT

SHOOT OR ACIDIZE

REPAIR WELL

Other:

PULL OR ALTER CASING

MULTIPLE COMPLETE

ABANDON*

CHANGE PLANT

SUBSEQUENT REPORT OF:

WATER SHUT-OFF

FRACTURE TREATMENT

SHOOTING OR ACIDIZING

(Other) Surface reclamation

REPAIRING WELL

ALTERING CASING

ABANDONMENT*

(NOTE: Report results of multiple completion on Well
Completion or Recompletion Report and Log form.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Include state all pertinent details, and give pertinent dates including estimated date of starting any
proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones perti-
nent to this work.)

On April 5, 1994, the above captioned well location was completed for abandonment
according to BLM stipulations.

On April 6, 1994, the pipeline was removed. BLM was notified of final abandonment.

18. I hereby certify that the foregoing is true and correct

SIGNED

Catricia A. McHaw

TITLE

Production Analyst

DATE

April 11, 1994

(This space for Federal or State office use)

APPROVED BY

(JON. SON) JOE G. LARA

TITLE

PETROLEUM ENGINEER

DATE

5/2/94

CONDITIONS OF APPROVAL, IF ANY:

*See Instructions on Reverse Side

Title 18 U.S.C. Section 1001, makes 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.

ATTACHMENT VII

Operation Summary

Well: Avalon SWD #1D

Location: 350' FNL and 2475' FEL
Unit B (NW/4, NE/4), Section 36, Township 26 South, Range 31 East, Eddy County, New Mexico

Injection Zone: Delaware Mountain Group

Well TD: 6500'

Summary:

1. Proposed average daily injection rate is 10,000 bbl/day with maximum daily injection rate of 15,000 bbl/day
2. This will be a closed system
3. Proposed average injection pressure is 1500 psi with maximum pressure of 2150 psi
4. Source of injection fluid will be reinjected produced water and frac water
5. On May 28, 1955, Gulf Oil Corp. completed the Eddy State "AG" No 2. (P/A) located approximately 1,205 feet west of proposed Avalon SWD #1D, as a producer. On May 16, 1969, Gulf Oil Corp converted the Eddy State "AG" No. 2 to an SWD with permission from NMOCD to reinject produced water into the Delaware Mountain Group (Bell Canyon formation) at 4158 feet. Getty Oil acquired the Eddy State "AG" No. 2 and deepened the well to 4250 feet (9/16/1982). Getty determined well to be a "dry hole" and plugged.

ATTACHMENT VIII

Geologic Summary

The proposed injection zone is the Delaware Mountain Group, comprised of the Brushy Mountain formation, Cherry Canyon formation and Bell Canyon formation, in ascending order. The proposed injection zone will be between 4200' and 6500'.

The Delaware Mountain Group is the proposed injection zone and is underlain by the Permian-age Bone Springs Limestone (8,000'). The Bone Springs Limestone is comprised of thin beds of cherty black limestone between approximately 1,500 to 2,000 feet thick.

The Delaware Mountain Group (Permian) is comprised of a thick sequence, approximately 2,700 feet, of largely of deep marine sandstone interbedded with shale and limestone. The Pipeline shale member is the basal unit of the Delaware Mountain Group. Above the Pipeline shale member is the Brushy Canyon formation (7,015'), Cherry Canyon formation (5,040') and Bell Canyon formation (4135').

The Delaware Mountain Group is overlain by Permian-age evaporate deposits of the Castile and Salado formations, in ascending order. The Castile formation is comprised of gypsum, anhydrite and thin to medium bedded limestone. The Castile formation ranges in thickness from approximately 1,500 to 2,000 feet. The Salado formation is mostly composed of halite with thin beds of anhydrite, potash salts and red sandy clay. The Salado formation varies in thickness from about 1,500 to 2,000 feet.

The Castile and Salado formations are overlain by the Permian-age Rustler formation. The Rustler formation is composed of deep water carbonates interbedded with sand, siltstone and shale.

Refer to the attached stratigraphic chart and geologic cross-section.

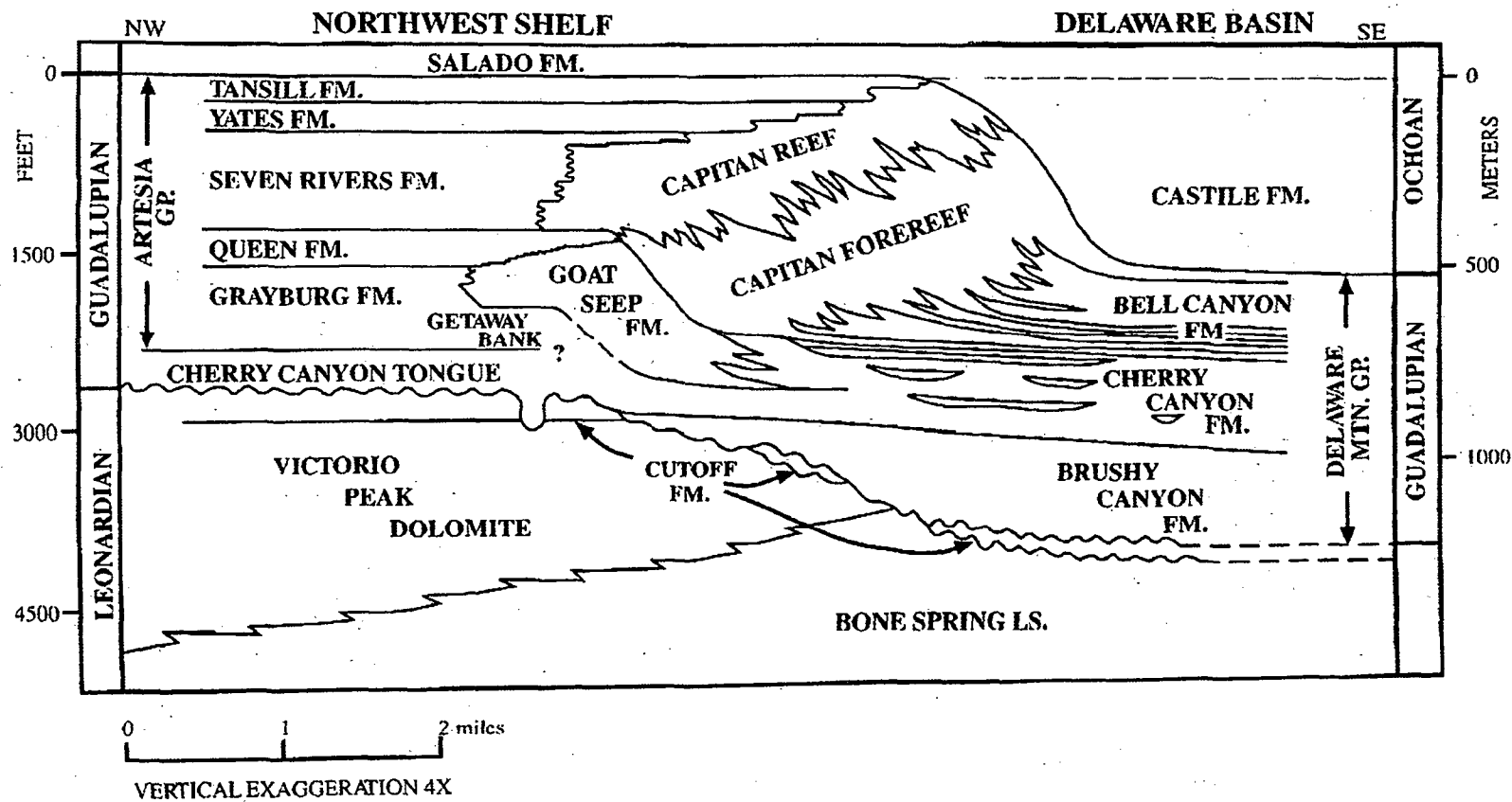
Table 1. Summary of geologic formations and groups forming the Capitan Reef Complex and Delaware Basin

Period/Epoch or Series	Apache Mountains (Wood, 1968; Uliana, 2001)		Guadalupe Mountains (King, 1948; Hiss, 1975; Kerans and others, 1994; Kerans and Tinker, 1999)		Glass Mountains (King, 1930; Hill, 1999)		Delaware Basin						
	Back Reef	Reef	Back Reef	Reef	Back Reef	Reef							
Quaternary to Tertiary	Quaternary Tertiary Deposits		Quaternary Tertiary Deposits		Quaternary Tertiary Deposits		Quaternary Tertiary Deposits						
Cretaceous					Cretaceous								
Triassic					Bissett								
Permian/Ochoan					Rustler ^a		Rustler						
					Salado ^a		Salado						
					Castile ^a		Castile						
Permian/ Guadalupian	Artesia Group	Tansill	Capitan Reef Complex	Capitan Limestone	Artesia Group	Tansill	Capitan Reef Complex	Carlsbad and Capitan Limestones	Gilliam	Capitan Reef Complex	Tessey Vidrio	Delaware Mountain Group	Bell Canyon
		Yates				Yates							
		Seven Rivers				Seven Rivers							
		Munn				Queen/ Grayburg							Goat Seep Dolomite
	Cherry Canyon		Upper San Andres Lower San Andres (equivalent to Brushy Canyon)		Word Formation (Cherry and Brushy Canyon Equivalent)		Brushy Canyon						
	Cutoff Shale (Member of Bone Spring Limestone)							Pipeline Shale Member					
Permian/ Leonardian	Yeso	Victorio Peak (Member of the Bone Spring Limestone)			Leonard and Hess Member of Leonard Formation		Bone Spring Limestone						

Note: Cell sizes are not to scale for formation thickness

Sources: Modified after King, 1930, 1948; Wood, 1968; Hiss, 1975; Uliana, 2001; Hill, 1999; Kerans and others, 1994; Kerans and Tinker, 1999

^a Formations overlie Capitan Reef Complex between the Guadalupe and Glass Mountains



Source: Melim and Scholle, 1999

Figure 3



Daniel B. Stephens & Associates, Inc.
08/28/2009 JN WR08.0039

CAPTAN REEF COMPLEX
Stratigraphic Cross-Section

ATTACHMENT VIII

(Continued)

Groundwater Summary

The shallowest groundwater-bearing unit is the Tertiary-age Ogallala formation. Groundwater occurs in the Ogallala formation at approximately 180 feet below ground surface (bgs). The base of the Ogallala formation is at approximately 240 feet bgs, based on available driller logs. The Ogallala formation has a saturated thickness of about 60 feet.

The Ogallala formation is underlain by the Triassic-age Chinle formation of the Dockum Group which is a non-water bearing formation.

The next deeper water-bearing formation is the Rustler which produces groundwater from wells approximately 700 feet deep. No potable groundwater (<10,000 mg/L TDS) is produced from the Salado or Castile formations.

The Delaware Mountain Group is not known for producing groundwater. The Delaware Mountain Group rocks were tested in a well (Hanson Federal No. 8) drilled about 800 feet north of the proposed location and was deemed dry.

Groundwater is not produced from the Bone Springs Limestone east of the Guadalupe Mountains.

ATTACHMENT IX

Proposed Stimulation Program

An acid cleanup is proposed for removing drilling fluids and residuals from wellbore face.

APPENDIX X

Logging and Test Data

***Refer to attached summary of test data and log for offset well, Hansen Federal
No. 8.***

X. LOGGING AND TEST DATA OF PROPOSED INJECTION INTERVAL
R360 ENVIRONMENTAL SOLUTIONS
AVALON SWD #1D

The northern offset well to the proposed location, the Hansen Federal #8 was drilled to 8400' and the entire proposed injection interval was tested and is presented below and on the enclosed log segments.

Date	Perforations	Formation	Comments
12/27/84	8261 - 8322'	Bone Springs	2000 gallons 15% HCl CIBP @ 8215'
1/4/85	8067 - 8088'	Bone Springs	2000 gallons 15% HCl
1/4/85	6965 - 6985'	Brushy Canyon	2000 gallons 15% HCl 25,000 gallons foam / 45,300# sand CIBP @ 6420'
2/6/85	6300 - 6338'	Brushy Canyon	2000 gallons 15% HCl 42,900 gallons foam / 72,900# sand
2/23/85			IP: 60 oil, 45 mcf, 312 water CIBP @ 6250'
3/8/85	5836 - 5866'	Cherry Canyon	2000 gallons 15% HCl squeezed with cement
3/22/85	5696 - 5718'	Cherry Canyon	2000 gallons 15% HCl squeezed with cement
4/3/85	5630 - 5646'	Cherry Canyon	2000 gallons 15% HCl squeezed with cement
4/12/85	5050 - 5072'	Cherry Canyon	3000 gallons 15% HCl squeezed with cement
2/10/92	4166 - 4192'	Delaware	2000 gallons 15% HCl 8,000 gallons gelled diesel / 8,000# sand
2/15/92			Plug & Abandoned well

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUBMIT
(Other in
verse side)

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on re

Form approved.
Budget Bureau No. 1004-0135
Expires August 31, 1985

RECEIVED BY

JAN 2 1985

SUNDRY NOTICES AND REPORTS ON WELLS

Use this form for proposals to drill or to deepen or plug back to a different reservoir.
Use "APPLICATION FOR PERMIT" for such proposals.

5. LEASE DESIGNATION AND SERIAL NO.

LC 068282-B

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

N/A

7. UNIT AGREEMENT NAME

N/A

8. FARM OR LEASE NAME

HANSON FEDERAL

9. WELL NO.

8

10. FIELD AND POOL, OR WILDCAT

Brushy Canyon Wildcat

11. SEC., T., R., M., OR BLK. AND
SURVEY OR AREA

Sec. 25, T. 26S, R. 31E

12. COUNTY OR PARISH

Eddy

13. STATE

New Mexico

14. PERMIT NO.

15. ELEVATIONS (Show whether DF, WT, CR, etc.)

3145' GR

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:

TEST WATER SHUT-OFF

FRACTURE TREAT

SHOOT OR ACIDIZE

REPAIR WELL

(Other)

PULL OR ALTER CASING

MULTIPLE COMPLETION

ABANDON*

CHANGE PLANS

SUBSEQUENT REPORT OF:

WATER SHUT-OFF

FRACTURE TREATMENT

SHOOTING OR ACIDIZING

(Other)

Cementing

REPAIRING WELL

ALTERING CASING

ABANDONMENT*

(Note: Report results of multiple completion on Well
Completion or Recompletion Report and Log form.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

Found top of cement @ 5400'.

Perforate @ 5320' to squeeze cement to 200' above base of salt.

Cement w/500 sx Class "C" neat foam & 200 sx Class "C" 2% Ca Cl.

Ran temperature survey 12 hrs later. Found top of cement @ 3520'.

Pressure tested casing to 1000# - no pressure decrease.

First run w/perf gun - shot 8322', 21', 18', 13', 10', 08', 01', 8297', 94', 89' & 84'.

Second run w/perf gun - shot 8277', 71', 69', 63' & 61'.

Acidized w/2000 gal 15% NEFE.

18. I hereby certify that the foregoing is true and correct.

SIGNED

Brenda R. Witt

TITLE

Production Analyst

DATE 12/27/84

(This space for Federal or State/Local use)

APPROVED BY

[Signature]

TITLE

DATE

CONDITIONS OF APPROVAL, IF ANY

[Signature]

*See Instructions on Reverse Side

Form approved. *C/SF*
Budget Bureau No. 1004-0135
Expires August 31, 1985

(Not to be filled in by applicant)
RECEIVED BY DEPT. OF THE INTERIOR
Artesia, NM BUREAU OF LAND MANAGEMENT

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JAN 9 1985 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—" for such proposals.)

1. O.C.D.
ARTESIA, OFFICE

WELL ☒ OTHER ☐

2. NAME OF OPERATOR

HANSON OPERATING COMPANY, INC. ✓

3. ADDRESS OF OPERATOR

P. O. BOX #1515, ROSWELL, NEW MEXICO 88202-1515

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.
See also space 17 below.)
At surface

330' FSL & 2310' FEL

14. PERMIT NO.

15. ELEVATIONS (Show whether OF, RT, GR, etc.)

3145' GR

5. LEASE DESIGNATION AND SERIAL NO

LC 068282-B

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

N/A

7. UNIT AGREEMENT NAME

N/A

8. FARM OR LEASE NAME

HANSON FEDERAL

9. WELL NO.

8

10. SURFACE AND POOL, OR WILDCAT

Brushy Canyon Wildcat

11. SEC., T., R., M., OR BLK. AND
SURVEY OR AREA

Sec. 25, T. 26S, R. 31E

12. COUNTY OR PARISH

Eddy

13. STATE

New Mexico

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:

SUBSEQUENT REPORT OF:

TEST WATER SHUT-OFF ☐

PCLL OR ALTER CASING ☐

WATER SHUT-OFF ☐

REPAIRING WELL ☐

FRACTURE TREAT ☐

MULTIPLE COMPLETE ☐

FRACTURE TREATMENT ☐

ALTERING CASING ☐

SHOOT OR ACIDIZE ☐

ABANDON* ☐

SHOOTING OR ACIDIZING ☒

ABANDONMENT* ☐

REPAIR WELL ☐

CHANGE PLANE ☐

(Other) ☐

(Note: Report results of multiple completion on Well
Completion or Recompletion Report and Log form.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)

Perf @ 8067', 68', 72', 73', 74', 75' & 76' (7 shots).

Perf @ 8082', 83', 84', 85', 86', 87' & 88' (7 shots).

Acidized w/2000 gals 15% NEFE.

Perf @ interval 6965' - 6985' (21 shots).

Set RBP @ 7113' & tested to 1500# - held OK.

Acidized w/2000 gals 15% NEFE.

18. I hereby certify that the foregoing is true and correct

SIGNED

Buranda L. Witt

TITLE

Production Analyst

DATE

01/04/85

(This space for Federal or State office use)

APPROVED BY

SW

TITLE

DATE

CONDITIONS OF APPROVAL, IF ANY:

Belknap
*See Instructions on Reverse Side

Title 18 U.S.C. Section 1001, makes 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.

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUBMIT IN TRIPlicate
(Other, UC, or re-
venue bid.)

Budget Bureau No. 100-0135
Expires August 31, 1985

5. LEASE DESIGNATION AND SERIAL NO.
LC 068282-B

6. IF INDIAN, ALLOTTEE OR TRIBE NAME
N/A

7. UNIT AGREEMENT NAME
N/A

8. FARM OR LEASE NAME
HANSON FEDERAL

9. WELL NO.
8

10. FIELD AND ZONE, OR WILDCAT
Brushy Canyon Wildcat

11. SEC., T., R., W., OR BLK. AND
SURVEY OR AREA
Sec. 25, T. 26S, R. 31E

12. COUNTY OR PARISH
Eddy

13. STATE
New Mexico

1. OIL WELL ☒ GAS WELL ☐ OTHER ☐
2. NAME OF OPERATOR
HANSON OPERATING COMPANY, INC.
3. ADDRESS OF OPERATOR
P. O. BOX #1515, ROSWELL, NEW MEXICO 88202-1515
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.
See also space 17 below.)
At surface
330' FSL & 2310' FEL
14. PERMIT NO.
15. ELEVATIONS (Show whether DF, RT, CR, etc.)
3145' GR

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
TEST WATER SHUT-OFF	<input type="checkbox"/>	WATER SHUT-OFF	<input checked="" type="checkbox"/>
FRACTURE TREAT	<input type="checkbox"/>	FRACTURE TREATMENT	<input checked="" type="checkbox"/>
SHOOT OR ACIDIZE	<input type="checkbox"/>	SHOOTING OR ACIDIZING	<input type="checkbox"/>
REPAIR WELL	<input type="checkbox"/>	(Other)	<input type="checkbox"/>
(Other)	<input type="checkbox"/>		
PERM OR ALTER CASING	<input type="checkbox"/>	REPAIRING WELL	<input type="checkbox"/>
MULTIPLE COMPLETE	<input type="checkbox"/>	ALTERING CASING	<input type="checkbox"/>
ABANDON*	<input type="checkbox"/>	ABANDONMENT*	<input type="checkbox"/>
CHANGE PLANS	<input type="checkbox"/>		

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)

Frac w/25,000 - 75 quality foam frac carrying 45,300# sand. Pmp 525,000 cubic feet of N₂. Max rate 4.6 BPM @ max press 6200#; min rate 3 BPM @ 3860#; avg rate 4 BPM @ 4500#. All rates are w/o calcu N₂.
ISIP 6160#, 5 min - SIP 5600#, 10 min - SIP 5380#, 15 min - SIP 5300#.

18. I hereby certify that the foregoing is true and correct

SIGNED Brenda R. Witt
(This space for Federal or State office use)

TITLE Production Analyst

DATE 01/28/85

APPROVED BY
CONDITIONS OF APPROVAL, IF ANY:

TITLE

DATE

JAN 30

*See Instructions on Reverse Side

RECEIVED BY

BUREAU OF LAND MANAGEMENT

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENTSUBMIT IN 7
(Other instructions
reverse side)TS
TCBudget Bureau No. 1004-0135
Expires August 31, 1985

3. LEASE DESIGNATION AND SERIAL NO.

LC 068282-B

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

N/A

7. UNIT AGREEMENT NAME

N/A

8. FARM OR LEASE NAME

HANSON FEDERAL

9. WELL NO.

8

10. FIELD AND POOL, OR WILDCAT

Brushy Canyon Wildcat

11. SEC., T., R., M., OR BLK. AND
SURVEY OR AREA

Sec. 25, T. 26S, R. 31E

12. PERMIT NO.

15. ELEVATIONS (Show whether DT, RT, CR, etc.)

3145' GR

12. COUNTY OR PARISH

Eddy

13. STATE

New Mexico

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

NOTICE OF INTENTION TO:

TEST WATER SHUT-OFF

PULL OR ALTER CASING

FRACTURE TREAT

MULTIPLE COMPLETION

SHOOT OR ACIDIZE

ABANDON*

REPAIR WELL

CHANGE PLANT

(Other)

SUBSEQUENT REPORT OF:

WATER SHUT-OFF

REPAIRING WELL

FRACTURE TREATMENT

ALTERING CASING

SHOOTING OR ACIDIZING

ABANDONMENT*

(Other)

(Note: Report results of multiple completion on Well
Completion or Recompletion Report and Log form.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)

Perf w/1 JSPF f/6300' - 6307' (8 shots), 6312' - 6322' (11 shots) & 6330' - 6338' (9 shots). Set RBP @ 6431'. Acidize w/2,000 gals 15% NEFE.
 Frac w/42,900 gals gelled wtr, 33,700# 20/40 sand & 39,200# 12/20 sand.
 Avg rate 26 BPM, avg psi 3850#, SIP 350#, 5 min - 320#, 10 min - 300#.
 Set CIBP @ 6420'. Put well on pump.

