ERGY AND MINERALS DEPARTMENT

POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87501

Revised 7-1-81

APPLICATION FOR AUTHORIZATION TO INJECT

I. Purpose: ☐ Secondary Recovery ☐ Pressure Maintenance ☐ Disposal ☐ Storage
Application qualifies for administrative approval? ☒ yes ☐ no

II. Operator: READING & BATES PETROLEUM CO.

Address: 2412 N. Grandview, Suite 201, Odessa, Texas 79761

Contact party: Donald J. Kipgen Phone: (915) 362-6302

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. See attached

* 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 geological data on the injection zone including appropriate lithologic detail, geological 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 source 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 source 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: Donald J. Kipgen Title Area Superintendent

Signature: Donald J. Kipgen Date: March 6, 1986

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

See attached information

DISTRIBUTION: Original and one copy to Santa Fe with one copy to the appropriate Division district office.

III. WELL DATA

A. The following well data must be submitted for each injection well covered by this application. The data must be both in tabular and schematic form and shall include:

(1) Lease name; Well No.; location by Section, Township, and Range; and footage location within the section.

(2) Each casing string used with its size, setting depth, sacks of cement used, hole size, top of cement, and how such top was determined.

(3) A description of the tubing to be used including its size, lining material, and setting depth.

(4) The name, model, and setting depth of the packer used or a description of any other seal system or assembly used.

Division District offices have supplies of Well Data Sheets which may be used or which may be used as models for this purpose. Applicants for several identical wells may submit a "typical data sheet" rather than submitting the data for each well.

B. The following must be submitted for each injection well covered by this application. All items must be addressed for the initial well. Responses for additional wells need be shown only when different. Information shown on schematics need not be repeated.

(1) The name of the injection formation and, if applicable, the field or pool name.

(2) The injection interval and whether it is perforated or open-hole.

(3) State if the well was drilled for injection or, if not, the original purpose of the well.

(4) Give the depths of any other perforated intervals and detail on the sacks of cement or bridge plugs used to seal off such perforations.

(5) Give the depth to and name of the next higher and next lower oil or gas zone in the area of the well, if any.

XIV. PROOF OF NOTICE

All applicants must furnish proof that a copy of the application has been furnished, by certified or registered mail, to the owner of the surface of the land on which the well is to be located and to each leasehold operator within one-half mile of the well location.

Where an application is subject to administrative approval, a proof of publication must be submitted. Such proof shall consist of a copy of the legal advertisement which was published in the county in which the well is located. The contents of such advertisement must include:

(1) The name, address, phone number, and contact party for the applicant;

(2) the intended purpose of the injection well; with the exact location of single wells or the section, township, and range location of multiple wells;

(3) the formation name and depth with expected maximum injection rates and pressures; and

(4) a notation that interested parties must file objections or requests for hearing with the Oil Conservation Division, P. O. Box 2088, Santa Fe, New Mexico 87501 within 15 days.

NO ACTION WILL BE TAKEN ON THE APPLICATION UNTIL PROPER PROOF OF NOTICE HAS BEEN SUBMITTED.

NOTICE: Surface owners or offset operators must file any objections or requests for hearing of administrative applications within 15 days from the date this application was mailed to them.

VI. Only one well is in the area of review: it is our producing well Dickinson Cattle Co. "33" No. 1.

Spudded: January 23, 1982
Originally drilled as a Devonian wildcat to 13360', it was non-productive and was plugged back to the Wolfcamp as follows:

Plug No. 1: 50 sx 13230-13130' Top of Devonian
Plug No. 2: 50 sx 11850-11750' Top of Mississippian
Plug No. 3: 125 sx 9900-9600' Lower Wolfcamp
Drilled out to 9659'

Casing program as follows:

Surface: 13-3/8" to 528'; 550 sx to surface

Intermediate: 9-5/8" to 4911'; 2600 sx; two stages through stage collar at 2010' - 1300 sx around shoe and 1300 sacks through stage collar. 1st stage circulated 210 sx off top of staging collar and 2nd stage circulated 102 sacks to surface.

Long String: 5-1/2" to 9659'; 225 sacks, top of cement 8346'.

Perforations: 9409-9434' in Wolfcamp

VII: Data on the proposed operation:

1. Proposed average and maximum daily rate and volume of fluids to be injected:

   Average 1000 bbls.
   Maximum 2000 bbls.