18. I hereby certify that the foregoing is true and correct

SIGNED

Brenda R. Mitt

TITLE

Production Analyst

DATE

02/06/85

(This space for Federal or State office use)

APPROVED BY

CONDITIONS OF APPROVAL, IF ANY

TITLE

DATE

*See Instructions on Reverse Side

Title 18 U.S.C. Section 1001 makes 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.

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN DUPLICATE

Form approved.
Budget Bureau No. 42-R355.0

6157

WELL COMPLETION OR RECOMPLETION REPORT AND LOG *

1a. TYPE OF WELL: OIL WELL ☒ GAS WELL ☐ DRY ☐ Other ☐

b. TYPE OF COMPLETION: NEW WELL ☐ WORK OVER ☐ DEEP-EN ☒ PLUG BACK ☐ DIFF. RESVR. ☐ Other ☐

2. NAME OF OPERATOR
HANSON OPERATING COMPANY, INC. ✓

3. ADDRESS OF OPERATOR
P. O. BOX #1515, ROSWELL, NEW MEXICO 88202-ARIESIA. OFFICE

RECEIVED BY
APR 12 1985
O. C. D.
ARIESIA. OFFICE

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements)*
At surface Sec. 25, T. 26S, R. 31E 330' FSL & 2310' FEL
At top prod. interval reported below
At total depth

14. PERMIT NO. DATE ISSUED
08/16/84

15. DATE SPUDDED 11/02/84 16. DATE T.D. REACHED 12/10/84 17. DATE COMPL. (Ready to prod.) 02/04/85 18. ELEVATIONS (DF, R&B, RT, GR, ETC.)* 3155.7' DF 19. ELEV. CASINGHEAD 3145'

20. TOTAL DEPTH, MD & TVD 8410' 21. PLUG, BACK T.D., MD & TVD 6420' 22. IF MULTIPLE COMPL., HOW MANY* 23. INTERVALS DRILLED BY → Surf to TD

24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)*
6300 - 6338' Cherry Canyon

26. TYPE ELECTRIC AND OTHER LOGS RUN
BHC Acoustilog Gamma Ray, Compensated Neutron Gamma Ray

27. WAS WELL CORED
No

28. CASING RECORD (Report all strings set in well)

CASINO SIZE	WEIGHT, LB./FT.	DEPTH SET (MD)	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
8-5/8"	28#	884'	10-3/4"	340 sx circ to surf	
5-1/2"	17#	8410'	7-7/8"	DV tool - 60 sx H, 125 sx C. Squeeze 700 sx C foam cem. Top of cem 3520'.	

29. LINER RECORD

SIZE	TOP (MD)	BOTTOM (MD)	SACKS CEMENT*	SCREEN (MD)

30. TUBING RECORD

SIZE	DEPTH SET (MD)	PACKER SET (MD)
2-7/8"	6324' (204 lbs)	N/A

31. PERFORATION RECORDED (Interval, size and number)
8322 - 8261' (16 holes)
8088 - 8067' (14 holes)
6965 - 6985' (21 holes)
6300 - 6338' (28 holes)

32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.

DEPTH INTERVAL (MD)	AMOUNT AND KIND OF MATERIAL USED
8322 - 8261'	2000 gal 15%. Set CIBP @ 8215'.
8088 - 8067'	2000 gal 15%
6965 - 6985'	2000 gal 15%, 25000 75% foam/45000
6300 - 6338'	2000 gal 15%, 43000 gelled

33. PRODUCTION

DATE FIRST PRODUCTION 02/23/85 PRODUCTION METHOD (Flowing, gas lift, pumping—size and type of pump) Pumping Tubing Pump WELL STATUS (Producing or shut-in) Producing

DATE OF TEST 02/23/85 HOURS TESTED 24 CHOKER SIZE PROD'N. FOR TEST PERIOD OIL—BBL. 60 GAS—MCF. 45 WATER—BBL. 312 GAS-OIL RATIO. 750/1

FLOW. TUBING PRESS. CASINO PRESSURE CALCULATED 24-HOUR RATE OIL—BBL. 60 GAS—MCF. 45 WATER—BBL. 312 OIL GRAVITY-API (CORR.)

34. DISPOSITION OF GAS (Sold, used for fuel, vented, etc.)
Vented

TEST WITNESSED BY
APR 2 1985

35. LIST OF ATTACHMENTS

36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records

SIGNED Brenda R. Witt TITLE Production Analyst DATE 02/27/85

*(See Instructions and Spaces for Additional Data on Reverse Side)

(Formerly 9-331)

DEPARTMENT OF THE INTERIOR (reverse side)

BUREAU LAND MANAGEMENT

5. LEASE DESIGNATION AND SERIAL NO.

LC 068282-B

dsf

SUNDRY NOTICES AND REPORTS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use "APPLICATION FOR PERMIT" for such proposals.)

RECEIVED BY
APR 12 1985
O. C. D.
ARTESIA, OFFICE

OIL WELL ☒ GAS WELL ☐ OTHER ☐

2. NAME OF OPERATOR

HANSON OPERATING COMPANY, INC.

3. ADDRESS OF OPERATOR

P. O. BOX #1515, ROSWELL, NEW MEXICO 88202-1515

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)

See also space 17 below.)

At surface

330' FSL & 2310' FEL

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

N/A

7. UNIT AGREEMENT NAME

N/A

8. FARM OR LEASE NAME

HANSON FEDERAL

9. WELL NO.

8

10. FIELD AND POOL, OR WILDCAT

Brushy Canyon Wildcat

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA

Sec. 25, T. 26S, R. 31E

14. PERMIT NO.

15. ELEVATIONS (Show whether DT, RT, GR, etc.)

3145' GR

12. COUNTY OR PARISH

Eddy

13. STATE

New Mexico

10. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:

TEST WATER SHUT-OFF

FRACATURE TREAT

SHOOT OR ACIDIZE

REPAIR WELL

(Other)

PLUG OR ALTER CASING

MULTIPLE COMPLETE

ABANDON*

CHANGE PLANE

SUBSEQUENT REPORT OF:

WATER SHUT-OFF

FRACATURE TREATMENT

SHOOTING OR ACIDIZING

(Other)

REPAIRING WELL

ALTERING CASING

ABANDONMENT*

(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)

Perf w/CRC f/5836-41' & 5856-66' (17 holes). Acidized w/2,000 gal 15% NE Ac.

Set CIBP @ 6040' & capped w/35' cement.

18. I hereby certify that the foregoing is true and correct

SIGNED

Brenda G. Witt

TITLE

Production Analyst

DATE

03/12/85

(This space for Federal or State office use)

APPROVED BY

ACCEPTED FOR RECORD

TITLE

DATE

CONDITIONS OF APPROVAL, IF ANY:

APR 2 1985

*See Instructions on Reverse Side

Orig. + 4 c. to
B.L.M. - 100-10-10
3/12/85

Title 16 U.S.C. Section 1101, makes 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.

UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

Designation Bureau No. 1004-0135
Expires August 31, 1985

151

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—" for such proposals.)

1. OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <input type="checkbox"/>	RECEIVED BY	5. LEASE DESIGNATION AND SERIAL NO.
2. NAME OF OPERATOR HANSON OPERATING COMPANY, INC.	APR 12 1985	LC-068282-B
3. ADDRESS OF OPERATOR P. O. BOX #1515, ROSWELL, NEW MEXICO	O. C. D. ARTESIA OFFICE	6. IF INDIAN, ALLOTTEE OR TRIBE NAME N/A
4. LOCATION OF WELL (Report location clearly and in accordance with State requirements. See also space 17 below.) At surface 330' FSL & 2310' FEL		7. UNIT AGREEMENT NAME N/A
14. PERMIT NO.	15. ELEVATIONS (Show whether DF, WT, GR, etc.) 3145' GR	8. FARM OR LEASE NAME HANSON FEDERAL
		9. WELL NO. 8
		10. FIELD AND POOL, OR WILDCAT North Mason Delaware
		11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA Sec. 25, T. 26S, R. 31E
		12. COUNTY OR PARISH Eddy
		13. STATE New Mexico

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
TEST WATER SHUT-OFF	<input type="checkbox"/>	WATER SHUT-OFF	<input type="checkbox"/>
FRAC TURE TREAT	<input type="checkbox"/>	FRAC TURE TREATMENT	<input type="checkbox"/>
RIIOOT OR ACIDIZE	<input type="checkbox"/>	SHOOTING OR ACIDIZING	<input checked="" type="checkbox"/>
REPAIR WELL	<input type="checkbox"/>	(Other)	<input type="checkbox"/>
(Other)	<input type="checkbox"/>	(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)	

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)

Set retainer @ 5795'. Squeezed 134 sx cement into perfs @ 5836-41' & 5856-66'. Squeezed of 2500#. Drilled retainer & cem to 5875'. Press up on csg to 600# for 15 min. Perf f/5696-5718' - 1 JSPF. Acidized w/2,000 gal 15% NE Acid.

18. I hereby certify that the foregoing is true and correct

SIGNED Carlsbad

TITLE Production Analyst

DATE 03/22/85

(This space for Federal or State office use)

APPROVED BY ACCEPTED FOR RECORD
CONDITIONS OF APPROVAL, IF ANY:

TITLE

DATE

APR 2 1985

*See Instructions on Reverse Side

CARLSBAD, NEW MEXICO

Title 18 U.S.C. Section 1001, makes 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.

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUBMIT IN TRIPLICATE*
(Other instructions on reverse side)

BLM Form 3160-5, 11004-0115
Expires August 31, 1985

45F

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different formation.
Use "APPLICATION FOR PERMIT—" for such proposals.)

1. ☒ OIL WELL ☐ GAS WELL ☐ OTHER

2. NAME OF OPERATOR
HANSON OPERATING COMPANY, INC.

3. ADDRESS OF OPERATOR
P. O. BOX #1515, ROSWELL, NEW MEXICO 88202-1515

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*
See also space 17 below.)
At surface
330' FSL & 2310' FEL

14. PERMIT NO.

15. ELEVATIONS (Show whether DF, RT, GK, etc.)
3145' GR

RECEIVED BY
APR 12 1985
O. C. D.
ARTESIA OFFICE

5. LEASE DESIGNATION AND SERIAL NO.
LC-068282-B

6. IF INDIAN, ALLOTTEE OR TRIBE NAME
N/A

7. UNIT AGREEMENT NAME
N/A

8. FARM OR LEASE NAME
HANSON FEDERAL

9. WELL NO.
8

10. FIELD AND POOL, OR WILDCAT
North Mason Delaware

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA
Sec. 25, T. 26S, R. 31E

12. COUNTY OR PARISH
Eddy

13. STATE
New Mexico

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
TEST WATER SHUT-OFF	<input type="checkbox"/>	WATER SHUT-OFF	<input type="checkbox"/>
FRACTURE TREAT	<input type="checkbox"/>	FRACTURE TREATMENT	<input type="checkbox"/>
SHOOT OR ACIDIZE	<input type="checkbox"/>	SHOOTING OR ACIDIZING	<input checked="" type="checkbox"/>
REPAIR WELL	<input type="checkbox"/>	(Other) Squeezing	<input type="checkbox"/>
(Other)	<input type="checkbox"/>		
DELL OR ALTER CASING	<input type="checkbox"/>	REPAIRING WELL	<input type="checkbox"/>
MULTIPLE COMPLETE	<input type="checkbox"/>	ALTERING CASING	<input type="checkbox"/>
ABANDON*	<input type="checkbox"/>	ABANDONMENT*	<input checked="" type="checkbox"/>
CHANGE PLANS	<input type="checkbox"/>		

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)

Perf f/5630-5646' (1 JSPF).
Acidized w/2,000 gals 15% NE Acid.
Squeezed perfs w/90 sx Class "H" cement.
Squeeze pressure to 3500#. Tested squeeze to 1000# - held OK.

18. I hereby certify that the foregoing is true and correct

SIGNED Brenda H. Witt TITLE Production Analyst DATE 04/03/85

(This space for Federal or State office use)

APPROVED BY ACCEPTED FOR RECORD TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:
APR 11 1985

*See Instructions on Reverse Side

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUBMIT IN TRIPL
(Other instructions on reverse side)

Form approved.
Budget Bureau No. 1004-0135
Expires August 31, 1985

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—" for such proposals.)

1. <input checked="" type="checkbox"/> OIL WELL <input type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER	2. NAME OF OPERATOR Hanson Operating Company, Inc.	3. ADDRESS OF OPERATOR P. O. Box 1515, Roswell, New Mexico 88202-1515	4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements. See also space 17 below.) At surface Sec. 25, T. 26S, R. 31E, Unit O, 330' FSL & 2310' FEL	5. LEASE DESIGNATION AND SERIAL NO. LC-068282-B	6. IF INDIAN, ALLOTTEE OR TRIBE NAME N/A	7. UNIT AGREEMENT NAME N/A	8. FARM OR LEASE NAME Hanson Federal Batt. #2	9. WELL NO. #8	10. FIELD AND POOL, OR WILDCAT North Mason (Delaware)	11. SEC., T., R., M., OR BLE. AND SURVEY OR AREA Sec. 25, T. 26S, R. 31E	12. COUNTY OR PARISH Eddy	13. STATE New Mexico
14. PERMIT NO. 30-015-05874	15. ELEVATIONS (Show whether DT, ST, GR, etc.) 3145" GR											

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:					
TEST WATER SHUT-OFF	<input type="checkbox"/>	PULL OR ALTER CASING	<input type="checkbox"/>	WATER SHUT-OFF	<input type="checkbox"/>	REPAIRING WELL	<input type="checkbox"/>
FRACTURE TREAT	<input type="checkbox"/>	MULTIPLE COMPLETE	<input type="checkbox"/>	FRACTURE TREATMENT	<input type="checkbox"/>	ALTERING CASING	<input type="checkbox"/>
SHOOT OR ACIDIZE	<input type="checkbox"/>	ABANDON*	<input type="checkbox"/>	SHOOTING OR ACIDIZING	<input type="checkbox"/>	ABANDONMENT*	<input type="checkbox"/>
REPAIR WELL	<input type="checkbox"/>	CHANGE PLANS	<input type="checkbox"/>	(Other) Re-completion	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>
(Other)	<input type="checkbox"/>			(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)			

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)

Well was re-completed on 02-10-92

- 1) Set CIBP @6250' and capped w/5 sx cem.
- 2) Perf Upper Delaware in the following interval 4166-4192' 19 Holes.
- 3) Acidized w/2000 gal 7 1/2% HCl
- 4) Frac w/8000 gal gelled diesel w/8000# 20/40 sd.

18. I hereby certify that the foregoing is true and correct

SIGNED [Signature] TITLE Production Analyst DATE 02-13-92

(This space for Federal or State office use)

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY: _____

*See Instructions on Reverse Side

Form 1000-5
November 1983
(Formerly 9-311)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUBMIT IN TRIPLICATE
(Other Instructions
reverse side)

Budget Bureau No. 1004-0135
Expires August 31, 1985

LEASE DESIGNATION AND SERIAL NO.

LC-068282-B

IF INDIAN, ALLOTTEE OR TRIBE NAME

N/A

1. UNIT AGREEMENT NAME

N/A

2. FARM OR LEASE NAME

Hanson Federal Batt. #2

3. WELL NO.

#8

10. FIELD AND POOL, OR WILDCAT

North Mason (Delaware)

11. SEC., T., R., OR BLM. AND
SURVEY OR AREA

Sec25, T.26S, R.31E

12. COUNTY OR PARISH

Eddy

13. STATE

New Mexico

1. OIL WELL ☒ GAS WELL ☐ OTHER ☐

2. NAME OF OPERATOR

Hanson Operating company, Inc.

3. ADDRESS OF OPERATOR

P. O. Box 1515, Roswell, New Mexico 88202-1515

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)

See also space 17 below.
At surface

Sec.25, T.26S, R.31E, Unit 0, 330' FSL & 2310' FEL

14. PERMIT NO.

30-015-05874

15. ELEVATIONS (Show whether OF, RT, OR, etc.)

3145' GR

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:

TEST WATER SHUT-OFF

FRACURE TREAT

SHOOT OR ACIDIZE

REPAIR WELL

(Other)

PULL OR ALTER CASING

MULTIPLE COMPLETE

ABANDON*

CHANGE PLANT

SUBSEQUENT REPORT OF:

WATER SHUT-OFF

FRACURE TREATMENT

SHOOTING OR ACIDIZING

(Other)

REPAIRING WELL

ALTERING CASING

ABANDONMENT*

(NOTE: Report results of multiple completion on Well
Completion or Recompletion Report and Log form.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)

This well was plugged & abandoned in the following manner on 02-15-92:

- 1). Tag cem @6203' on top of CIBP @6250'.
- 2). Set CIBP @4100'±. Circ hole w/9# gelled fluid. Pmp 25 sx Class C cem w/2% CaCl₂ from 4100' to 3830'±. Tagged plug @3830'.
- 3). Perf @ 934'. Pmp 45 sx Class C cem w/@2%CaCl₂ 100' in & 100' out of 5½" csg. Tagged plug @847'. RIH & pmp 5 sx Class C cem w/2% CaCl₂ from 847' to 798'.
- 4). Pmp 10 sx Class C cem from 35' to surface. All plugs witnessed & approved by BLM inspector Don Early.
- 5). RD well service unit. Cut off anchors. Install dry hole marker.

Part ID-2
3-30-92
P+H

18. I hereby certify that the foregoing is true and correct

SIGNED

(This space for Federal or State signature)

APPROVED BY

CONDITIONS OF APPROVAL, IF ANY:

TITLE Production Analyst

TITLE

DATE 02-18-92

DATE

*See Instructions on Reverse Side

Title 18 U.S.C. Section 1001, makes 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.



DRILLER

COMPENSATED NEUTRON GAMMA RAY

FILE NO.

Company HANSON OPERATING CO., INC.

API NO.

Well HANSON FEDERAL NO. 8

Field BRUSHY CANYON WILDCAT

County EDDY State N.M.

Tops Corr

DGM

Location:

338' FSL & 2318' FEL

OTHER SERVICES

ACBL

SEC 25 TWP 26-S R9E 31-E

PERMANENT DATUM GROUND LEVEL ELEV. 3145'
LOGGING MEASURED FROM K.B. 11.7 FT. ABOVE F.O.
DRILLING MEASURED FROM K.B.

ELEVATIONS

KB 3136.7'
OF 3155.7'
CL 3145'

DATE 12-18-84
RUN 1
SERVICE ORDER 77653
DEPTH-DRILLER 8328
DEPTH-LOGGER 8328
BOTTOM LOGGED INTERVAL 8326
TOP LOGGED INTERVAL 3788
TYPE FLUID IN HOLE WATER
SALINITY PPM CL.
DENSITY LB/GAL.
LEVEL 988
MAX. REC. TEMP. DEG. F
OPR. RIG TIME 4.5 HRS.
EQUIP. NO. / LOC. HP4883 HO888
RECORDED BY BOGGS
WITNESSED BY G. SMITH

TIGHT HOLE

RUN NO. BIT BOREHOLE RECORD FROM TO

FOLD HERE

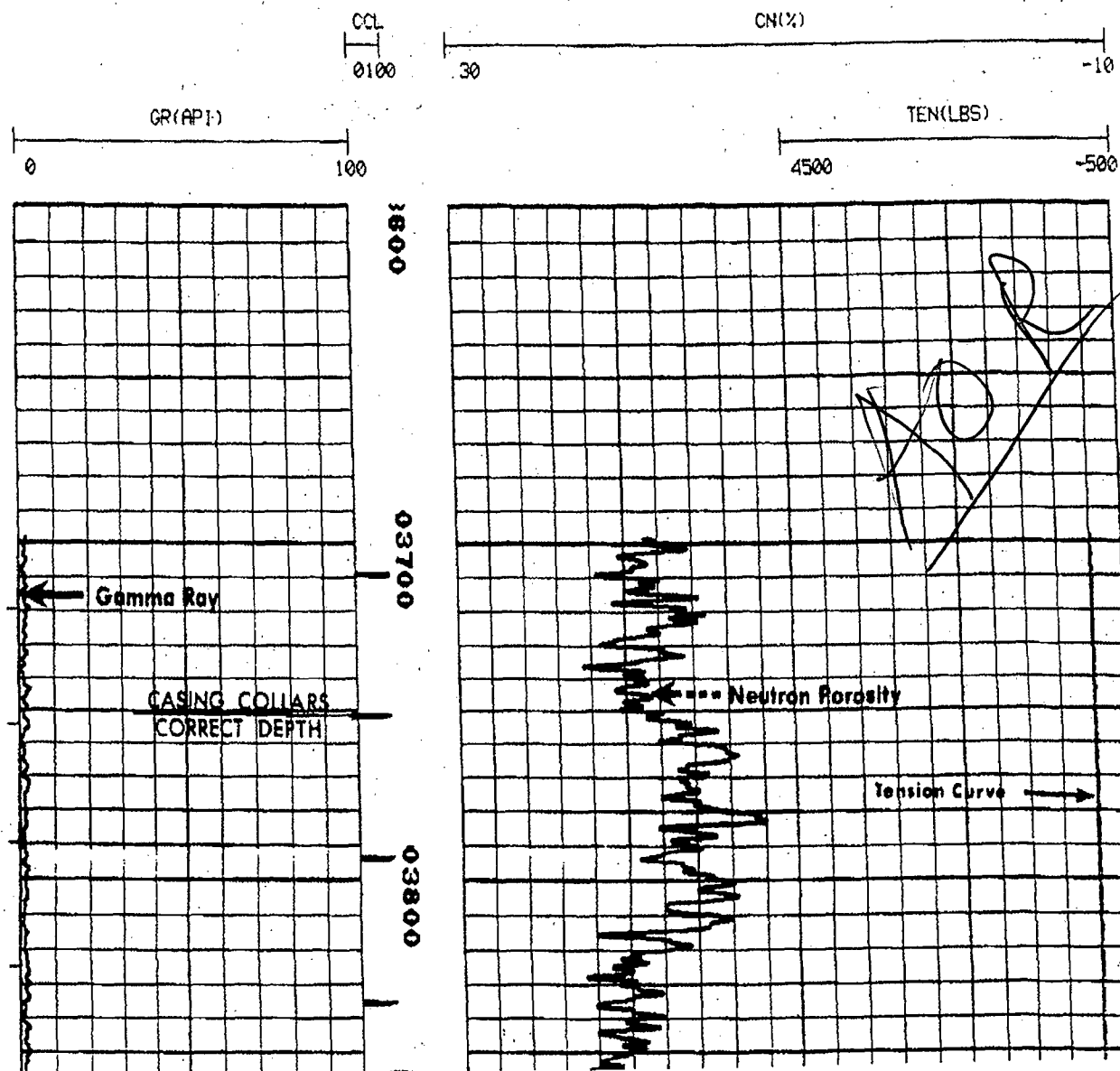
IN MAKING INTERPRETATIONS OF LOGS & EMPLOYEES WILL GIVE CUSTOMER THE BEST OF THEIR BEST JUDGEMENT. BUT SINCE INTERPRETATIONS ARE OPINIONS BASED ON INFERENCES FROM ELECTRICAL OR OTHER MEASUREMENTS. WE CANNOT AND WE DO NOT GUARANTEE THE ACCURACY OR CORRECTNESS OF ANY INTERPRETATION. WE SHALL NOT BE RESPONSIBLE FOR ANY LOSS, COST, OR EXPENSE WHATSOEVER INCURRED OR SUSTAINED BY THE CUSTOMER RESULTING FROM ANY INTERPRETATION MADE BY ANY OF OUR EMPLOYEES.