2. System is closed.

3. Proposed average and maximum injection pressure:

   Average 500#
   Maximum 1000#

4. Disposal system. Source of water to be disposed of is from the Wolfcamp formation. (Analysis attached.

5. There is no San Andres or Glorieta oil or water production in the area so water samples are not available.

   From communication with chemical companies and water analysis laboratories, the best we can do is approximation based on wells ten to fifteen miles away. The results are as follows:

   Specific Gravity 1.035, ph 7

	MG/L
Calcium	3,070
Magnesium	1,780
Sodium	14,400
Bicarbonates	840
Sulfates	3,250
Chlorides	30,000
Total dissolved solids	53,340

   Carbonate sealing index is .8
   Sulfate scaling index is 10-20 which is typical for the region.

   Disposal well will be monitored for scaling indications and appropriate preventive measures will be followed, ie. scale corrosion inhibitor will be applied when needed.

VIII. Geological Data:

   The San Andres zone is principally dolomitic and is approximately 800 feet thick from 4700 to 5500'.

   The Glorieta is a limestone with fractured chert in the loss zone at 6060'-6400', the Glorieta being approximately 340 feet thick.

   Drinking water depths, etc. are as follows:

   Tertiary (Ogalala) water sands at maximum depth 150'.

   Water analysis in surrounding water wells attached.

There are no drinking water zones below the injection interval.

IX. Proposed stimulation program:

1000 gallons 15% NE/FE H.C.L.

X. Logging & test data on well.

Logs have been previously submitted. Mud logs attached.

XI. Chemical analysis of fresh water.

Note attachments.

XII. Affirmative statement:

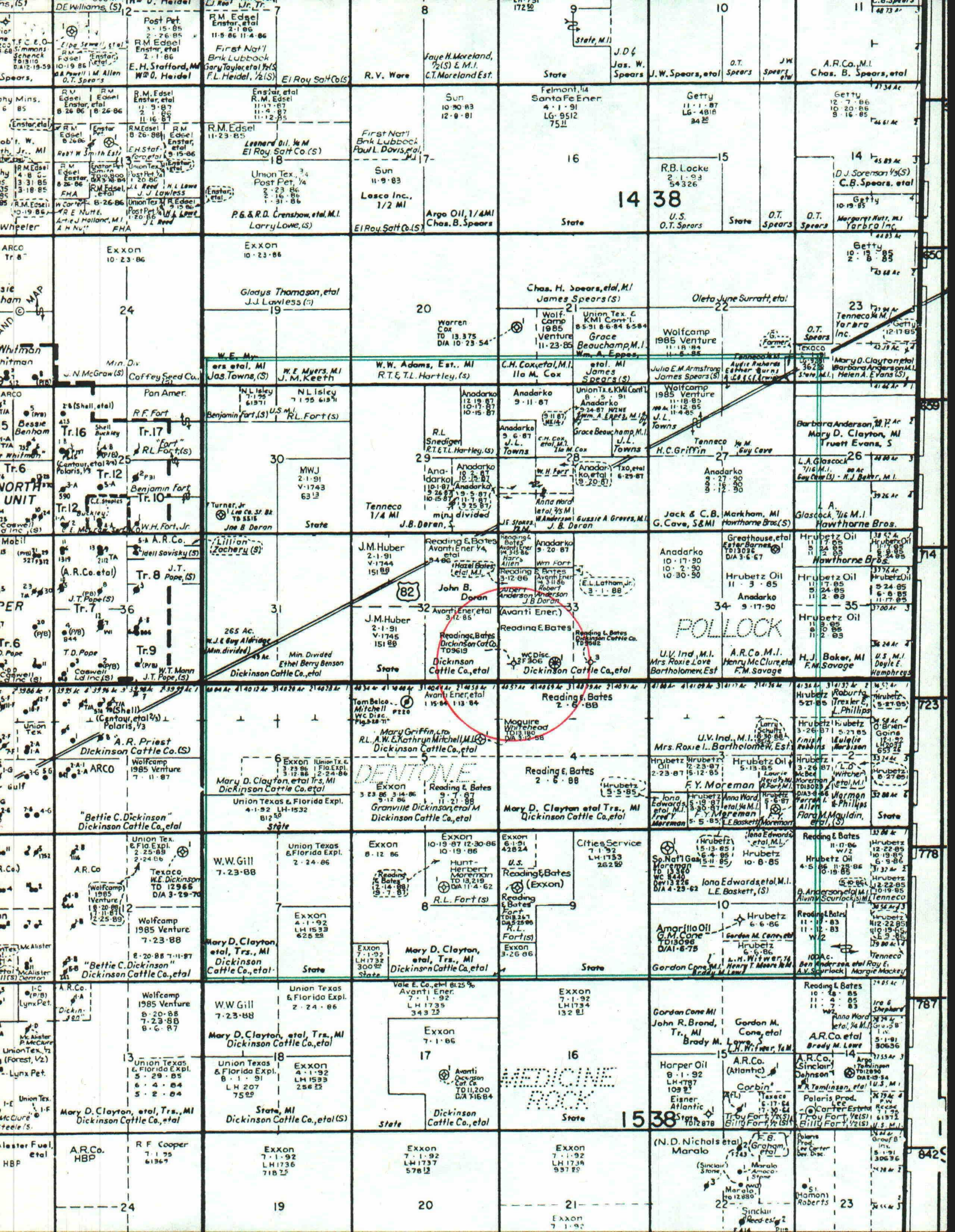
After complete study of the area, both on the surface and sub-surface, I find no indication of faults in the San Andres or overlying zones to indicate any possibility of injected water from this well coming as high as the base of the Ogalala.