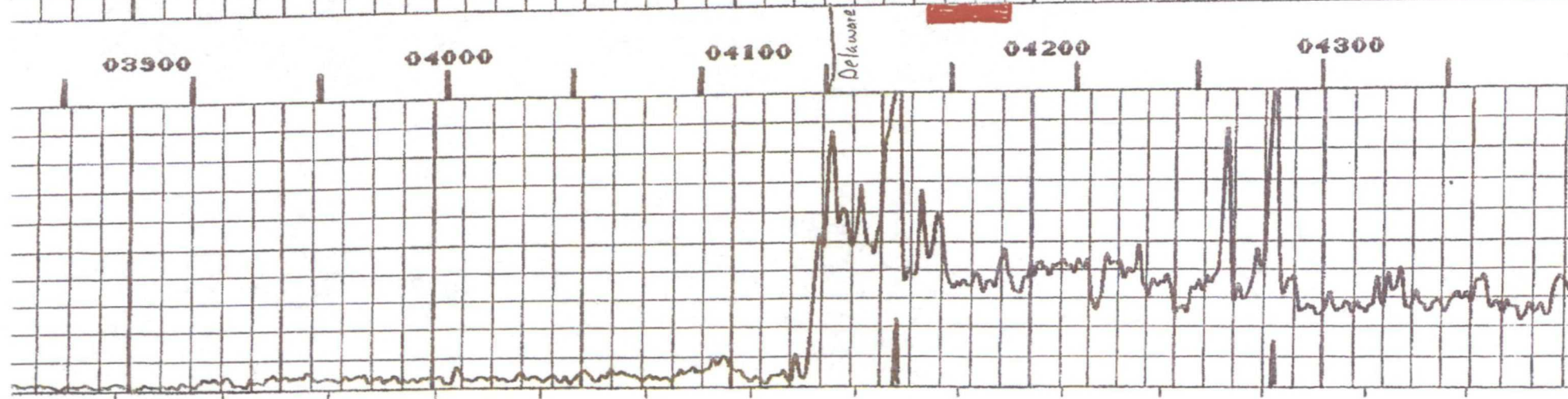
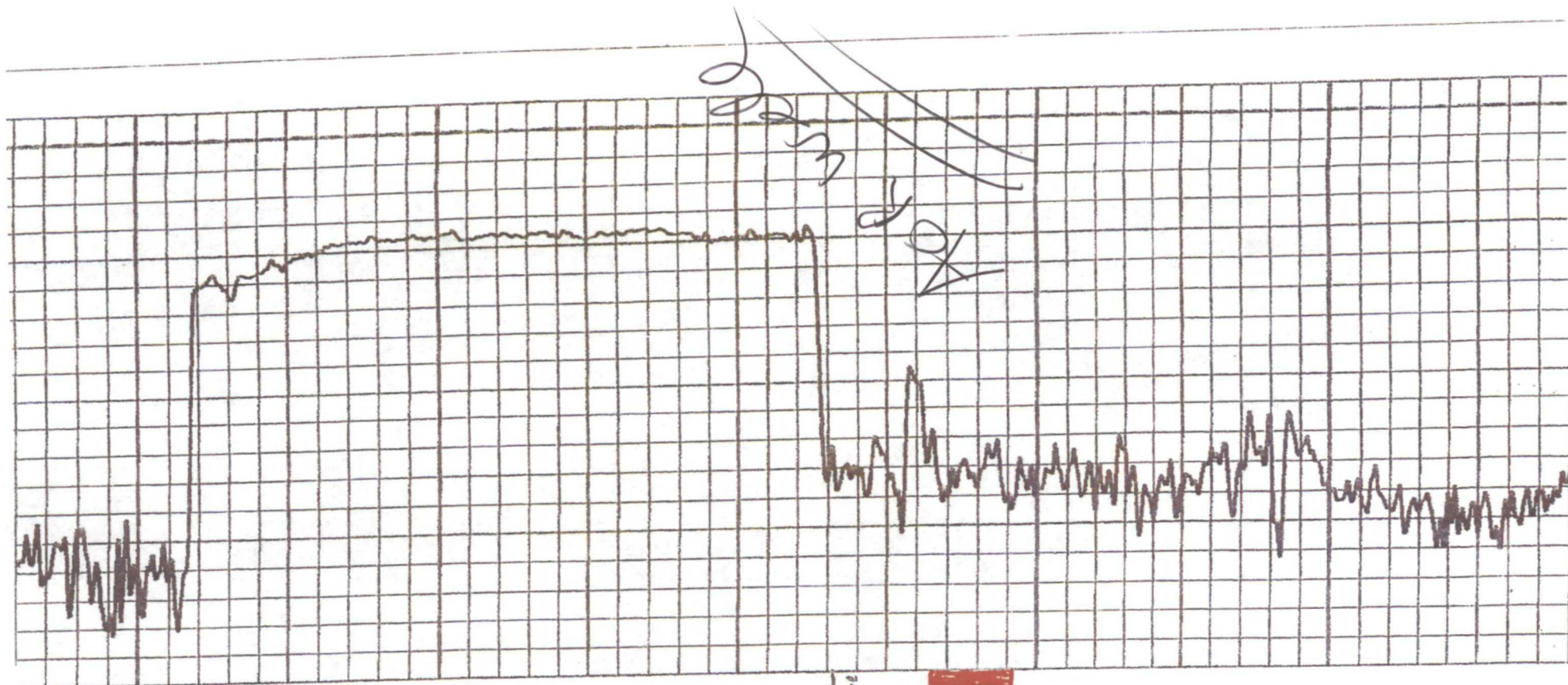
CASING RECORD SIZE WT FROM T.D.
5.5" SURF.

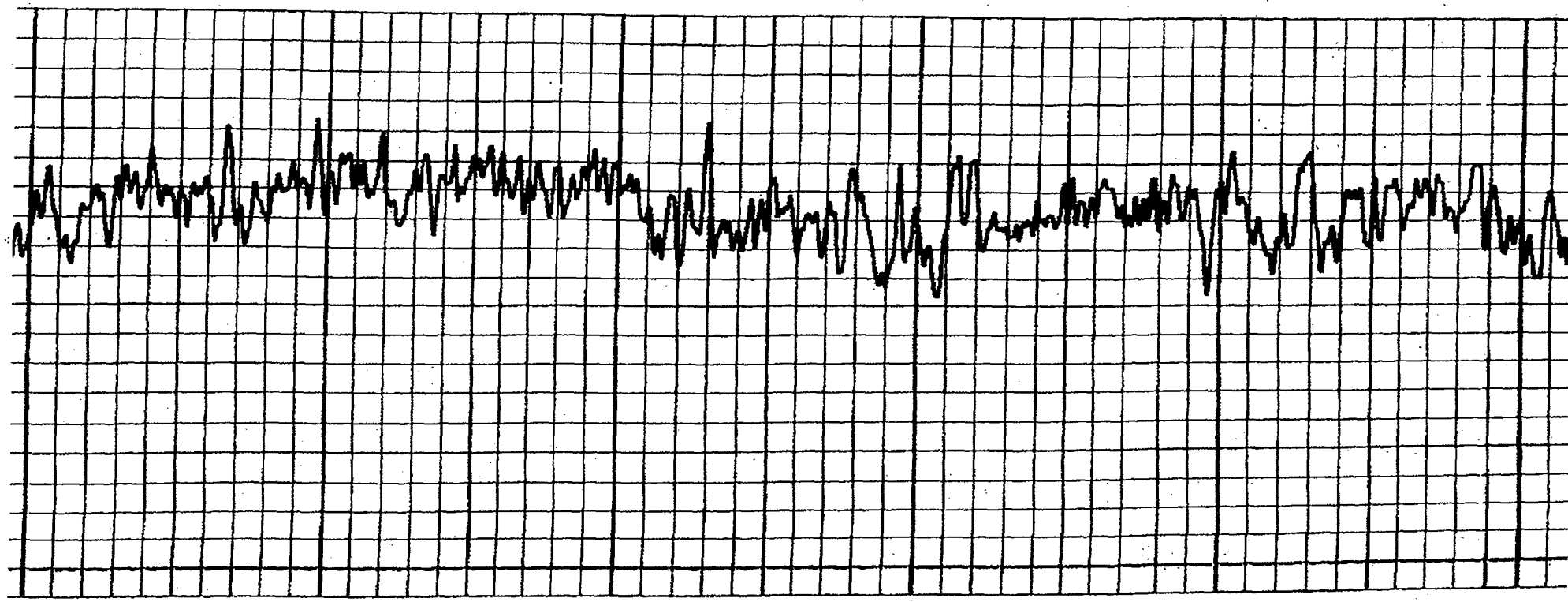
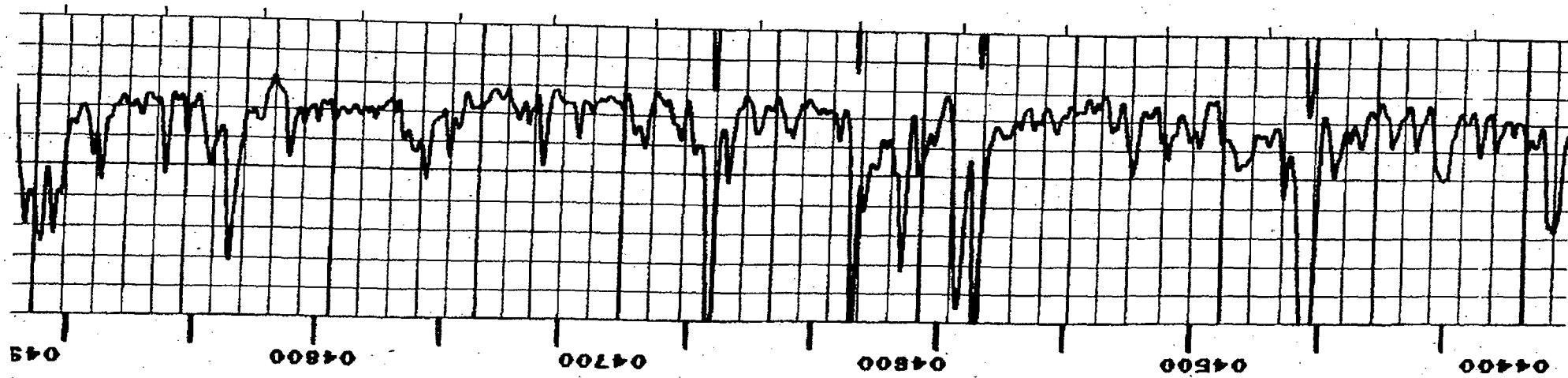
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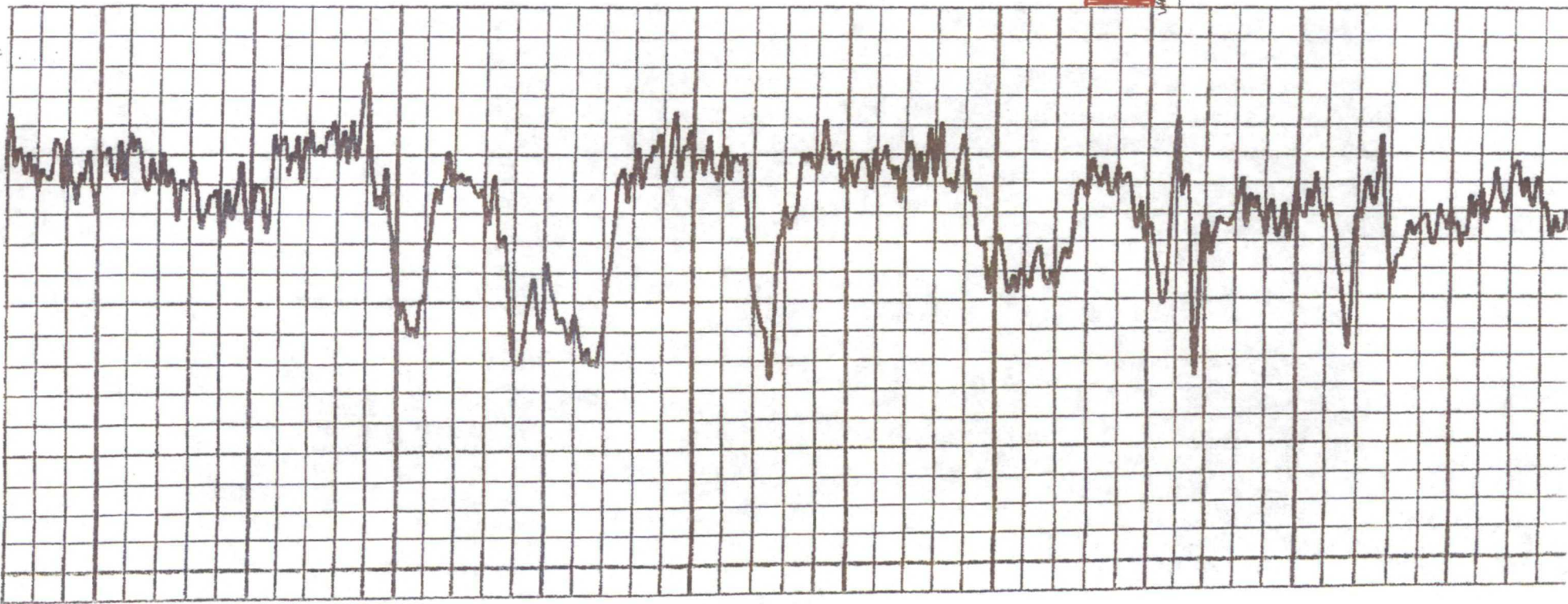
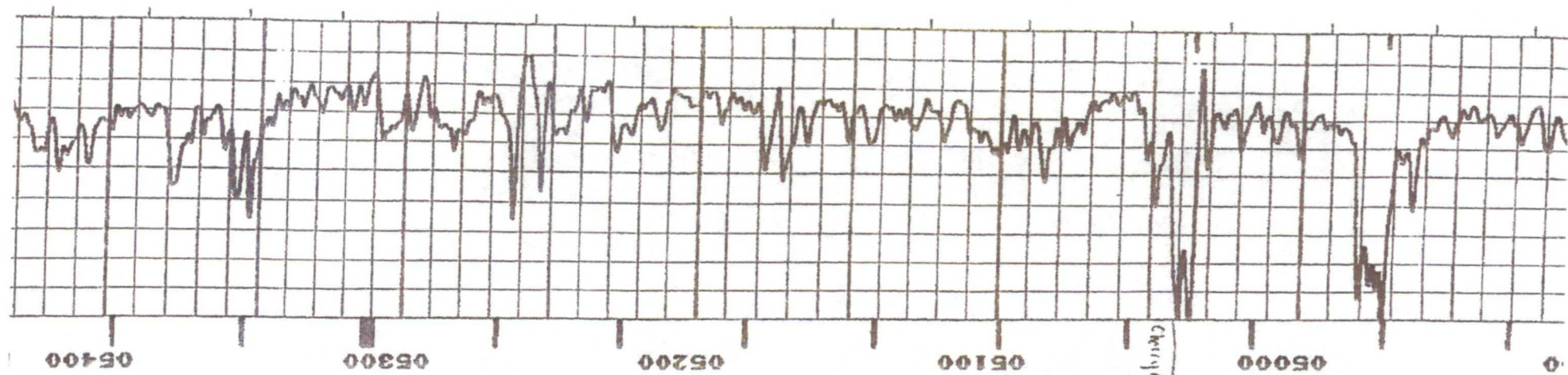
C/N CORRECTED FOR CASING

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1	1	GR	41748	1313	FREE

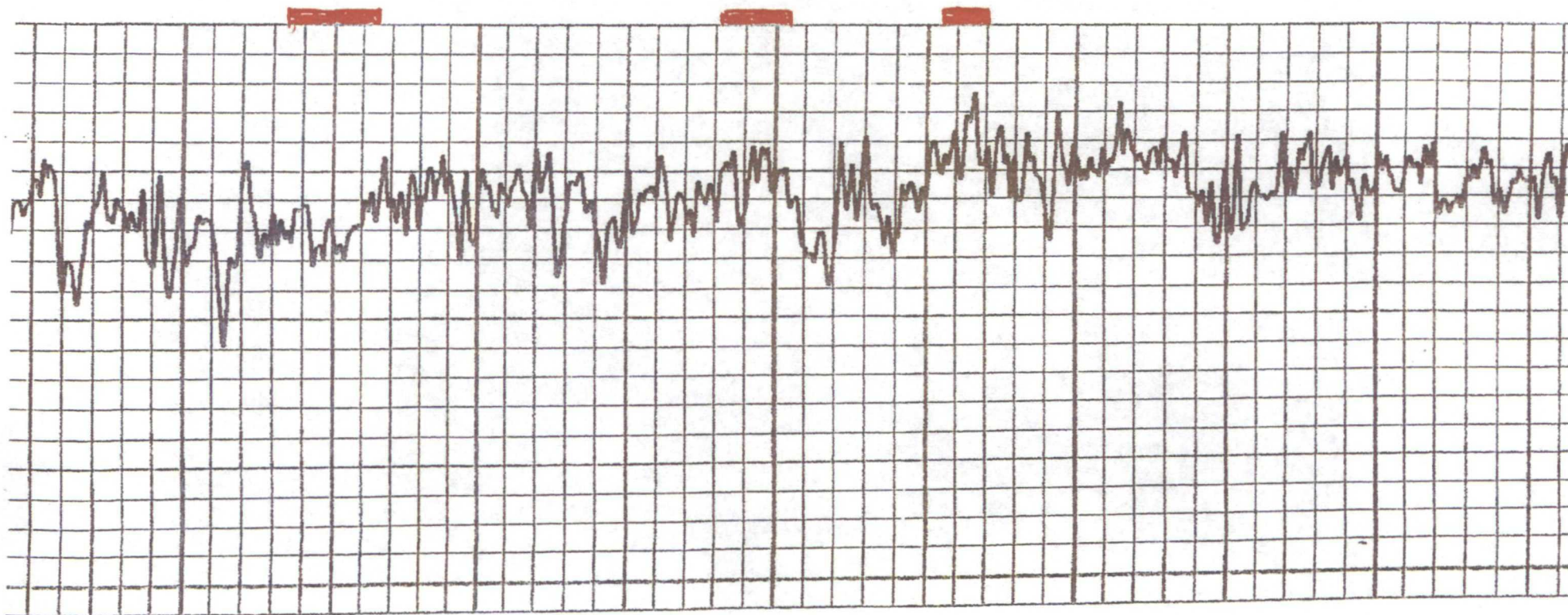
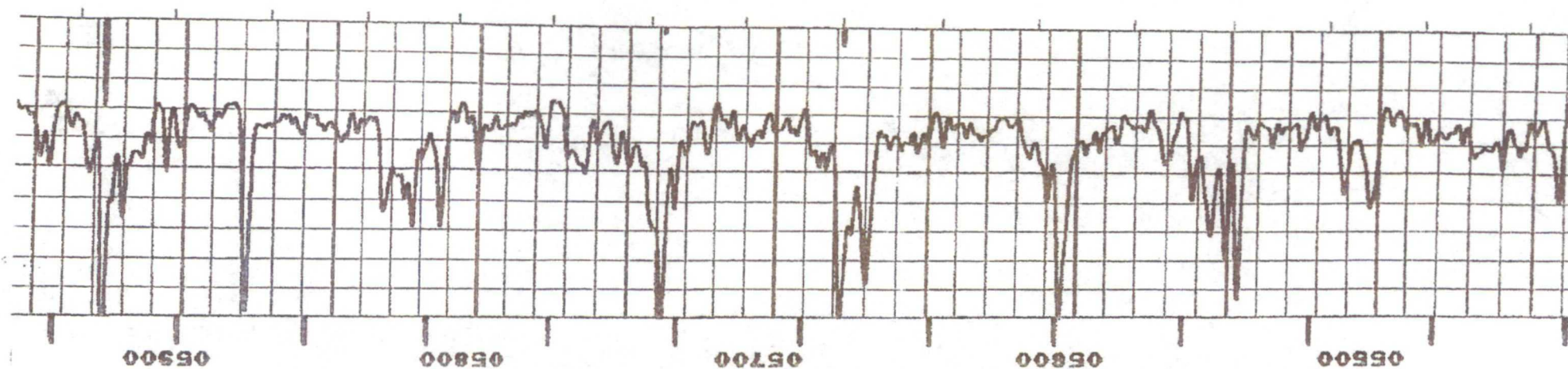


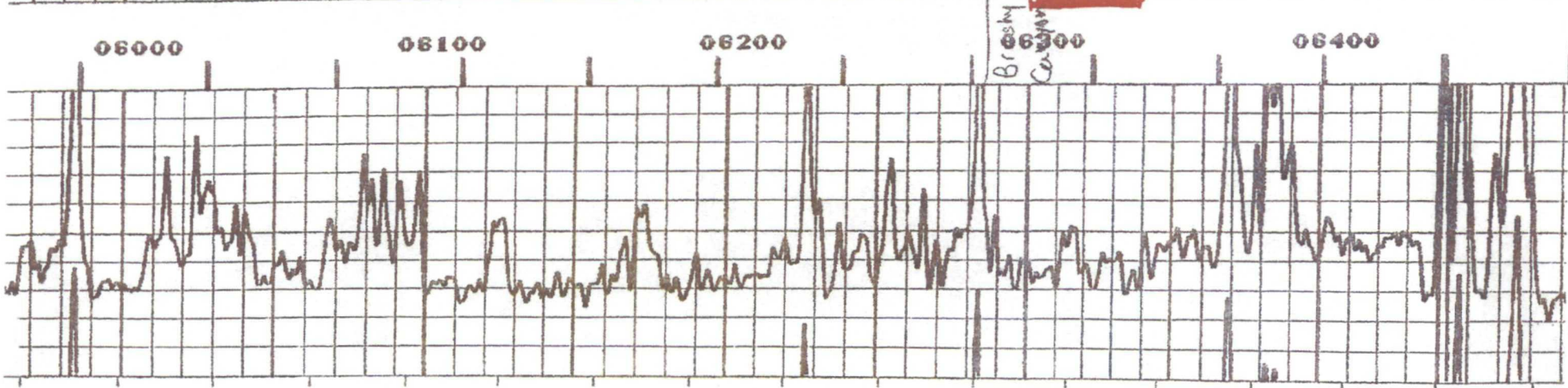
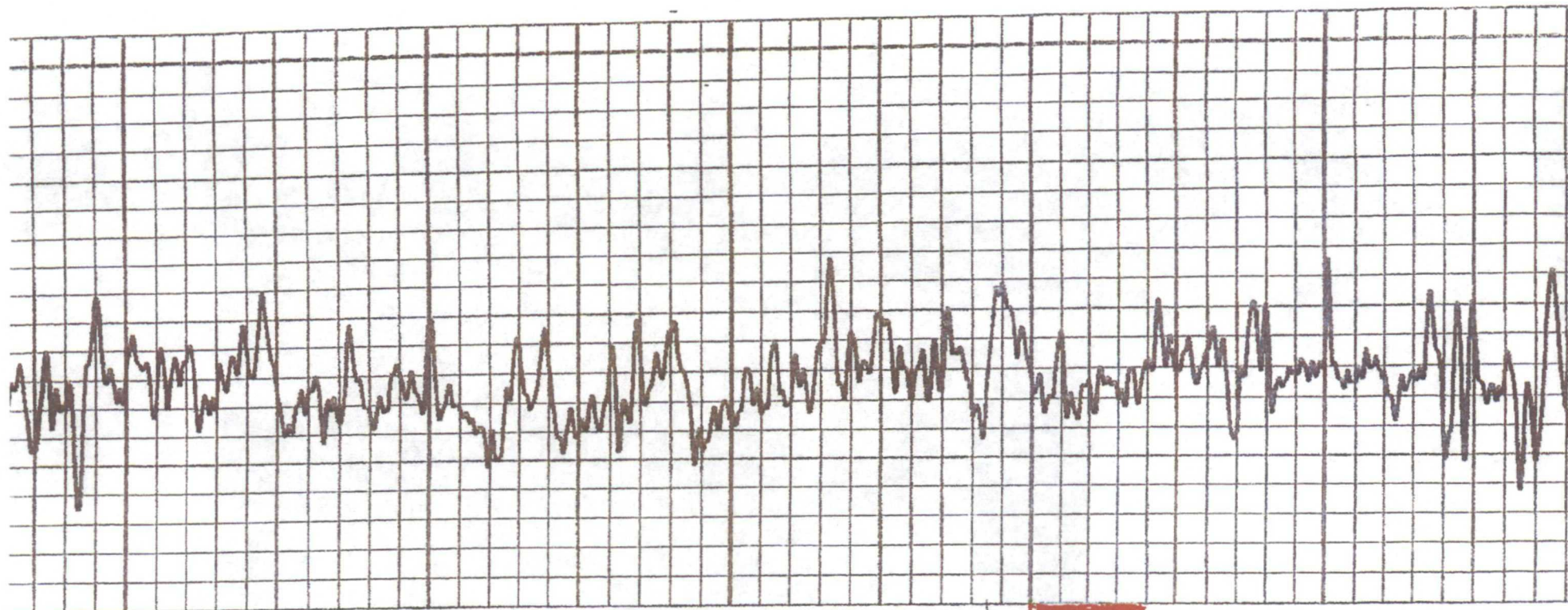






Chirp





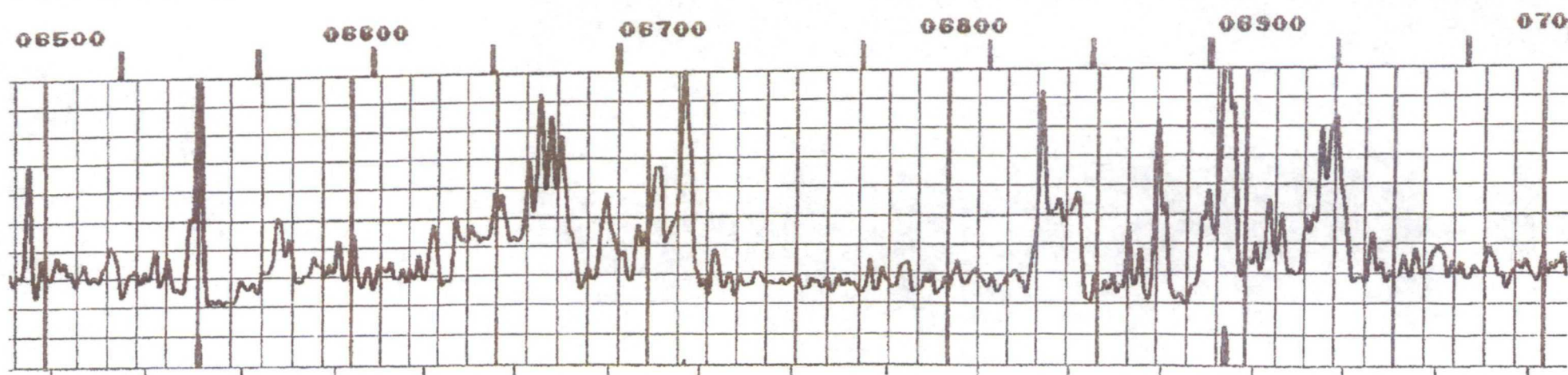
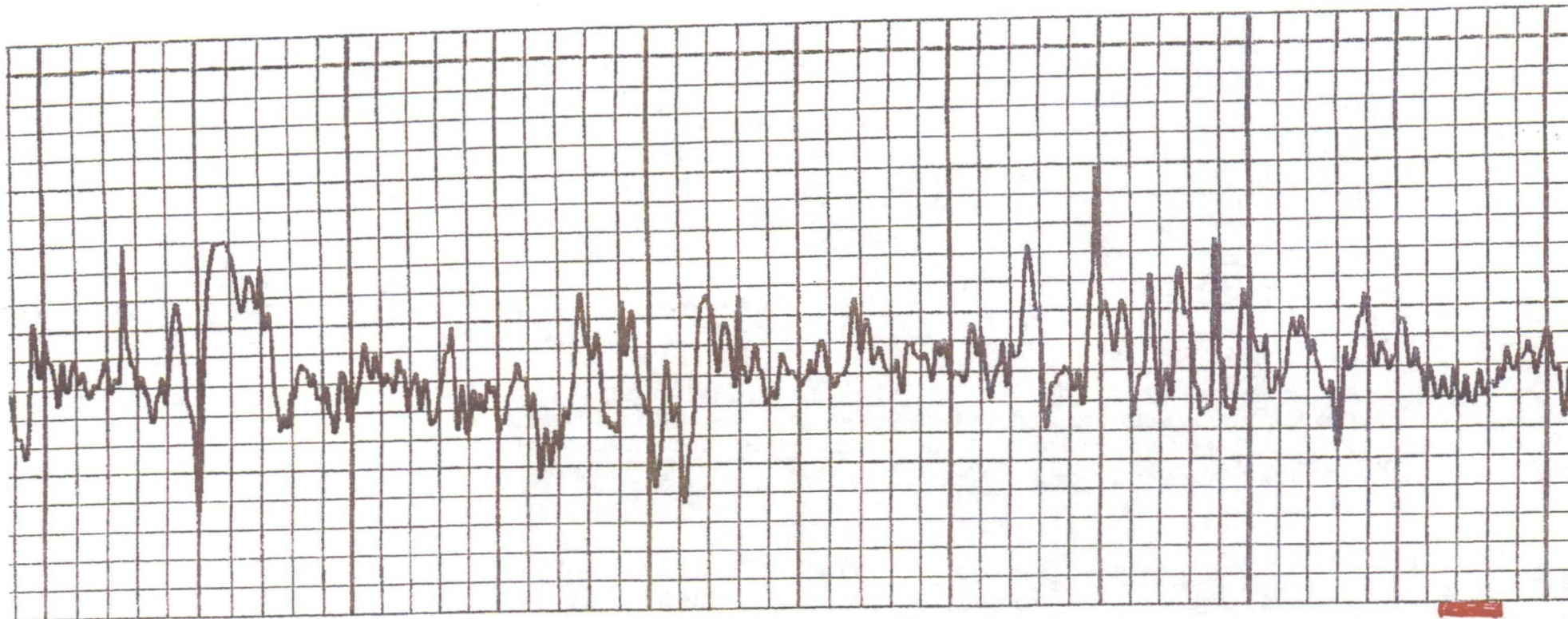
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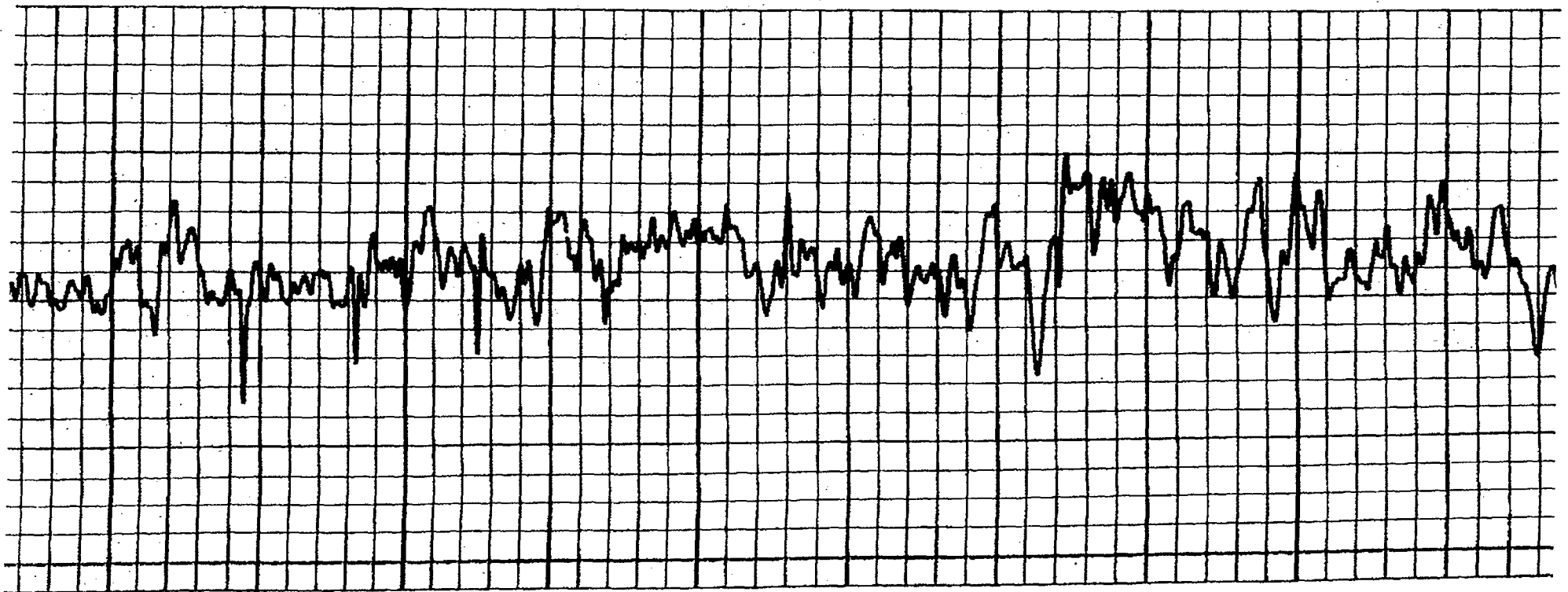
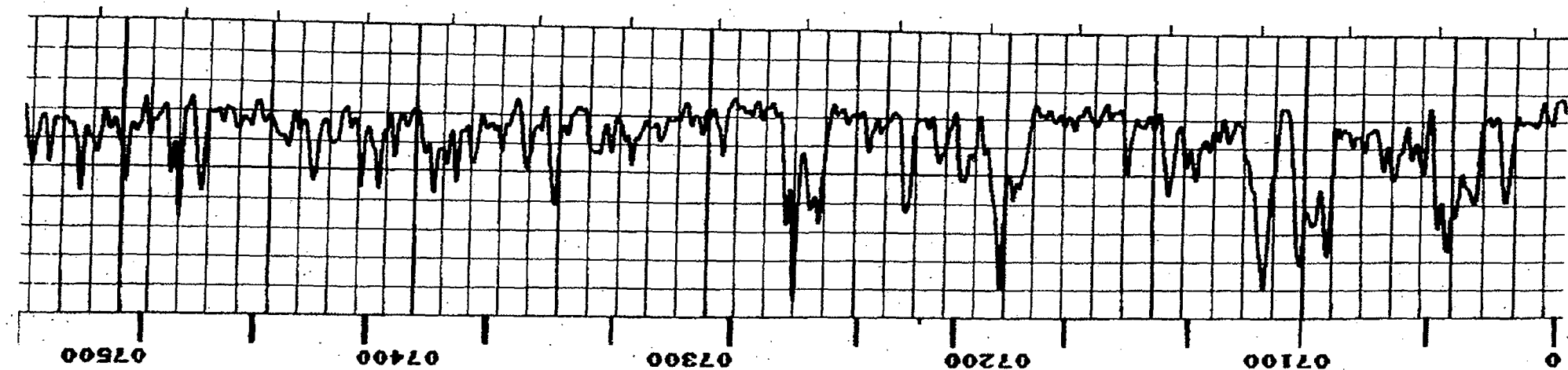
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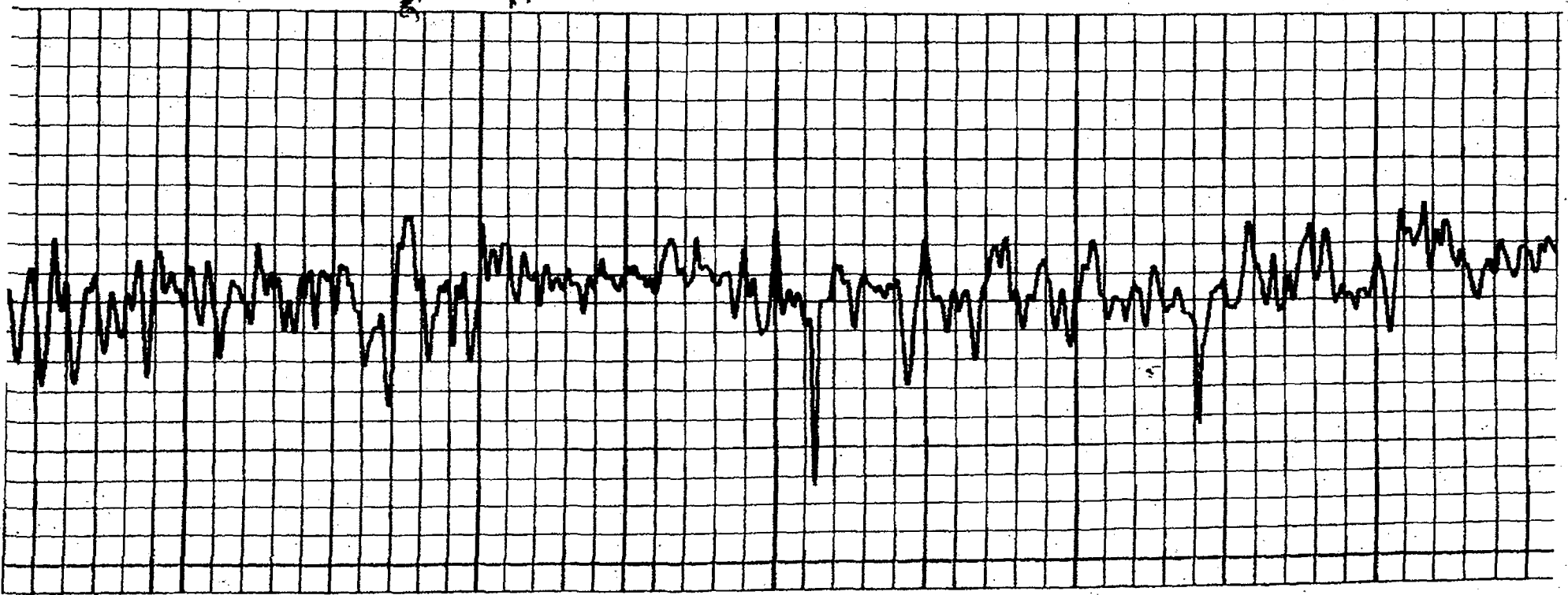
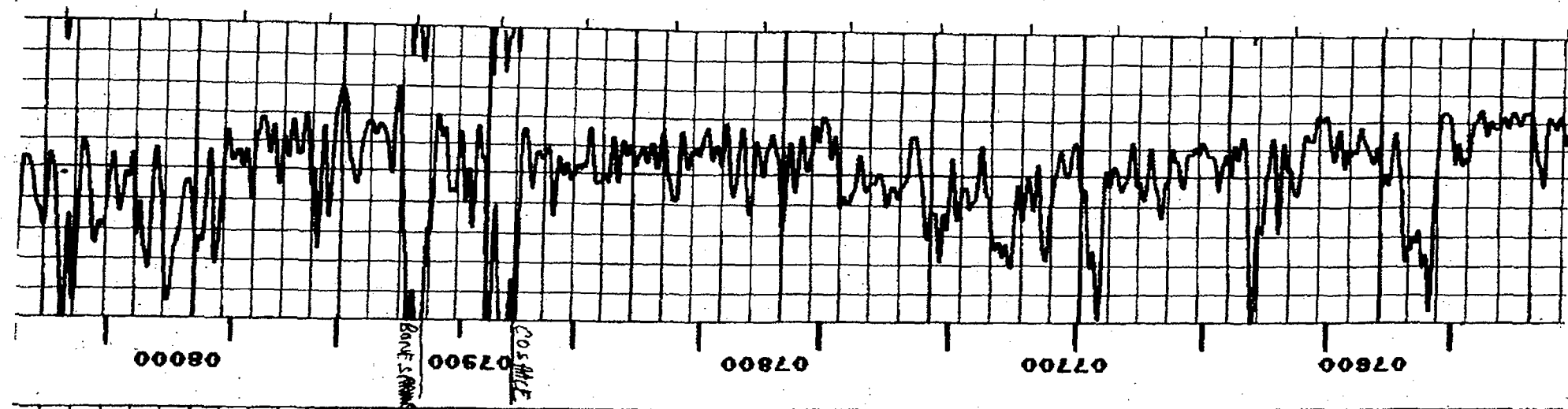
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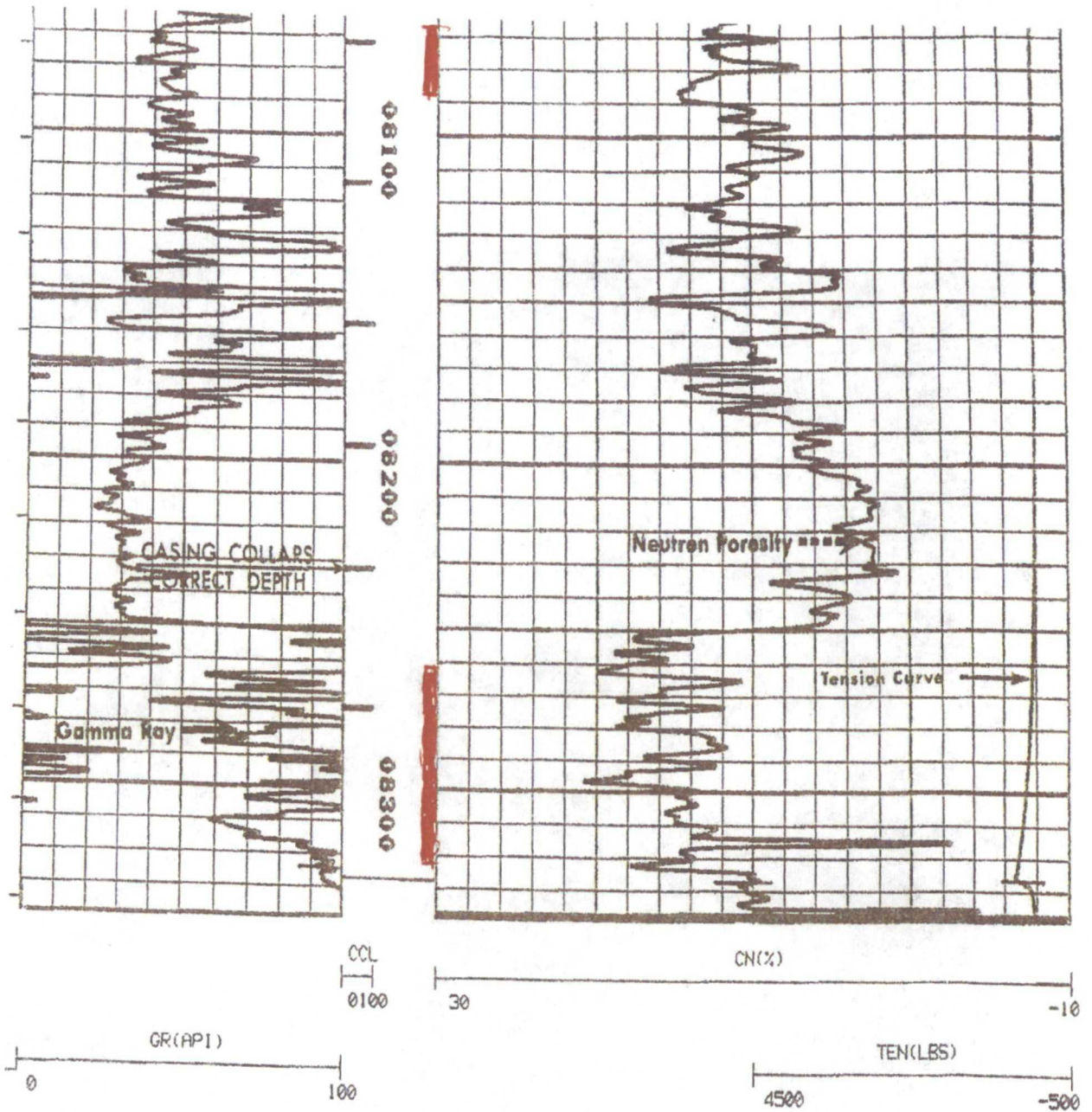
06300
Brachy
Corynor

06400









PARAMETERS			
NAME	DEPTH INTERVAL	VALUE	UNITS
MATRIX	8339 TO 8100	LIMESTONE	

DISPLAY SCALE CHANGES

APPENDIX XI

Chemical Analysis from Fresh Water Well

Refer to attached analytical data summary and laboratory report for fresh water sample that was collected from a stock well (windmill) located 0.8 miles east of the proposed SWD well.