XIII. Proof of Notice.

See attached.

XIV: Certification:

See attached.

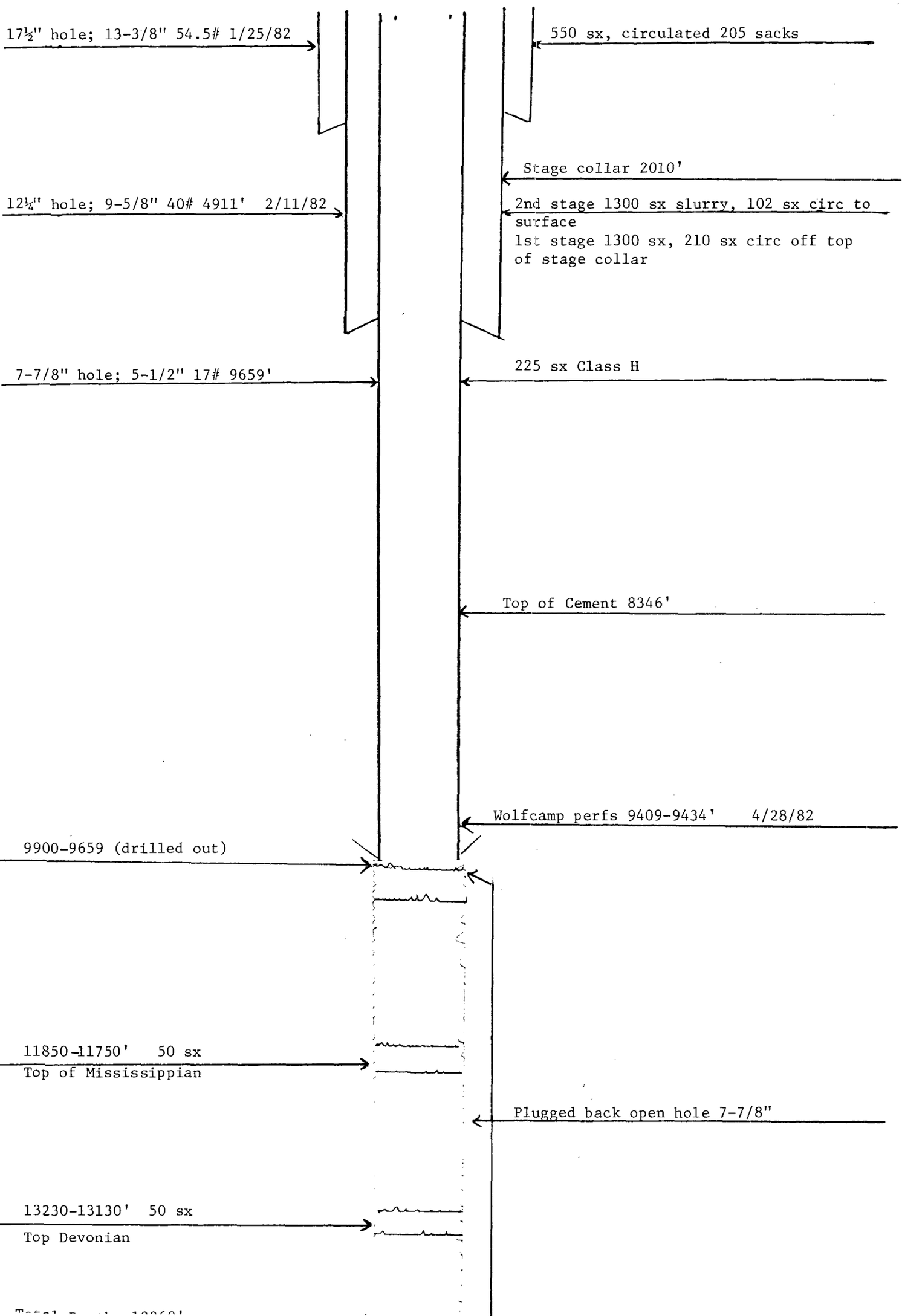


Post Pet.
R.M. Edsel
First Nat'l Bnk Lubbock
E.H. Stafford, MI
W. O. Heidel
F.L. Heidel, ½(S)
El Roy Salt Co.(S)
R.V. Ware
Faye H. Moreland, ½(S) & M.I.
C.T. Moreland Est.
State
J.D. & Jas. W. Spears
J.W. Spears, etal
O.T. Spears
A.R.Co., M.I.
Chas. B. Spears, etal
Sun
Felmont, ¼
Santa Fe Ener.
Getty
Enstar, etal
R.M. Edsel
Leonard Oil, ¾ M
El Roy Salt Co.(S)
First Nat'l Bnk Lubbock
Paul L. Davis, etal
Union Tex.
Post Pet.
Sun
Lasco Inc., 1/2 MI
Argo Oil, 1/4 MI
Chas. B. Spears
R.B. Locke
C.B. Spears, etal
D.J. Sorenson ⅓(S)
14 38
U.S.
O.T. Spears
P.G. & R.D. Crenshaw, etal, M.I.
Larry Lowe, (S)
El Roy Salt Co.(S)
Margaret Nutt, M.I.
Yarbro Inc.
Wheeler
Exxon
10 · 23 · 86
Gladys Thomason, etal
J.J. Lawless
Chas. H. Spears, etal, M.I.
James Spears (S)
Oleta June Surratt, etal
Warren Cox
Wolfcamp 1985 Venture
Union Tex. & KMI Cont'l.
Grace Beauchamp, M.I.
Tenneco
Yarbro Inc.
Texaco
Whitman
Min. Div.
J. N. McGraw (S)