November 17, 2011

Alexis Johnson
Larson & Associates
507 N. Marienfeld #200
Midland, TX 79701

Order No: 1111076

TEL: (432) 687-0901
FAX: (432) 687-0456

RE:

Dear Alexis Johnson:

DHL Analytical received 1 sample(s) on 11/9/2011 for the analyses presented in the following report.

There were no problems with the analyses and all data met requirements of NELAC except where noted in the Case Narrative. All non-NELAC methods will be identified accordingly in the case narrative and all estimated uncertainties of test results are within method or EPA specifications.

If you have any questions regarding these tests results, please feel free to call. Thank you for using DHL Analytical.

Sincerely,

A handwritten signature in black ink, appearing to read "John DuPont".

John DuPont
General Manager

This report was performed under the accreditation of the State of Texas Laboratory Certification Number: T104704211-11-7



2300 Double Creek Dr. • Round Rock, TX 78664 • Phone: (512) 388-8222 • Fax: (512) 388-8229
<http://www.dhlanalytical.com>

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Sample Summary.....	7
Prep Dates Report.....	8
Analytical Dates Report.....	9
Sample Results	10
Analytical QC Summary Report.....	11

[illegible]



Airbill No. Z8049199

Lone Star Overnight
800.800.8984
www.lso.com

To: SAMPLE RECEIVING
DHL ANALYTICAL
2300 DOUBLE CREEK DRIVE
ROUND ROCK, TX 78664
(512) 388 - 8222

From: ALEXIS JOHNSON
LARSON AND ASSOCIATES
507 N MARIENFELD
SUITE 200
MIDLAND, TX 79701
(432) 687 - 0901

Service Type: By 10:30am
1D00V

AUS

By 10:30am

QuickCode: DHL
Date Printed: 11/8/2011
Billing Ref 1: 11-0131-01



DHL Analytical

Sample Receipt Checklist

Client Name: Lanson & Associates
Work Order Number: 1111076

Date Received: 11/6/2011
Received by: JB

Checklist completed by:

[Signature] 11/5/11

Reviewed by:

SS 11/5-11

Carrier name: LoneStar

Shipping container/coolers in good condition?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Not Present: <input type="checkbox"/>
Custody seals intact on shipping container/coolers?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Not Present: <input type="checkbox"/>
Custody seals intact on sample bottles?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Not Present: <input checked="" type="checkbox"/>
Chain of custody present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody signed when relinquished and received?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody agrees with sample labels?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Samples in proper container/bottle?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sample containers intact?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sufficient sample volume for indicated test?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
All samples received within holding time?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Container Temp Blank temperature in compliance?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	1.1 °C
Water - VOA vials have zero headspace?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	No VOA vials submitted <input type="checkbox"/>
Water - pH acceptable upon receipt?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Not Applicable <input type="checkbox"/>

Adjusted? SS

Checked by [Signature]

Any No response must be detailed in the comments section below.

Client contacted: _____ Date contacted: _____ Person contacted: _____

Contacted by: _____ Regarding: _____

Comments: _____

Corrective Action: _____

CLIENT: Larson & Associates
Project:
Lab Order: 1111076

CASE NARRATIVE

Sample was analyzed using the methods outlined in the following references:

Method SW6020 - Metals Analysis
Method SW7470A - Mercury Analysis
Method SW8021B - Volatile Organics by GC Analysis
Method E300 - Anions Analysis
Method M2320 B (18th Edition) - Alkalinity Analysis
Method M2540C (18th Edition) - TDS Analysis

LOG IN

The sample was received and log-in performed on 11/9/11. A total of 1 sample was received. The Time of Collection was Mountain Standard Time. The sample arrived in good condition and was properly packaged. All method blanks, sample duplicates, laboratory spikes, and/or matrix spikes met quality assurance objectives.

DHL Analytical

Date: 11/17/11

CLIENT: Larson & Associates
Project:
Lab Order: 1111076

Work Order Sample Summary

Lab Smp ID	Client Sample ID	Tag Number	Date Collected	Date Recv'd
1111076-01	Windmill		11/07/11 01:30 PM	11/09/11

CLIENT: Larson & Associates
Project:
Lab Order: 1111076

PREP DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Number	Test Name	Prep Date	Batch ID
1111076-01A	Windmill	11/07/11 01:30 PM	Aqueous	SW5030C	Purge and Trap Water GC	11/09/11 04:52 PM	49109
1111076-01B	Windmill	11/07/11 01:30 PM	Aqueous	SW7470A	Mercury Aq Prep, Total	11/09/11 09:07 AM	49092
	Windmill	11/07/11 01:30 PM	Aqueous	SW3005A	Aq Prep Metals: Dissolved	11/11/11 08:53 AM	49140
1111076-01C	Windmill	11/07/11 01:30 PM	Aqueous	E300	Anion Preparation	11/09/11 11:00 AM	49099
	Windmill	11/07/11 01:30 PM	Aqueous	E300	Anion Preparation	11/09/11 11:00 AM	49099
	Windmill	11/07/11 01:30 PM	Aqueous	M2320 B	Alkalinity Preparation	11/09/11 01:00 PM	49100
	Windmill	11/07/11 01:30 PM	Aqueous	M2540C	TDS Preparation	11/11/11 04:20 PM	49153

CLIENT: Larson & Associates
Project:
Lab Order: 1111076

ANALYTICAL DATES REPORT

Sample ID	Client Sample ID	Matrix	Test Number	Test Name	Batch ID	Dilution	Analysis Date	Run ID
1111076-01A	Windmill	Aqueous	SW8021B	Volatile Organics by GC	49109	1	11/09/11 06:39 PM	GC8_111109B
1111076-01B	Windmill	Aqueous	SW6020	Dissolved Metals-ICPMS (0.45µ)	49140	1	11/15/11 06:09 PM	ICP-MS3_111115B
	Windmill	Aqueous	SW7470A	Mercury Filtered (0.45µ)	49092	1	11/10/11 02:11 PM	CETAC_HG_111110B
1111076-01C	Windmill	Aqueous	M2320 B	Alkalinity	49100	1	11/09/11 01:49 PM	TITRATOR_111109B
	Windmill	Aqueous	E300	Anions by IC method - Water	49099	10	11/09/11 11:23 AM	IC_111109A
	Windmill	Aqueous	E300	Anions by IC method - Water	49099	1	11/09/11 11:55 AM	IC_111109A
	Windmill	Aqueous	M2540C	Total Dissolved Solids	49153	1	11/14/11 09:15 AM	WC_111111C

DHL Analytical

Date: 11/17/11

CLIENT: Larson & Associates
 Project:
 Project No: 11-0131-01
 Lab Order: 1111076

Client Sample ID: Windmill
 Lab ID: 1111076-01
 Collection Date: 11/07/11 01:30 PM
 Matrix: Aqueous

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed
Volatile Organics by GC							Analyst: DEW
		SW8021B					
Benzene	ND	0.000800	0.00200		mg/L	1	11/09/11 06:39 PM
Ethylbenzene	ND	0.00200	0.00600		mg/L	1	11/09/11 06:39 PM
Toluene	ND	0.00200	0.00600		mg/L	1	11/09/11 06:39 PM
Xylenes, Total	ND	0.00300	0.00900		mg/L	1	11/09/11 06:39 PM
Surf: a,a,a-Trifluorotoluene	103	0	87 - 113		%REC	1	11/09/11 06:39 PM
Mercury Filtered (0.45µ)							Analyst: LM
		SW7470A					
Mercury	ND	0.0000800	0.000200		mg/L	1	11/10/11 02:11 PM
Dissolved Metals-ICPMS (0.45µ)							Analyst: AJR
		SW6020					
Arsenic	ND	0.00200	0.00600		mg/L	1	11/15/11 06:09 PM
Barium	0.178	0.00300	0.0100		mg/L	1	11/15/11 06:09 PM
Cadmium	ND	0.000300	0.00100		mg/L	1	11/15/11 06:09 PM
Chromium	ND	0.00200	0.00600		mg/L	1	11/15/11 06:09 PM
Lead	ND	0.000300	0.00100		mg/L	1	11/15/11 06:09 PM
Selenium	0.00283	0.00200	0.00600		mg/L	1	11/15/11 06:09 PM
Silver	ND	0.00100	0.00200		mg/L	1	11/15/11 06:09 PM
Anions by IC method - Water							Analyst: JBC
		E300					
Chloride	35.3	0.300	1.00		mg/L	1	11/09/11 11:55 AM
Nitrate-N	2.71	0.100	0.500		mg/L	1	11/09/11 11:55 AM
Sulfate	190	10.0	30.0		mg/L	10	11/09/11 11:23 AM
Alkalinity							Analyst: JBC
		M2320 B					
Alkalinity, Bicarbonate (As CaCO ₃)	175	10.0	20.0		mg/L	1	11/09/11 01:49 PM
Alkalinity, Carbonate (As CaCO ₃)	ND	10.0	20.0		mg/L	1	11/09/11 01:49 PM
Alkalinity, Hydroxide (As CaCO ₃)	ND	10.0	20.0		mg/L	1	11/09/11 01:49 PM
Alkalinity, Total (As CaCO ₃)	175	10.0	20.0		mg/L	1	11/09/11 01:49 PM
Total Dissolved Solids							Analyst: JCG
		M2540C					
Total Dissolved Solids (Residue, Filterable)	589	10.0	10.0		mg/L	1	11/14/11 09:15 AM

Qualifiers: * Value exceeds TCLP Maximum Concentration Level
 B Analyte detected in the associated Method Blank
 C Sample Result or QC discussed in the Case Narrative
 DF Dilution Factor
 E TPH pattern not Gas or Diesel Range Pattern

J Analyte detected between MDL and RL
 MDL Method Detection Limit
 N Parameter not NELAC certified
 ND Not Detected at the Method Detection Limit
 RL Reporting Limit
 S Spike Recovery outside control limits

CLIENT: Larson & Associates
 Work Order: 1111076
 Project:

ANALYTICAL QC SUMMARY REPORT

RunID: GC8_111109B

Sample ID:	LCS-49109	Batch ID:	49109	TestNo:	SW8021B	Units:	mg/L			
SampType:	LCS	Run ID:	GC8_111109B	Analysis Date:	11/09/11 05:57 PM	Prep Date:	11/09/11			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPD Limit	Qual
Benzene	0.0507	0.00200	0.0500	0	101	81	125			
Toluene	0.0516	0.00600	0.0500	0	103	84	123			
Ethylbenzene	0.0513	0.00600	0.0500	0	103	83	119			
Xylenes, Total	0.153	0.00900	0.150	0	102	81	117			
Surr: a,a,a-Trifluorotoluene	195		200.0		97.3	87	113			

Sample ID:	MB-49109	Batch ID:	49109	TestNo:	SW8021B	Units:	mg/L			
SampType:	MBLK	Run ID:	GC8_111109B	Analysis Date:	11/09/11 06:17 PM	Prep Date:	11/09/11			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPD Limit	Qual
Benzene	ND	0.00200								
Toluene	ND	0.00600								
Ethylbenzene	ND	0.00600								
Xylenes, Total	ND	0.00900								
Surr: a,a,a-Trifluorotoluene	194		200.0		96.8	87	113			

Sample ID:	1111076-01AMS	Batch ID:	49109	TestNo:	SW8021B	Units:	mg/L			
SampType:	MS	Run ID:	GC8_111109B	Analysis Date:	11/09/11 07:00 PM	Prep Date:	11/09/11			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPD Limit	Qual
Benzene	0.0496	0.00200	0.0500	0	99.3	81	125			
Toluene	0.0500	0.00600	0.0500	0	99.9	84	123			
Ethylbenzene	0.0494	0.00600	0.0500	0	98.7	83	119			
Xylenes, Total	0.148	0.00900	0.150	0	98.4	81	117			
Surr: a,a,a-Trifluorotoluene	193		200.0		96.3	87	113			

Sample ID:	1111076-01AMSD	Batch ID:	49109	TestNo:	SW8021B	Units:	mg/L			
SampType:	MSD	Run ID:	GC8_111109B	Analysis Date:	11/09/11 07:21 PM	Prep Date:	11/09/11			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPD Limit	Qual
Benzene	0.0527	0.00200	0.0500	0	105	81	125	5.94	20	
Toluene	0.0529	0.00600	0.0500	0	106	84	123	5.73	20	
Ethylbenzene	0.0505	0.00600	0.0500	0	101	83	119	2.30	20	
Xylenes, Total	0.150	0.00900	0.150	0	100	81	117	1.62	20	
Surr: a,a,a-Trifluorotoluene	203		200.0		102	87	113	0	0	

Qualifiers: B Analyte detected in the associated Method Blank
 DF Dilution Factor
 J Analyte detected between MDL and RL
 MDL Method Detection Limit
 ND Not Detected at the Method Detection Limit

R RPD outside accepted control limits
 RL Reporting Limit
 S Spike Recovery outside control limits
 J Analyte detected between SDL and RL
 N Parameter not NELAC certified

CLIENT: Larson & Associates
 Work Order: 1111076
 Project:

ANALYTICAL QC SUMMARY REPORT

RunID: GC8_111109B

Sample ID:	ICV-111109	Batch ID:	R57766	TestNo:	SW8021B	Units:	mg/L			
SampType:	ICV	Run ID:	GC8_111109B	Analysis Date:	11/09/11 05:36 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPD Limit	Qual
Benzene	0.0929	0.00200	0.100	0	92.9	80	120			
Toluene	0.0931	0.00600	0.100	0	93.1	80	120			
Ethylbenzene	0.0943	0.00600	0.100	0	94.3	80	120			
Xylenes, Total	0.283	0.00900	0.300	0	94.2	80	120			
Surr: a,a,a-Trifluorotoluene	194		200.0		97.1	87	113			

Sample ID:	CCV1-111109	Batch ID:	R57766	TestNo:	SW8021B	Units:	mg/L			
SampType:	CCV	Run ID:	GC8_111109B	Analysis Date:	11/09/11 07:42 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPD Limit	Qual
Benzene	0.0542	0.00200	0.0500	0	108	80	120			
Toluene	0.0540	0.00600	0.0500	0	108	80	120			
Ethylbenzene	0.0520	0.00600	0.0500	0	104	80	120			
Xylenes, Total	0.155	0.00900	0.150	0	104	80	120			
Surr: a,a,a-Trifluorotoluene	207		200.0		104	87	113			

Qualifiers: B Analyte detected in the associated Method Blank
 DF Dilution Factor
 J Analyte detected between MDL and RL
 MDL Method Detection Limit
 ND Not Detected at the Method Detection Limit

R RPD outside accepted control limits
 RL Reporting Limit
 S Spike Recovery outside control limits
 J Analyte detected between SDL and RL
 N Parameter not NELAC certified

CLIENT: Larson & Associates
 Work Order: 1111076
 Project:

ANALYTICAL QC SUMMARY REPORT

RunID: CETAC_HG_111110B

Sample ID:	MB-49092	Batch ID:	49092	TestNo:	SW7470A	Units:	mg/L				
SampType:	MBLK	Run ID:	CETAC_HG_111110B	Analysis Date:	11/10/11 01:36 PM	Prep Date:	11/09/11				
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPD Limit	Qual
Mercury		ND	0.000200								
Sample ID:	LCS-49092	Batch ID:	49092	TestNo:	SW7470A	Units:	mg/L				
SampType:	LCS	Run ID:	CETAC_HG_111110B	Analysis Date:	11/10/11 01:42 PM	Prep Date:	11/09/11				
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPD Limit	Qual
Mercury		0.00195	0.000200	0.00200	0	97.5	85	115			
Sample ID:	LCSD-49092	Batch ID:	49092	TestNo:	SW7470A	Units:	mg/L				
SampType:	LCSD	Run ID:	CETAC_HG_111110B	Analysis Date:	11/10/11 01:44 PM	Prep Date:	11/09/11				
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPD Limit	Qual
Mercury		0.00198	0.000200	0.00200	0	99.0	85	115	1.53	15	
Sample ID:	1111038-01A SD	Batch ID:	49092	TestNo:	SW7470A	Units:	mg/L				
SampType:	SD	Run ID:	CETAC_HG_111110B	Analysis Date:	11/10/11 01:52 PM	Prep Date:	11/09/11				
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPD Limit	Qual
Mercury		0	0.0100	0	0				0	10	
Sample ID:	1111038-01A PDS	Batch ID:	49092	TestNo:	SW7470A	Units:	mg/L				
SampType:	PDS	Run ID:	CETAC_HG_111110B	Analysis Date:	11/10/11 01:54 PM	Prep Date:	11/09/11				
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPD Limit	Qual
Mercury		0.0215	0.00200	0.0250	0	86.0	85	115			
Sample ID:	1111038-01A MS	Batch ID:	49092	TestNo:	SW7470A	Units:	mg/L				
SampType:	MS	Run ID:	CETAC_HG_111110B	Analysis Date:	11/10/11 02:01 PM	Prep Date:	11/09/11				
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPD Limit	Qual
Mercury		0.0186	0.00200	0.0200	0	93.0	80	120			
Sample ID:	1111038-01A MSD	Batch ID:	49092	TestNo:	SW7470A	Units:	mg/L				
SampType:	MSD	Run ID:	CETAC_HG_111110B	Analysis Date:	11/10/11 02:03 PM	Prep Date:	11/09/11				
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPD Limit	Qual
Mercury		0.0194	0.00200	0.0200	0	97.0	80	120	4.21	15	

Qualifiers: B Analyte detected in the associated Method Blank
 DF Dilution Factor
 J Analyte detected between MDL and RL
 MDL Method Detection Limit
 ND Not Detected at the Method Detection Limit

R RPD outside accepted control limits
 RL Reporting Limit
 S Spike Recovery outside control limits
 J Analyte detected between SDL and RL
 N Parameter not NELAC certified

DHL Analytical

Date: 11/17/11

CLIENT: Larson & Associates
Work Order: 1111076
Project:

ANALYTICAL QC SUMMARY REPORT

RunID: CETAC_HG_111110B

Sample ID:	ICV-111110	Batch ID:	R57788	TestNo:	SW7470A	Units:	mg/L				
Sample Type:	ICV	Run ID:	CETAC_HG_111110B	Analysis Date:	11/10/11 01:32 PM	Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPD Limit	Qual
Mercury		0.00385	0.000200	0.00400	0	96.2	90	110			
Sample ID:	CCV1-111110	Batch ID:	R57788	TestNo:	SW7470A	Units:	mg/L				
Sample Type:	CCV	Run ID:	CETAC_HG_111110B	Analysis Date:	11/10/11 01:57 PM	Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPD Limit	Qual
Mercury		0.00194	0.000200	0.00200	0	97.0	90	110			
Sample ID:	CCV2-111110	Batch ID:	R57788	TestNo:	SW7470A	Units:	mg/L				
Sample Type:	CCV	Run ID:	CETAC_HG_111110B	Analysis Date:	11/10/11 02:21 PM	Prep Date:					
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPD Limit	Qual
Mercury		0.00194	0.000200	0.00200	0	97.0	90	110			

Qualifiers:	B	Analyte detected in the associated Method Blank	R	RPD outside accepted control limits
	DF	Dilution Factor	RL	Reporting Limit
	J	Analyte detected between MDL and RL	S	Spike Recovery outside control limits
	MDL	Method Detection Limit	J	Analyte detected between SDL and RL
	ND	Not Detected at the Method Detection Limit	N	Parameter not NELAC certified

CLIENT: Larson & Associates
 Work Order: 1111076
 Project:

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS3_111115B

Sample ID:	MB-49140	Batch ID:	49140	TestNo:	SW6020	Units:	mg/L			
SampType:	MBLK	Run ID:	ICP-MS3_111115B	Analysis Date:	11/15/11 05:36 PM	Prep Date:	11/11/11			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPD Limit	Qual
Arsenic	ND	0.00600								
Barium	ND	0.0100								
Cadmium	ND	0.00100								
Chromium	ND	0.00600								
Lead	ND	0.00100								
Selenium	ND	0.00600								
Silver	ND	0.00200								

Sample ID:	LCS-49140	Batch ID:	49140	TestNo:	SW6020	Units:	mg/L			
SampType:	LCS	Run ID:	ICP-MS3_111115B	Analysis Date:	11/15/11 05:41 PM	Prep Date:	11/11/11			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPD Limit	Qual
Arsenic	0.202	0.00600	0.200	0	101	80	120			
Barium	0.195	0.0100	0.200	0	97.6	80	120			
Cadmium	0.196	0.00100	0.200	0	98.2	80	120			
Chromium	0.198	0.00600	0.200	0	99.0	80	120			
Lead	0.193	0.00100	0.200	0	96.6	80	120			
Selenium	0.194	0.00600	0.200	0	96.8	80	120			
Silver	0.198	0.00200	0.200	0	98.8	80	120			

Sample ID:	LCSD-49140	Batch ID:	49140	TestNo:	SW6020	Units:	mg/L			
SampType:	LCSD	Run ID:	ICP-MS3_111115B	Analysis Date:	11/15/11 05:47 PM	Prep Date:	11/11/11			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPD Limit	Qual
Arsenic	0.199	0.00600	0.200	0	99.4	80	120	1.70	15	
Barium	0.195	0.0100	0.200	0	97.6	80	120	0.102	15	
Cadmium	0.197	0.00100	0.200	0	98.6	80	120	0.407	15	
Chromium	0.192	0.00600	0.200	0	96.1	80	120	2.97	15	
Lead	0.194	0.00100	0.200	0	97.0	80	120	0.413	15	
Selenium	0.190	0.00600	0.200	0	94.9	80	120	2.03	15	
Silver	0.197	0.00200	0.200	0	98.6	80	120	0.152	15	

Sample ID:	1111086-06A SD	Batch ID:	49140	TestNo:	SW6020	Units:	mg/L			
SampType:	SD	Run ID:	ICP-MS3_111115B	Analysis Date:	11/15/11 06:04 PM	Prep Date:	11/11/11			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPD Limit	Qual
Arsenic	0	0.0300	0	0				0	10	
Barium	0.0486	0.0500	0	0.0483				0.557	10	
Cadmium	0	0.00500	0	0.000485				0	10	
Chromium	0	0.0300	0	0				0	10	
Lead	0	0.00500	0	0				0	10	
Selenium	0	0.0300	0	0				0	10	
Silver	0	0.0100	0	0				0	10	

Sample ID:	1111086-06A PDS	Batch ID:	49140	TestNo:	SW6020	Units:	mg/L
SampType:	PDS	Run ID:	ICP-MS3_111115B	Analysis Date:	11/15/11 06:49 PM	Prep Date:	11/11/11

Qualifiers:	B	Analyte detected in the associated Method Blank	R	RPD outside accepted control limits
	DF	Dilution Factor	RL	Reporting Limit
	J	Analyte detected between MDL and RL	S	Spike Recovery outside control limits
	MDL	Method Detection Limit	J	Analyte detected between SDL and RL
	ND	Not Detected at the Method Detection Limit	N	Parameter not NELAC certified

CLIENT: Larson & Associates
 Work Order: 1111076
 Project:

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS3_111115B

Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPD Limit	Qual
Arsenic	0.227	0.00600	0.200	0	113	75	125			
Barium	0.242	0.0100	0.200	0.0483	97.0	75	125			
Cadmium	0.195	0.00100	0.200	0.000485	97.2	75	125			
Chromium	0.179	0.00600	0.200	0	89.4	75	125			
Lead	0.191	0.00100	0.200	0	95.4	75	125			
Selenium	0.205	0.00600	0.200	0	103	75	125			
Silver	0.194	0.00200	0.200	0	97.0	75	125			

Sample ID:	1111086-06A MS	Batch ID:	49140	TestNo:	SW6020	Units:	mg/L			
SampType:	MS	Run ID:	ICP-MS3_111115B	Analysis Date:	11/15/11 06:54 PM	Prep Date:	11/11/11			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPD Limit	Qual
Arsenic	0.226	0.00600	0.200	0	113	80	120			
Barium	0.247	0.0100	0.200	0.0483	99.3	80	120			
Cadmium	0.198	0.00100	0.200	0.000485	99.0	80	120			
Chromium	0.179	0.00600	0.200	0	89.6	80	120			
Lead	0.193	0.00100	0.200	0	96.4	80	120			
Selenium	0.208	0.00600	0.200	0	104	80	120			
Silver	0.191	0.00200	0.200	0	95.3	80	120			

Sample ID:	1111086-06A MSD	Batch ID:	49140	TestNo:	SW6020	Units:	mg/L			
SampType:	MSD	Run ID:	ICP-MS3_111115B	Analysis Date:	11/15/11 07:00 PM	Prep Date:	11/11/11			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPD Limit	Qual
Arsenic	0.230	0.00600	0.200	0	115	80	120	1.45	15	
Barium	0.243	0.0100	0.200	0.0483	97.4	80	120	1.51	15	
Cadmium	0.197	0.00100	0.200	0.000485	98.3	80	120	0.708	15	
Chromium	0.180	0.00600	0.200	0	90.2	80	120	0.723	15	
Lead	0.195	0.00100	0.200	0	97.5	80	120	1.13	15	
Selenium	0.209	0.00600	0.200	0	104	80	120	0.528	15	
Silver	0.188	0.00200	0.200	0	94.1	80	120	1.27	15	

Qualifiers: B Analyte detected in the associated Method Blank
 DF Dilution Factor
 J Analyte detected between MDL and RL
 MDL Method Detection Limit
 ND Not Detected at the Method Detection Limit

R RPD outside accepted control limits
 RL Reporting Limit
 S Spike Recovery outside control limits
 J Analyte detected between SDL and RL
 N Parameter not NELAC certified

CLIENT: Larson & Associates
 Work Order: 1111076
 Project:

ANALYTICAL QC SUMMARY REPORT

RunID: ICP-MS3_111115B

Sample ID:	ICV1-111115	Batch ID:	R57853	TestNo:	SW6020	Units:	mg/L			
SampType:	ICV	Run ID:	ICP-MS3_111115B	Analysis Date:	11/15/11 01:09 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPD Limit	Qual
Arsenic	0.0962	0.00600	0.100	0	96.2	90	110			
Barium	0.0960	0.0100	0.100	0	96.0	90	110			
Cadmium	0.0974	0.00100	0.100	0	97.4	90	110			
Chromium	0.100	0.00600	0.100	0	100	90	110			
Lead	0.0960	0.00100	0.100	0	96.0	90	110			
Selenium	0.0976	0.00600	0.100	0	97.6	90	110			
Silver	0.104	0.00200	0.100	0	104	90	110			

Sample ID:	CCV2-111115	Batch ID:	R57853	TestNo:	SW6020	Units:	mg/L			
SampType:	CCV	Run ID:	ICP-MS3_111115B	Analysis Date:	11/15/11 04:48 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPD Limit	Qual
Arsenic	0.205	0.00600	0.200	0	103	90	110			
Barium	0.196	0.0100	0.200	0	98.2	90	110			
Cadmium	0.200	0.00100	0.200	0	100	90	110			
Chromium	0.192	0.00600	0.200	0	96.1	90	110			
Lead	0.193	0.00100	0.200	0	96.6	90	110			
Selenium	0.199	0.00600	0.200	0	99.7	90	110			
Silver	0.201	0.00200	0.200	0	101	90	110			

Sample ID:	CCV3-111115	Batch ID:	R57853	TestNo:	SW6020	Units:	mg/L			
SampType:	CCV	Run ID:	ICP-MS3_111115B	Analysis Date:	11/15/11 07:17 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPD Limit	Qual
Arsenic	0.210	0.00600	0.200	0	105	90	110			
Barium	0.189	0.0100	0.200	0	94.6	90	110			
Cadmium	0.192	0.00100	0.200	0	96.2	90	110			
Chromium	0.194	0.00600	0.200	0	96.8	90	110			
Lead	0.186	0.00100	0.200	0	93.0	90	110			
Selenium	0.195	0.00600	0.200	0	97.6	90	110			
Silver	0.195	0.00200	0.200	0	97.4	90	110			

Qualifiers:	B	Analyte detected in the associated Method Blank	R	RPD outside accepted control limits
	DF	Dilution Factor	RL	Reporting Limit
	J	Analyte detected between MDL and RL	S	Spike Recovery outside control limits
	MDL	Method Detection Limit	J	Analyte detected between SDL and RL
	ND	Not Detected at the Method Detection Limit	N	Parameter not NELAC certified

CLIENT: Larson & Associates
 Work Order: 1111076
 Project:

ANALYTICAL QC SUMMARY REPORT

RunID: IC_111109A

Sample ID:	LCS-49099	Batch ID:	49099	TestNo:	E300	Units:	mg/L
SampType:	LCS	Run ID:	IC_111109A	Analysis Date:	11/09/11 09:25 AM	Prep Date:	11/09/11
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit HighLimit %RPD RPD Limit Qual
Chloride		10.2	1.00	10.00	0	102	90 110
Nitrate-N		5.25	0.500	5.000	0	105	90 110
Sulfate		30.8	3.00	30.00	0	103	90 110

Sample ID:	LCSD-49099	Batch ID:	49099	TestNo:	E300	Units:	mg/L
SampType:	LCSD	Run ID:	IC_111109A	Analysis Date:	11/09/11 09:37 AM	Prep Date:	11/09/11
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit HighLimit %RPD RPD Limit Qual
Chloride		10.2	1.00	10.00	0	102	90 110 0.124 20
Nitrate-N		5.27	0.500	5.000	0	105	90 110 0.309 20
Sulfate		30.8	3.00	30.00	0	103	90 110 0.026 20

Sample ID:	MB-49099	Batch ID:	49099	TestNo:	E300	Units:	mg/L
SampType:	MBLK	Run ID:	IC_111109A	Analysis Date:	11/09/11 09:49 AM	Prep Date:	11/09/11
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit HighLimit %RPD RPD Limit Qual
Chloride		ND	1.00				
Nitrate-N		ND	0.500				
Sulfate		ND	3.00				

Sample ID:	1111073-01D MS	Batch ID:	49099	TestNo:	E300	Units:	mg/L
SampType:	MS	Run ID:	IC_111109A	Analysis Date:	11/09/11 10:25 AM	Prep Date:	11/09/11
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit HighLimit %RPD RPD Limit Qual
Nitrate-N		5.46	0.500	5.000	0.4300	101	90 110
Sulfate		59.2	3.00	30.00	28.11	104	90 110

Sample ID:	1111073-01D MSD	Batch ID:	49099	TestNo:	E300	Units:	mg/L
SampType:	MSD	Run ID:	IC_111109A	Analysis Date:	11/09/11 10:37 AM	Prep Date:	11/09/11
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit HighLimit %RPD RPD Limit Qual
Nitrate-N		5.47	0.500	5.000	0.4300	101	90 110 0.055 20
Sulfate		58.8	3.00	30.00	28.11	102	90 110 0.755 20

Sample ID:	1111073-01D MS	Batch ID:	49099	TestNo:	E300	Units:	mg/L
SampType:	MS	Run ID:	IC_111109A	Analysis Date:	11/09/11 11:00 AM	Prep Date:	11/09/11
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit HighLimit %RPD RPD Limit Qual
Chloride		176	10.0	100.0	78.67	97.4	90 110

Sample ID:	1111073-01D MSD	Batch ID:	49099	TestNo:	E300	Units:	mg/L
SampType:	MSD	Run ID:	IC_111109A	Analysis Date:	11/09/11 11:12 AM	Prep Date:	11/09/11
Analyte		Result	RL	SPK value	Ref Val	%REC	LowLimit HighLimit %RPD RPD Limit Qual
Chloride		176	10.0	100.0	78.67	97.4	90 110 0.000 20

Qualifiers: B Analyte detected in the associated Method Blank
 DF Dilution Factor
 J Analyte detected between MDL and RL
 MDL Method Detection Limit
 ND Not Detected at the Method Detection Limit

R RPD outside accepted control limits
 RL Reporting Limit
 S Spike Recovery outside control limits
 J Analyte detected between SDL and RL
 N Parameter not NELAC certified

CLIENT: Larson & Associates
 Work Order: 1111076
 Project:

ANALYTICAL QC SUMMARY REPORT

RunID: IC_111109A

Sample ID:	ICV-111109	Batch ID:	R57758	TestNo:	E300	Units:	mg/L			
SampType:	ICV	Run ID:	IC_111109A	Analysis Date:	11/09/11 09:08 AM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPD Limit	Qual
Chloride	25.9	1.00	25.00	0	104	90	110			
Nitrate-N	13.4	0.500	12.50	0	107	90	110			
Sulfate	79.3	3.00	75.00	0	106	90	110			

Sample ID:	CCV1-111109	Batch ID:	R57758	TestNo:	E300	Units:	mg/L			
SampType:	CCV	Run ID:	IC_111109A	Analysis Date:	11/09/11 11:43 AM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPD Limit	Qual
Chloride	10.2	1.00	10.00	0	102	90	110			
Nitrate-N	5.28	0.500	5.000	0	106	90	110			
Sulfate	31.2	3.00	30.00	0	104	90	110			

Sample ID:	CCV2-111109	Batch ID:	R57758	TestNo:	E300	Units:	mg/L			
SampType:	CCV	Run ID:	IC_111109A	Analysis Date:	11/09/11 12:06 PM	Prep Date:				
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPD Limit	Qual
Chloride	10.2	1.00	10.00	0	102	90	110			
Nitrate-N	5.24	0.500	5.000	0	105	90	110			

Qualifiers: B Analyte detected in the associated Method Blank
 DF Dilution Factor
 J Analyte detected between MDL and RL
 MDL Method Detection Limit
 ND Not Detected at the Method Detection Limit

R RPD outside accepted control limits
 RL Reporting Limit
 S Spike Recovery outside control limits
 J Analyte detected between SDL and RL
 N Parameter not NELAC certified

CLIENT: Larson & Associates
 Work Order: 1111076
 Project:

ANALYTICAL QC SUMMARY REPORT

RunID: TITRATOR_111109B

Sample ID:	Batch ID:	TestNo:	Units:
LCS-49100	49100	M2320 B	mg/L
SampleType: LCS	Run ID: TITRATOR_111109B	Analysis Date: 11/09/11 01:36 PM	Prep Date: 11/09/11
Analyte	Result	RL	SPK value
Alkalinity, Total (As CaCO3)	50.8	20.0	50.00

Sample ID:	Batch ID:	TestNo:	Units:
MB-49100	49100	M2320 B	mg/L
SampleType: MBLK	Run ID: TITRATOR_111109B	Analysis Date: 11/09/11 01:38 PM	Prep Date: 11/09/11
Analyte	Result	RL	SPK value
Alkalinity, Bicarbonate (As CaCO3)	ND	20.0	
Alkalinity, Carbonate (As CaCO3)	ND	20.0	
Alkalinity, Hydroxide (As CaCO3)	ND	20.0	
Alkalinity, Total (As CaCO3)	ND	20.0	

Sample ID:	Batch ID:	TestNo:	Units:
1111073-01D DUP	49100	M2320 B	mg/L
SampleType: DUP	Run ID: TITRATOR_111109B	Analysis Date: 11/09/11 01:45 PM	Prep Date: 11/09/11
Analyte	Result	RL	SPK value
Alkalinity, Bicarbonate (As CaCO3)	94.9	20.0	0
Alkalinity, Carbonate (As CaCO3)	0	20.0	0
Alkalinity, Hydroxide (As CaCO3)	0	20.0	0
Alkalinity, Total (As CaCO3)	94.9	20.0	0

Qualifiers: B Analyte detected in the associated Method Blank
 DF Dilution Factor
 J Analyte detected between MDL and RL
 MDL Method Detection Limit
 ND Not Detected at the Method Detection Limit

R RPD outside accepted control limits
 RL Reporting Limit
 S Spike Recovery outside control limits
 J Analyte detected between SDL and RL
 N Parameter not NELAC certified

DHL Analytical

Date: 11/17/11

CLIENT: Larson & Associates
Work Order: 1111076
Project:

ANALYTICAL QC SUMMARY REPORT

RunID: TITRATOR_111109B

Sample ID:	ICV-111109	Batch ID:	R57760	TestNo:	M2320 B	Units:	mg/L			
SampType:	ICV	Run ID:	TITRATOR_111109B	Analysis Date:	11/09/11 01:32 PM	Prep Date:	11/09/11			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPD Limit	Qual
Alkalinity, Bicarbonate (As CaCO3)	6.08	20.0	0							
Alkalinity, Carbonate (As CaCO3)	93.8	20.0	0							
Alkalinity, Hydroxide (As CaCO3)	0	20.0	0							
Alkalinity, Total (As CaCO3)	99.8	20.0	100.0	0	99.8	98	102			

Sample ID:	CCV-111109	Batch ID:	R57760	TestNo:	M2320 B	Units:	mg/L			
SampType:	CCV	Run ID:	TITRATOR_111109B	Analysis Date:	11/09/11 01:54 PM	Prep Date:	11/09/11			
Analyte	Result	RL	SPK value	Ref Val	%REC	LowLimit	HighLimit	%RPD	RPD Limit	Qual
Alkalinity, Bicarbonate (As CaCO3)	9.28	20.0	0							
Alkalinity, Carbonate (As CaCO3)	90.7	20.0	0							
Alkalinity, Hydroxide (As CaCO3)	0	20.0	0							
Alkalinity, Total (As CaCO3)	100	20.0	100.0	0	100	90	110			

Qualifiers: B Analyte detected in the associated Method Blank
DF Dilution Factor
J Analyte detected between MDL and RL
MDL Method Detection Limit
ND Not Detected at the Method Detection Limit

R RPD outside accepted control limits
RL Reporting Limit
S Spike Recovery outside control limits
J Analyte detected between SDL and RL
N Parameter not NELAC certified

CLIENT: Larson & Associates
 Work Order: 1111076
 Project:

ANALYTICAL QC SUMMARY REPORT

RunID: WC_111111C

Sample ID: LCS-49153	Batch ID: 49153	TestNo: M2540C	Units: mg/L
SampType: LCS	Run ID: WC_111111C	Analysis Date: 11/14/11 09:15 AM	Prep Date: 11/11/11
Analyte	Result RL SPK value	Ref Val %REC	LowLimit HighLimit %RPD RPD Limit Qual
Total Dissolved Solids (Residue, Fi	826 10.0 745.6	0 111	90 113

Sample ID: MB-49153	Batch ID: 49153	TestNo: M2540C	Units: mg/L
SampType: MBLK	Run ID: WC_111111C	Analysis Date: 11/14/11 09:15 AM	Prep Date: 11/11/11
Analyte	Result RL SPK value	Ref Val %REC	LowLimit HighLimit %RPD RPD Limit Qual
Total Dissolved Solids (Residue, Fi	ND 10.0		

Sample ID: 1111088-01EDUP	Batch ID: 49153	TestNo: M2540C	Units: mg/L
SampType: DUP	Run ID: WC_111111C	Analysis Date: 11/14/11 09:15 AM	Prep Date: 11/11/11
Analyte	Result RL SPK value	Ref Val %REC	LowLimit HighLimit %RPD RPD Limit Qual
Total Dissolved Solids (Residue, Fi	376 10.0 0	375.0	0.266 5

Sample ID: 1111093-01CDUP	Batch ID: 49153	TestNo: M2540C	Units: mg/L
SampType: DUP	Run ID: WC_111111C	Analysis Date: 11/14/11 09:15 AM	Prep Date: 11/11/11
Analyte	Result RL SPK value	Ref Val %REC	LowLimit HighLimit %RPD RPD Limit Qual
Total Dissolved Solids (Residue, Fi	742 10.0 0	755.0	1.74 5

Qualifiers: B Analyte detected in the associated Method Blank
 DF Dilution Factor
 J Analyte detected between MDL and RL
 MDL Method Detection Limit
 ND Not Detected at the Method Detection Limit

R RPD outside accepted control limits
 RL Reporting Limit
 S Spike Recovery outside control limits
 J Analyte detected between SDU and RL
 N Parameter not NELAC certified

APPENDIX XII

Faults and Hydrologic Connections

Statement

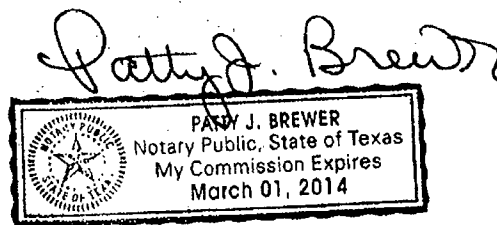
I, Mark J. Larson, have reviewed available geologic and engineering data and find no evidence of open faults or any other hydrologic connection between the disposal zone and any underground sources of drinking water.

State of Texas

County of Midland

On this, the 19th day of March 2012, before me a notary public, the undersigned officer, personally appeared, Mark J. Larson, known to me (or satisfactorily proven) to be the person whose name is subscribed to the within instrument, and acknowledged that he executed the same for the purposes therein contained.

In witness hereof, I hereunto set my hand and official seal.



APPENDIX XIII

Proof of Notice

Notification was sent on March 19, 2012 via certified mail to the following entities:

- 1. Mr. David Kirk - Surface Owner
Certified Mail 7010 1870 0001 6545 7164

2713 Racquet Club Drive

Midland, Texas 79705**
- 2. Hanson Operating Company – Offset Lease Owner
Certified Mail 7010 1870 0001 6545 7170

400 N. Pennsylvania Ave., #1200

Roswell, New Mexico 88201-4782**
- 3. Agua Sucia, LLC – Offset Lease Owner
Certified Mail 7010 1870 0001 6545 7156
14605 South Memorial Drive
Bixby, Oklahoma 74008**
- 4. Legacy Reserves Operating L.P.
Certified Mail 7010 1870 0001 6545 7149
303 W. Wall Street, Suite 1400**

CMD :
OG5SEC2

ONGARD
VIEW LAND BY ULSTR

06/22/12 16:18:21
OGOWVJ -TQ22
PAGE NO: 1

Sec : 36 Twp : 26S Rng : 31E Cnty1 : Eddy
Cnty2 : Cnty3 :

U Lot/ Qtr	SRF SUB	ACTIVE	Bene	REMARKS
L Trct Qtr	ACREAGE	OWNER	LEASE #	(may show restrictions codes)
A	NE4NE4	40.00	FE ST E0 0920 0000 CS	PATENT NO. 3028
B	NW4NE4	40.00	FE ST E0 0920 0000 CS	PATENT NO. 3028
C	NE4NW4	40.00	FE ST E0 0920 0001 CS	PATENT NO. 3028
D	NW4NW4	40.00	FE ST E0 0920 0001 CS	PATENT NO. 3028
E 4		25.45	FE ST E0 0920 0001 CS	PATENT NO. 3028
F 3		25.15	FE ST E0 0920 0000 CS	PATENT NO. 3028
G 2		24.85	FE ST E0 0920 0000 CS	PATENT NO. 3028
H 1		24.55	FE ST E0 0920 0000 CS	PATENT NO. 3028

M0002: This is the first page

PF01 HELP	PF02 PREV	PF03 EXIT	PF04 GoTo	PF05	PF06
PF07 BKWD	PF08 FWD	PF09 PRINT	PF10 SDIV	PF11	PF12

Jones, William V., EMNRD

From: Jones, William V., EMNRD
Sent: Friday, June 22, 2012 5:15 PM
To: 'Mark Larson'; 'Joe Rodriguez'
Cc: Ezeanyim, Richard, EMNRD; Shapard, Craig, EMNRD; Phillips, Dorothy, EMNRD; Jones, Brad A., EMNRD; Dade, Randy, EMNRD; 'Dawson, Scott'
Subject: Disposal application from R360 Permian Basin LLC: proposed Avalon SWD #1D 30-015-NA Unit B Sec 36 T26S R31E Eddy County Delaware disposal perms from 4300 to 6500 feet

Hello Mark,

Reviewed your application and have a few questions and requests – these should not be too difficult to answer,

- ✓ a. What is the final legal location of this well (footages) – I saw two different footage locations as sent to TC Shapard in Artesia.
- ✓ b. This company name R360 Permian Basin LLC still does not appear in our list that I have access to. I will check further with our bonding person, but in the meantime let me know....what is the company name being used in New Mexico and when was the bonding sent into Ms. Phillips here at the OCD?
- ✓ c. The maximum pressure suggested in the application is 2150 psi – but we will start out this well at 860 psi and R360 will need to run Step Rate Test to obtain a higher disposal maximum tubing surface pressure. Mentioning this, because it could have an effect on your planned disposal rate.
- ✓ d. Another comment: On open hole disposal wells such as this one which is more than 2000 feet, we ask the operator to run an injection survey after disposal starts – we will put this requirement in the permit.
- ✓ e. Please send a copy of the newspaper posting in an Eddy County newspaper.
- ✓ f. We got a note last week from an operator who was near the Halfway well that they did not receive a copy of the application, only one page. Please assure me you have sent a complete copy of this application to all the affected persons – let me know if you still need to do this?
- ✓ g. Please send copies of the return receipts you get from the noticed parties.
- ✓ h. I understand this well is on Fee surface but on State minerals. Does R360 have an agreement with David Kirk (surface owner) to use this well for a commercial disposal well? Or have you begun negotiations?
- ✓ i. Let me know who the Delaware Lessees or operators are in the lands within the ½ mile AOR in Texas to the south. Have they been noticed?
- ✓ j. Please send a notice to Sahara Operating as shown on your map being the operator in Section 31 directly to the east.
- ✓ k. Does R360 intend to dispose of any UIC Class I fluids into this well?

Thank You,

William V. Jones, P.E.
Engineering, Oil Conservation Division
1220 South St. Francis Drive, Santa Fe, NM 87505
Tel 505.476.3448 ~ Fax 505.476.3462



Officer Rodriguez

July 5, 2012

Mr. Williams Jones
Engineering and Geological Services Bureau
New Mexico Oil Conservation Division
1220 So. St. Francis Drive
Santa Fe, New Mexico 87505

**Re: Response to Request for Additional Information – Proposed Avalon SWD Well #1D
R360 Permian Basin, LLC, Unit B (NW/4, NE/4), Section 36, Township 26 South, Range 31 East
Eddy County, New Mexico**

2012 JUL -9 PM 1:01
RECEIVED OCD

Dear Mr. Jones:

This letter is written in response to your email request on June 22, 2012, for additional information pertaining to the permit application for the proposed Avalon SWD Well #1D.

- a. What is the final legal location of this well (footages) – I saw two different footage locations as sent to TC Shapard in Artesia.
Response: Appendix A presents the C-102, dated June 7, 2012, with final legal location (footages) for the well.
- b. This company name R360 Permian Basin LLC still does not appear in our list that I have access to. I will check further with our bonding person, but in the meantime let me know....what is the company name being used in New Mexico and when was the bonding sent into Ms. Phillips here at the OCD?
Response: Appendix B presents your response to Joe Rodriguez on June 28, 2012.
- c. The maximum pressure suggested in the application is 2150 psi – but we will start out this well at 860 psi and R360 will need to run Step Rate Test to obtain a higher disposal maximum tubing surface pressure. Mentioning this, because it could have an effect on your planned disposal rate.
Response: The maximum pressure requested assumes pressure losses due to pipe friction. R360 will run the Step Rate Test to obtain a higher disposal maximum tubing pressure.
Another comment: On open hole disposal wells such as this one which is more than 2000 feet, we ask the operator to run an injection survey after disposal starts – we will put this requirement in the permit.
- d. Please send a copy of the newspaper posting in an Eddy County newspaper.
Response: Appendix C presents the legal notification.
- e. We got a note last week from an operator who was near the Halfway well that they did not receive a copy of the application, only one page. Please assure me you have sent a complete copy of this application to all the affected persons – let me know if you still need to do this?
Response: Copies of the permit application were mailed to the affected parties including BLM, Intrepid Potash and BOPCO. Please refer to Appendix D.
- f. Please send copies of the return receipts you get from the noticed parties.
Response: Please refer to Appendix E.
- g. I understand this well is on Fee surface but on State minerals. Does R360 have an agreement with David Kirk (surface owner) to use this well for a commercial disposal well? Or have you begun negotiations?
Response: R360 has an agreement with the surface owner, Mr. David Kirk, which can be provided at the request of the OCD under a confidentiality agreement.

h. ✓ Let me know who the Delaware Lessees or operators are in the lands within the ½ mile AOR in Texas to the south. Have they been noticed?

Response: Legacy Reserves is the leasehold operator to the south and was provided notification on March 21, 2012. Please refer to Appendix E for the certified mail return receipt.

i. Please send a notice to Sahara Operating as shown on your map being the operator in Section 31 directly to the east.

Response: Sahara Operating Co. was notified. Please refer to Appendix for the notification letter and certified mail receipt.

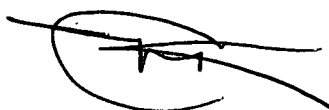
j. Does R360 intend to dispose of any UIC Class I fluids into this well?

Response: R360 does not intend to use the well for disposal of UIC Class I wastes.

Please contact Mr. Joe Rodriguez with R360 at (210) 275-0839 or myself at (432) 687-0901 if you have questions.

Sincerely,

Larson & Associates, Inc.



Mark J. Larson, P.G.

mark@laenvironmental.com

Encl.

Cc: Joe Rodriguez – R360

Appendix A

Final C-102

June 7, 2012

District I
 1625 N. French Dr., Hobbs, NM 88240
 Phone: (505) 393-6161 Fax: (505) 393-0720
 District II
 811 N. First St., Artesia, NM 88210
 Phone: (505) 746-1283 Fax: (505) 748-9720
 District III
 1000 Rio Brazos Road, Abo, NM 87410
 Phone: (505) 334-6178 Fax: (505) 334-6170
 District IV
 1220 S. St. Francis Dr., Santa Fe, NM 87505
 Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico
 Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
 1220 South St. Francis Dr.
 Santa Fe, NM 87505

Form C-102
 Revised August 1, 2011
 Submit one copy to appropriate
 District Office
☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number		² Pool Code 44820	³ Pool Name Mason Delaware North
⁴ Property Code	⁵ Property Name AVALON SWD		⁶ Well Number #113
⁷ OGRID No. 289936	⁸ Operator Name R360 PERMIAN BASIN, INC.		⁹ Elevation 5129'

" Surface Location

Ul. or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
B	36	26S	31E		333	NORTH	2482	EAST	LEA

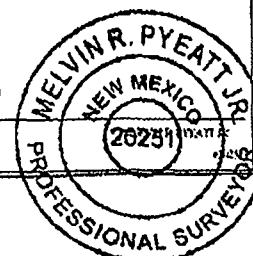
" Bottom Hole Location If Different From Surface

Ul. or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County

¹⁰ Dedicated Acres	¹¹ Joint or Infill	¹² Consolidation Code	¹³ Order No.

No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.

GEODEIC COORDINATES NAD 83 NME SURFACE LOCATION N=366252.6 E=728207.5 LAT=32.0019009°N LONG=103.43513695°W	333' 2482'		" OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns or working mineral or subsurface mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division. Signature: <i>Joe B. Rodriguez</i> Date: 6/7/2012 Joe B. Rodriguez Printed Name jrodriguez@r360es.com E-mail Address	
				" SURVEYOR CERTIFICATION I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief. JUNE 5, 2012 Date of Survey Signature and Seal of Professional Surveyor: Certificate Number: <i>MELVIN R. PYEATT JR.</i>



Appendix B
Email from Joe Rodriguez, June 24, 2012

Mark Larson

From: Joe Rodriguez [jrodriguez@r360es.com]
Sent: Sunday, June 24, 2012 9:47 PM
To: Jones, William V., EMNRD
Cc: Dorothy Phillips; Mark Larson
Subject: RE: Disposal application from R360 Permian Basin LLC: proposed Avalon SWD #1D 30-015-NA Unit B Sec 36 T26S R31E Eddy County Delaware disposal perfs from 4300 to 6500 feet

Mr. Jones, to answer "b" below, I received the following email from Dorothy Phillips.

From: Phillips, Dorothy, EMNRD [<mailto:dorothy.phillips@state.nm.us>]
Sent: Wednesday, May 16, 2012 8:28 AM
To: Joe Rodriguez
Subject: RE: Registration - R360 Permian Basin LLC

You are now on the drop down list to register an operator administrator. Your OGRID is 289936.

Joe B Rodriguez, PG
Director – Regulatory Affairs and Development

From: Jones, William V., EMNRD [<mailto:William.V.Jones@state.nm.us>]
Sent: Friday, June 22, 2012 6:15 PM
To: Mark Larson; Joe Rodriguez
Cc: Ezeanyim, Richard, EMNRD; Shapard, Craig, EMNRD; Phillips, Dorothy, EMNRD; Jones, Brad A., EMNRD; Dade, Randy, EMNRD; Dawson, Scott
Subject: Disposal application from R360 Permian Basin LLC: proposed Avalon SWD #1D 30-015-NA Unit B Sec 36 T26S R31E Eddy County Delaware disposal perfs from 4300 to 6500 feet

Hello Mark,

Reviewed your application and have a few questions and requests – these should not be too difficult to answer,

- a. What is the final legal location of this well (footages) – I saw two different footage locations as sent to TC Shapard in Artesia.
- b. This company name R360 Permian Basin LLC still does not appear in our list that I have access to. I will check further with our bonding person, but in the meantime let me know....what is the company name being used in New Mexico and when was the bonding sent into Ms. Phillips here at the OCD?
- c. The maximum pressure suggested in the application is 2150 psi – but we will start out this well at 860 psi and R360 will need to run Step Rate Test to obtain a higher disposal maximum tubing surface pressure. Mentioning this, because it could have an effect on your planned disposal rate.
- d. Another comment: On open hole disposal wells such as this one which is more than 2000 feet, we ask the operator to run an injection survey after disposal starts – we will put this requirement in the permit.
- e. Please send a copy of the newspaper posting in an Eddy County newspaper.
- f. We got a note last week from an operator who was near the Halfway well that they did not receive a copy of the application, only one page. Please assure me you have sent a complete copy of this application to all the affected persons – let me know if you still need to do this?
- g. Please send copies of the return receipts you get from the noticed parties.
- h. I understand this well is on Fee surface but on State minerals. Does R360 have an agreement with David Kirk (surface owner) to use this well for a commercial disposal well? Or have you begun negotiations?
- i. Let me know who the Delaware Lessees or operators are in the lands within the ½ mile AOR in Texas to the south. Have they been noticed?

- j. Please send a notice to Sahara Operating as shown on your map being the operator in Section 31 directly to the east.
- k. Does R360 intend to dispose of any UIC Class I fluids into this well?

Thank You,

William V Jones, P.E.
Engineering, Oil Conservation Division
1220 South St. Francis Drive, Santa Fe, NM 87505
Tel 505.476.3448 ~ Fax 505.476.3462



Appendix C
Legal Notification
(Published in Carlsbad Current-Argus, July 6, 2012)

PUBLIC NOTICE

R360 Permian Basin, LLC, a wholly owned subsidiary of R360 Environmental Solutions, Inc., 16945 Northchase Drive, Suite 2200, Houston, Texas, 77060, has submitted an application to the New Mexico Energy, Minerals and Natural Resources Department, Oil Conservation Division for a commercial salt water disposal (SWD) well. The well will be located 533' FNL and 2482' FEL, in Unit B (NW ¼, NE ¼), Section 36, Township 26 South, Range 31 East, in Eddy County, New Mexico. The well will be located approximately 25 miles southeast of Malaga, New Mexico. The well is proposed to reinject produced and frac water into the Delaware Basin Group between 4200' and 6500'. Interested parties must file objections within 15 days of the date of this publication or prior to release of this permit. Objections or concerns should be copied both to this applicant to the Director of the New Mexico Oil Conservation Division at 1220 South St. Francis Drive, Santa Fe, New Mexico 87505, (505) 476-3448.

RE-RUN WITH CORRECTIONS
7/10/12

*** TX REPORT ***

TRANSMISSION OK

JOB NO. 2072
DESTINATION ADDRESS 15758851066
PSWD/SUBADDRESS
DESTINATION ID
ST. TIME 07/05 09:35
USAGE T 00'19
PGS. 2
RESULT OK



FAX

DATE: July 5, 2012
ATT: Kathy
Carlsbad Current-Argus
FAX: (575) 885-1066
FROM: Mark Larson

PAGES (with cover): 2

Re: Legal Notice for One-Time Publication on July 6, 2012

Dear Kathy,

Please find the attached legal notice for one-time publication in the Carlsbad Current-Argus on July 6, 2012. Please contact me if you have questions.

Mark J. Larson

Larson & Associates, Inc.
P.O. Box 50685
Midland, Texas 79710-0685

Appendix D
Document Transfer Letters



July 5, 2012

CERTIFIED MAIL: 7009 3410 0000 0955 2863

Intrepid Potash – New Mexico, LLC
707 17th Street, Suite 4200
Denver, CO 80202
ATT: Katie Keller

Re: Application for Halfway SWD Well #1, R360 Permian Basin, LLC, Unit K (NE/4, SWE/4), Section 26, Township 20 South, Range 32 East, Lea County, New Mexico

Dear Ms. Keller:

You are receiving a copy of the referenced application because you are lessee of land administered by the U.S. Bureau of Land Management (BLM) in the vicinity of a proposed commercial salt water disposal well (SWD). The well will be located at the R360 Permian Basin, LLC (formerly Controlled Recovery, Inc.) Halfway Facility, located at Mile Marker 66, U.S. Highway 62/180 in Lea County, New Mexico. The Facility is located approximately 40 miles west of Hobbs, New Mexico. The well will be located 1358' FSL and 2307' FWL, in Unit K (NE/4, SW/4) Section 27, Township 20 South and Range 32 east. The well is proposed to reinject produced and frac water into the Delaware Basin Group between 4500' and 6900'.

Larson & Associates, Inc. (LAI), on behalf of R360 Permian Basin, LLC, a wholly owned subsidiary of R360 Environmental Solutions, Inc., 16945 Northchase Drive, Suite 2200, in Houston, Texas 77060, has submitted an application to the New Mexico Oil Conservation Division (OCD) in Santa Fe, New Mexico. You have 15 days to submit comments to the OCD at the District 1 office located at 1625 N. French Drive in Hobbs, New Mexico 88240 or 1220 South St. Francis Drive in Santa Fe, New Mexico 87505. Please forward a copy of your correspondence to OCD to Mr. Joe Rodriguez with R360.

Sincerely,

Larson & Associates, Inc.

Mark J. Larson, P.G.
Sr. Project Manager/President

Cc: Joe Rodriguez – R360

U.S. Postal Service [®]	
CERTIFIED MAIL [™] RECEIPT	
(Domestic Mail Only; No Insurance Coverage Provided)	
For delivery information visit our website at www.usps.com	
OFFICIAL USE	
Postage	\$
Certified Fee	
Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	\$6.04
Sent To Intrepid Potash – New Mexico, LL	
707 17 th , Suite 4200	
Street, Apt. No., or PO Box No. Denver, CO 80202	
City, State, ZIP+4	
ATT: Katie Keller	
PS Form 3800, August 2006	

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:

Intrepid Potash – New Mexico, LLC
707 17th, Suite 4200
Denver, CO 80202
ATT: Katie Keller

2. Article Number

(Transfer from service label)

7009 3410 0000 0955 2863

PS Form 3811, February 2004

Domestic Return Receipt

102595-02-M-1540

COMPLETE THIS SECTION ON DELIVERY

A. Signature

X

☐ Agent

☐ Addressee

B. Received by (Printed Name)

C. Date of Delivery

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

If 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

LA arson &
 ssociates, Inc.
 Environmental Consultants
 507 N. Marientfeld, Suite 200
 Midland, TX 79701
 Intrepid Potash – New Mexico, LLC
 707 17th, Suite 4200
 Denver, CO 80202
 ATT: Katie Keller

7009 3410 0000 0955 2863



UNITED STATES POSTAGE
 02 1P
 0002220686 J1
 MAILED FROM ZIP



July 5, 2012

CERTIFIED MAIL: 7009 3410 0000 0955 2900

BOPCO, L.P.
6 Desta Drive, Suite 3700
Midland, Texas 79705
ATT: Carlos Cruz

Re: Application for Halfway SWD Well #1, R360 Permian Basin, LLC, Unit K (NE/4, SWE/4), Section 26, Township 20 South, Range 32 East, Lea County, New Mexico

Dear Mr. Cruz:

You are receiving a copy of the referenced application because you have been identified as an operator in the area of a proposed commercial salt water disposal well (SWD). The well will be located at the R360 Permian Basin, LLC (formerly Controlled Recovery, Inc.) Halfway Facility, located at Mile Marker 66, U.S. Highway 62/180 in Lea County, New Mexico. The Facility is located approximately 40 miles west of Hobbs, New Mexico. The well will be located 1358' FSL and 2307' FWL, in Unit K (NE/4, SW/4) Section 27, Township 20 South and Range 32 east. The well is proposed to reinject produced and frac water into the Delaware Basin Group between 4500' and 6900'.

Larson & Associates, Inc. (LAI), on behalf of R360 Permian Basin, LLC, a wholly owned subsidiary of R360 Environmental Solutions, Inc., 16945 Northchase Drive, Suite 2200, in Houston, Texas 77060, has submitted an application to the New Mexico Oil Conservation Division (OCD) in Santa Fe, New Mexico. You have 15 days to submit comments to the OCD at the District 1 office located at 1625 N. French Drive in Hobbs, New Mexico 88240 or 1220 South St. Francis Drive in Santa Fe, New Mexico 87505. Please forward a copy of your correspondence to OCD to Mr. Joe Rodriguez with R360.

Sincerely,

Larson & Associates, Inc.

Mark J. Larson, P.G.
Sr. Project Manager/President

Cc: Joe Rodriguez – R360

7009 3410 0000 0955 2900

U.S. Postal Service TM	
CERTIFIED MAIL TM RECEIPT	
(Domestic Mail Only; No Insurance Coverage Provided)	
For delivery information visit our website at www.usps.com	
OFFICIAL USE	
Postage	\$
Certified Fee	
Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	\$5.90
Sent To	
BOPCO, L.P.	
6 Desta Drive, Suite 3700	
Midland, TX 79705	
ATT: Carlos Cruz	

PS Form 3800, August 2006 See Reverse for Instructions

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:

BOPCO, L.P.
6 Desta Drive, Suite 3700
Midland, TX 79705
ATT: Carlos Cruz

2. Article Number

(Transfer from service label)

7009 3410 0000 0955 2900

PS Form 3811, February 2004

Domestic Return Receipt

102595-02-M-1540

COMPLETE THIS SECTION ON DELIVERY

A. Signature

X

☐ Agent☐ Addressee

B. Received by (Printed Name)

C. Date of Delivery

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

LA arson &
Associates, Inc.
Environmental Consultants
507 N. Marlenfeld, Suite 200
Midland, TX 79701
BOPCO, L.P.
6 Desta Drive, Suite 3700
Midland, TX 79705
ATT: Carlos Cruz

7009 3410 0000 0955 2900



UNITED STATES
02 1P
00022206
MAILED FR

Appendix E
Certified Mail Return Receipts

7010 1870 0001 6545 7170

U.S. Postal Service™
CERTIFIED MAIL™ RECEIPT
 (Domestic Mail Only; No Insurance Coverage Provided)

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

OFFICIAL USE

Postage	\$
Certified Fee	
Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	\$

Postmark
Here

Sent To

Street, Apt. No.,
or PO Box No.
City, State, ZIP+4

Hanson Operating

PS Form 3800, August 2006

See Reverse for Instructions

7010 1870 0001 6545 7163

U.S. Postal Service™
CERTIFIED MAIL™ RECEIPT
 (Domestic Mail Only; No Insurance Coverage Provided)

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

OFFICIAL USE

Postage	\$
Certified Fee	
Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	\$

Postmark
Here

Sent To

Street, Apt. No.,
or PO Box No.
City, State, ZIP+4

David Kirk

PS Form 3800, August 2006

See Reverse for Instructions

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.

Article Addressed to:

Hanson Operating Co.
400 N. Pennsylvania Ave
#1200
Roswell, NM 88201-4782

COMPLETE THIS SECTION ON DELIVERY

A. Signature <input checked="" type="checkbox"/> Agent <input type="checkbox"/> Addressee	B. Received by (Printed Name) Asia Starne	C. Date of Delivery 3/21/12
D. Is delivery address different from item 1? <input type="checkbox"/> Yes If YES, enter delivery address below: <input type="checkbox"/> No		

3. Service Type	<input checked="" type="checkbox"/> Certified Mail	<input type="checkbox"/> Express Mail
	<input type="checkbox"/> Registered	<input checked="" type="checkbox"/> Return Receipt for Merchandise
	<input type="checkbox"/> Insured Mail	<input type="checkbox"/> 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.

Article Addressed to:

David Kirk
2713 Racquet Club Dr
Midland, TX 79705

COMPLETE THIS SECTION ON DELIVERY

A. Signature <input checked="" type="checkbox"/> Agent <input type="checkbox"/> Addressee	B. Received by (Printed Name) L. Hunt	C. Date of Delivery 3-21-12
D. Is delivery address different from item 1? <input type="checkbox"/> Yes If YES, enter delivery address below: <input type="checkbox"/> No		

3. Service Type	<input checked="" type="checkbox"/> Certified Mail	<input type="checkbox"/> Express Mail
	<input type="checkbox"/> Registered	<input checked="" type="checkbox"/> Return Receipt for Merchandise
	<input type="checkbox"/> Insured Mail	<input type="checkbox"/> C.O.D.

4. Restricted Delivery? (Extra Fee) ☐ Yes

Article Number
(Transfer from service label)

7010 1870 0001 6545 7170

2. Article Number
(Transfer from service label)

7010 1870 0001 6545 7163

NDER: 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.

Article Addressed to:

Agua Sucia, LLC
5708 W. Austin Street
Broken Arrow, Oklahoma 74011

COMPLETE THIS SECTION ON DELIVERY

A. Signature

[Signature]

☐ Agent
☒ Addressee

B. Received by (Printed Name)

C. Date of Delivery

3-21-12

D. Is delivery address different from item 1?

If YES, enter delivery address below:

☐ Yes
☒ No

3. Service Type

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

4. Restricted Delivery? (Extra Fee)

☐ Yes

Article Number

(Transfer from service label)

7010 1870 0001 6545 7200

Form 3811, February 2004

Domestic Return Receipt

102595-02-M-15

U.S. Postal Service[™]
CERTIFIED MAIL[™] RECEIPT
(Domestic Mail Only; No Insurance Coverage Provided)

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

OFFICIAL USE

Postage \$

Certified Fee

Return Receipt Fee
(Endorsement Required)

Restricted Delivery Fee
(Endorsement Required)

Total Postage & Fees

\$ 8.85

Postmark
Here

Sent To

Agua Sucia, LLC
Street, Apt. No.,
or PO Box No. 5708 W. Austin Street
City, State, ZIP+4
Broken Arrow, OK 74011

PS Form 3800, August 2006

See Reverse for Instructions

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:

Legacy Reserves Oper
303 W. Wall St., Ste 1400
Midland, TX 79701

2. Article Number

(Transfer from service label)

7010 1870 0001 6545 7149

PS Form 3811, February 2004

Domestic Return Receipt

102595-02-M-1540

U.S. Postal Service[™]
CERTIFIED MAIL[™] RECEIPT
(Domestic Mail Only; No Insurance Coverage Provided)

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

OFFICIAL USE

Postage \$

Certified Fee

Return Receipt Fee
(Endorsement Required)

Restricted Delivery Fee
(Endorsement Required)

Total Postage & Fees

\$

Postmark
Here

Sent To

Legacy Reserve
Street, Apt. No.,
or PO Box No.
City, State, ZIP+4

PS Form 3800, August 2006

See Reverse for Instructions

Appendix F
Notification Letter to
Sahara Operating Co.



July 5, 2012

CERTIFIED MAIL: 7009 3410 0000 0953 2667

Sahara Operating CO.
P.O. Box 4130
Midland, Texas 79704

Re: Notification of SWD Well Application, R360 Environmental Solutions, Inc., Unit B (NW/4, NE/4), Section 36, Township 26 South, Range 31 East, Eddy County, New Mexico

Dear Operator:

You are receiving a copy of the enclosed application for a commercial salt water disposal (SWD) well because you have been identified as a leasehold operator within ½ mile of a proposed well location. The permit application is for a commercial salt water disposal (SWD) well to be located in southeast Eddy County, approximately 45 miles southeast of Malaga, New Mexico. The well will be located 350' FNL and 2475' FEL, in Unit B (NW/4, NE/4) Section 36, Township 26 South and Range 31 East. The well is proposed to reinject produced and frac water into the Delaware Basin Group between 4200' and 6500'.

Larson & Associates, Inc. (LAI), on behalf of R360 Environmental Solutions, Inc., 16945 Northchase Drive, Suite 2200, in Houston, Texas 77060, has submitted an application to the New Mexico Oil Conservation Division (OCD). You have 15 days to submit comments to the OCD at the District 2 office located at 811 South First Street in Artesia, New Mexico 88210 or 1220 South St. Francis Drive in Santa Fe, New Mexico 87505. Please forward a copy of your correspondence to OCD to myself or Mr. Joe Rodriguez with R360.

Sincerely,

Larson & Associates, Inc.

Mark J. Larson, P.G.
Sr. Project Manager/President

Encl.

Cc: Joe Rodriguez – R360

U.S. Postal ServiceTM
CERTIFIED MAILTM RECEIPT
(Domestic Mail Only; No Insurance Coverage Provided)
For delivery information visit our website at www.usps.com

OFFICIAL USE

Postage	\$
Certified Fee	
Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	\$ 9.25

Sent To: Sahara Operating Co.
Street, Apt. No., or PO Box No. P.O. Box 4130
City, State, ZIP+4 Midland, TX 79704

PS Form 3800, August 2006 See Reverse for Instructions

7009 3410 0000 0953 2667

- 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:

Sahara Operating CO.
P.O. Box 4130
Midland, TX 79704

A. Signature

X

☐ Agent

☐ Addressee

B. Received by (Printed Name)

C. Date of Delivery

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

If 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

2. Article Number

(Transfer from service label)

7009 3410 0000 0953 2667

PS Form 3811, February 2004

Domestic Return Receipt

102595-02-M-1540

LA arson &
ssociates, Inc.
Environmental Consultants
507 N. Marientfeld, Suite 200
Midland, TX 79701
Sahara Operating CO.
P.O. Box 4130
Midland, TX 79704

7009 3410 0000 0953 2667

CERTIFIED MAIL™



UNITED STATES POSTAGE
\$ 009
0002220686 JUL 05
MAILED FROM ZIP CODE

Jones, William V., EMNRD

From: Jones, William V., EMNRD
Sent: Saturday, July 07, 2012 1:55 PM
To: 'Mark Larson'; Joe Rodriguez
Cc: Shapard, Craig, EMNRD; Ezeanyim, Richard, EMNRD; Phillips, Dorothy, EMNRD; Sharp, Karen, EMNRD
Subject: RE: Disposal application from R360 Permian Basin LLC: proposed Avalon SWD #1D 30-015-NA Unit B Sec 36 T26S R31E Eddy County Delaware disposal perms from 4300 to 6500 feet

Mark and Joe,
Thank you for the quick and organized reply,

✓ Please send our Geologist in Artesia (Craig Shapard) a corrected C-101 showing the latest well location – or call him and make sure he is permitting the drilling of the well at the intended footage location.

✓ There seems to be three problems with the newspaper notice: Please correct and rerun the newspaper notice with the latest well location (333 FNL and 2482 FEL) and the correct proposed disposal interval (4300 to 6500 feet), and an R360 contact person's name and phone number – when the corrected notice is posted, send a copy for my records.

✓ I understand your company bond may be here, but I still cannot see R360 Permian Basin, LLC as an entity in the Division's records of operators – please call Dorothy Phillips at 505-476-3461 to ensure all steps have been taken. I thought she said you needed to get online and do something to ensure it shows up? Let me know?

2 What Delaware formation depths are Legacy producing from just south of your location in Texas?

Otherwise all looks fine,

Thank You,

Will Jones
New Mexico
Oil Conservation Division
Images Contacts

From: Mark Larson [<mailto:Mark@laenvironmental.com>]
Sent: Saturday, July 07, 2012 10:29 AM
To: Jones, William V., EMNRD

Affidavit of Publication

State of New Mexico,
County of Eddy, ss.

Kathy McCarroll, being first duly sworn,
on oath says:

That she is the Classified Supervisor of the Carlsbad Current-Argus, a newspaper published daily at the City of Carlsbad, in said county of Eddy, state of New Mexico and of general paid circulation in said county; that the same is a duly qualified newspaper under the laws of the State wherein legal notices and advertisements may be published; that the printed notice attached hereto was published in the regular and entire edition of said newspaper and not in supplement thereof on the date as follows, to wit:

July 10 2012

That the cost of publication is **\$61.33** and that payment thereof has been made and will be assessed as court costs.

Kathy McCarroll

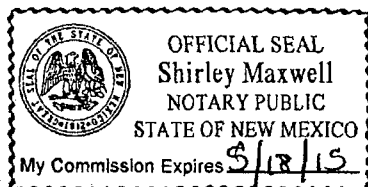
Subscribed and sworn to before me this

10th day of July, 2012

Shirley Maxwell

My commission Expires on May 18, 2015

Notary Public



July 10, 2012

PUBLIC NOTICE

R360 Permian Basin, LLC, a wholly owned subsidiary of R360 Environmental Solutions, Inc., 16945 Northchase Drive, Suite 2200, Houston, Texas 77060, has submitted an application to the New Mexico Energy, Minerals and Natural Resources Department, Oil Conservation Division for a commercial salt water disposal (SWD) well. The well will be located 333' FNL and 2482' FEL in Unit B (NW 1/4, NE 1/4) Section 36, Township 26 South, Range 31 East, in Eddy County, New Mexico. The well will be located approximately .25 miles southeast of Malaga, New Mexico. The well is proposed to reinject produced and frac water into the Delaware Basin Group between 4300' and 6500'. Interested parties must file objections within 15 days of the date of this publication or prior to release of this permit. Objections or concerns should be copied both to Mr. Joe Rodriguez with R360 Permian Basin, LLC, (210) 275-0839, and to the Director of the New Mexico Oil Conservation Division at 1220 South St. Francis Drive, Santa Fe, New Mexico 87505, (505) 476-3448.

Jones, William V., EMNRD

From: Jones, William V., EMNRD
Sent: Monday, July 09, 2012 10:20 AM
To: 'Mark Larson'
Cc: Ezeanyim, Richard, EMNRD; Kent Williams; Blain Lewis; 'Joe Rodriguez'
Subject: Disposal application from R360 Permian Basin LLC: proposed Avalon SWD #1D 30-015-NA Unit B Sec 36 T26S R31E Eddy County Delaware disposal perms from 4300 to 6500 feet

Hello Mark,

Legacy Reserves cannot find its copy of your application our records show was sent back in March for this proposed project.

Please send them another complete copy – attn: Blain Lewis, and send me a copy of the mailer.

Thank You,

Will Jones
New Mexico
Oil Conservation Division
[Images](#) [Contacts](#)

Jones, William V., EMNRD

From: Mark Larson [Mark@laenvironmental.com]
Sent: Monday, July 09, 2012 11:54 AM
To: Jones, William V., EMNRD
Subject: RE: Disposal application from R360 Permian Basin LLC: proposed Avalon SWD #1D 30-015-NA Unit B Sec 36 T26S R31E Eddy County Delaware disposal perms from 4300 to 6500 feet

Will,
Another copy is being sent today via certified mail.
Mark

From: Jones, William V., EMNRD [<mailto:William.V.Jones@state.nm.us>]
Sent: Monday, July 09, 2012 11:20 AM
To: Mark Larson
Cc: Ezeanyim, Richard, EMNRD; Kent Williams; Blain Lewis; Joe Rodriguez
Subject: Disposal application from R360 Permian Basin LLC: proposed Avalon SWD #1D 30-015-NA Unit B Sec 36 T26S R31E Eddy County Delaware disposal perms from 4300 to 6500 feet

Hello Mark,
Legacy Reserves cannot find its copy of your application our records show was sent back in March for this proposed project.

Please send them another complete copy – attn: Blain Lewis, and send me a copy of the mailer.

Thank You,

Will Jones
New Mexico
Oil Conservation Division
[Images](#) [Contacts](#)

Jones, William V., EMNRD

From: Eli Miranda [eli@laenvironmental.com]
Sent: Monday, July 09, 2012 3:27 PM
To: Jones, William V., EMNRD
Cc: Mark Larson
Subject: Copy of Mailer
Attachments: Copy of Letter and RRC.pdf

Mr. Jones,

Above is attached a copy of the SWD Well Application letter and a copy of the return receipt. Thank you for your time and have a wonderful day.

Eli Miranda

Administrative Assistant

Larson and Associates, Inc.

507 N. Marienfeld St., Ste. 200

Midland, TX 79701

(432) 687-0901

(432) 687-0456 fax



July 9, 2012

CERTIFIED MAIL: 7009 3410 0000 0955 2917

Legacy Reserves Operating L.P.
303 W. Wall Street, Suite 1400
Midland, Texas 79701
ATT: Blain Lewis

Re: Notification of SWD Well Application, R360 Permian Basin, LLC, Unit B (NW/4, NE/4), Section 36, Township 26 South, Range 31 East, Eddy County, New Mexico

Dear Operator:

You are receiving a copy of the enclosed application for a commercial salt water disposal (SWD) well because you have been identified as a leasehold operator within ½ mile of a proposed well location. The permit application is for a commercial salt water disposal (SWD) well to be located in southeast Eddy County, approximately 45 miles southeast of Malaga, New Mexico. The well will be located 333' FNL and 2482' FEL, in Unit B (NW/4, NE/4) Section 36, Township 26 South and Range 31 East. The well is proposed to reinject produced and frac water into the Delaware Basin Group between 4300' and 6500'.

Larson & Associates, Inc. (LAI), on behalf of R360 Environmental Solutions, Inc., 16945 Northchase Drive, Suite 2200, in Houston, Texas 77060, has submitted an application to the New Mexico Oil Conservation Division (OCD). You have 15 days to submit comments to the OCD at the District 2 office located at 811 South First Street in Artesia, New Mexico 88210 or 1220 South St. Francis Drive in Santa Fe, New Mexico 87505. Please forward a copy of your correspondence to OCD and to Mr. Joe Rodriguez with R360. Mr. Rodriguez may be reached at (210) 275-0839.

Sincerely,

Larson & Associates, Inc.

Mark J. Larson, P.G.

Sr. Project Manager/President

Encl.

Cc: Joe Rodriguez – R360

507 North Marienfeld, Suite 200 ♦ Midland, Texas 79701 ♦

U.S. Postal Service	
CERTIFIED MAIL RECEIPT	
(Domestic Mail Only; No Insurance Coverage Provided)	
For delivery information visit our website at www.usps.com	
OFFICIAL USE	
Postage	\$
Certified Fee	
Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	\$10.34
Postmark Here	
Sent To	
Legacy Reserves Operating L.P.	
Street, Apt. No., or PO Box No.	
303 W. Wall Street, Suite 1400	
City, State, ZIP+4	
Midland, Texas 79701	
ATT: Blain Lewis	
PS Form 3800, April 2010	

7009 3410 0000 0955 2917

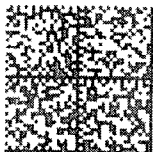
(432) 667-0901 ♦ Fax (432) 667-0456

REGISTERED MAIL™



7009 3410 0000 0955 2917

UNITED STATES POSTAGE
PITNEY BOWES
02 1P
\$ 010.340
0002220686 JUL 09 2012
MAILED FROM ZIP CODE 79701



Priority Mail
ComBasePrice

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:

Legacy Reserves Operating L.P.
303 W. Wall Street, Suite 1400
Midland, Texas 79701
ATT: Blain Lewis

2. Article Number

(Transfer from service label)

7009 3410 0000 0955 2917

PS Form 3811, February 2004

Domestic Return Receipt

102595-02-M-1540

COMPLETE THIS SECTION ON DELIVERY

A. Signature

X

☐ Agent

☐ Addressee

B. Received by (Printed Name)

C. Date of Delivery

D. Is delivery address different from item 1?
If YES, enter delivery address below:

☐ Yes

☐ No

3. Service Type

☒ Certified Mail

☐ Express Mail

☐ Registered

☒ Return Receipt for Merchandise

☐ Insured Mail

☐ C.O.D.

4. Restricted Delivery? (Extra Fee)

☐ Yes

LA arson &
Associates, Inc.
Environmental Consultants
507 N. Marlenfeld, Suite 200
Midland, TX 79701

Legacy Reserves Operating L.P.
303 W. Wall Street, Suite 1400
Midland, TX 79701
ATT: Blain Lewis

Run INT Survey Injection Permit Checklist (11/15/2010)

WFX _____ PMX _____ SWD 1346 Permit Date 7/6/12 UIC Ctr JAS

Wells 1 Well Name(s): AVALON SWD #1D

API Num: 30-0 15-NA Spud Date: Not Yet New/Old: N (UIC primacy March 7, 1982)

Footages: 332 350 FNL/34 FEL Unit B Sec 36 Tsp 265 Rge 31E County EDDY

General Location: 45 mi SE of MALAGA / DIRECTLY East of Red Bluff

Operator: R360 PERMIAN BASIN LLC Contact Joe B. Rios Riquelme
MARK J LARSON

OGRID: 289736 RULE 5.9 Compliance (Wells) _____ (Finan Assur) _____ IS 5.9 OK? _____

Well File Reviewed ☒ Current Status: NOT Drilled or Permitted

Planned Work to Well: Drill

Diagrams: Before Conversion ☒ After Conversion ☒ Elogs in Imaging File: _____

Well Details:		Sizes	Setting	Stage	Cement	Determination
		Hole.....Pipe	Depths	Tool	Sx or Cf	Method
New <input checked="" type="checkbox"/>	Existing <input type="checkbox"/>	Surface	<u>15 - 10 3/4</u>	<u>920'</u>	<u>4225X</u>	<u>CIRC</u>
New <input checked="" type="checkbox"/>	Existing <input type="checkbox"/>	LONG Interm	<u>9 1/2 - 7"</u>	<u>4300'</u>	<u>778</u>	<u>CIRC</u>
New <input type="checkbox"/>	Existing <input type="checkbox"/>	LongSt				
New <input type="checkbox"/>	Existing <input type="checkbox"/>	Liner				
New <input checked="" type="checkbox"/>	Existing <input type="checkbox"/>	OpenHole	<u>575</u>	<u>4300 - 6500'</u>		

Depths/Formations: Depths, Ft. Formation Tops?

Formation(s) Above	<u>4130</u>	<u>Del (Bot)</u>	<input checked="" type="checkbox"/>
	<u>5040</u>	<u>Cherry C.</u>	<input checked="" type="checkbox"/>
<u>D.M.G.</u> Injection TOP:	<u>4300'</u>	<u>Bell C.</u>	Max. PSI <u>860</u> OpenHole <input checked="" type="checkbox"/> Perfs <input type="checkbox"/>
Injection BOTTOM:	<u>6500'</u>	<u>Cherry C.</u>	Tubing Size <u>4 1/2</u> Packer Depth <u>4150</u>
Formation(s) Below	<u>7040</u>	<u>Bell C.</u>	<input checked="" type="checkbox"/>
	<u>8180</u>	<u>Bone S.</u>	<input checked="" type="checkbox"/>

Capitan Reef? ☒ (Potash? ☒ Noticed? ☒) (WIPR? ☒ Noticed? ☒) Salado Top/Bot ? - ? Cliff House? ☒

Fresh Water: Depths: 180-240 Formation AVALON Wells? ☒ Analysis? ☒ Affirmative Statement ☒

Disposal Fluid Analysis? Sources: COMMERCIAL

Disposal Interval: Analysis? ☒ Production Potential/Testing: Total in Deepwell

Notice: Newspaper Date 7/10/12 Surface Owner DAVID KIRK Mineral Owner(s) STO.

RULE 26.7(A) Affected Persons: HANSON / AGUIRRE / Legacy 3/19/12 Sahara 7/5/12

AOR: Maps? ☒ Well List? ☒ Producing in Interval? NO Wellbore Diagrams? ☒ 3/10/12

.....Active Wells ☐ Repairs? ☐ Which Wells? _____

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

Issues: Said NOTICE To Sahara about TEXAS copy Green Card Request Sent _____ Reply: _____