Coffey Seed Co.
W.E. Myers etal. MI
Jas. Towns, (S)
W.E. Myers, M.I.
J.M. Keeth
W.W. Adams, Est., MI
R.T. & T.L. Hartley, (s)
C.H. Cox, etal, M.I.
Ila M. Cox
James Spears (S)
Julia E.M. Armstrong
Mary D. Clayton, etal
Barbara Anderson
Helen A. Evans (S)
Pan Amer.
N.L. Isley
Anadarko
R.F. Fort
Benjamin Fort, (S)
R.L. Fort, (s)
Bessie Benham
Tr.16
Tr.17
Tr.6
NORTH UNIT
Tr.12
Tr.10
Benjamin Fort
W.H. Fort, Jr.
R.L. Snediger
R.T. & T.L. Hartley, (S)
J.L. Towns
Grace Beauchamp, M.I.
H.C. Griffin
Tenneco
Guy Cave
Barbara Anderson
Mary D. Clayton, MI
Truett Evans, S
L.A. Glascock
MWJ
2 · 1 · 91
V · 1743
Tenneco 1/4 MI
J.B. Doran, S.
min. divided
Anna Nord
Gussie A. Groves, M.I.
J.B. Doran
Jack & C.B. Markham, MI
G. Cave, S&MI
Hawthorne Bros.(S)
Hawthorne Bros.
Turner, Jr.
Jno B Doran
State
Mobil
A.R.Co.
Idell Savisky (S)
Lillian Zachery (S)
J.M. Huber
Reading & Bates
Avanti Ener ¼, etal
Hazel Bates
Wm Fort
Albert Anderson
Robert Anderson
E.L. Latham, Jr.
Greathouse, etal
Ester Barnes
Anadarko
Hrubetz Oil
(A.R.Co. etal)
Tr.8
J.T. Pope, (S)
82
John B. Doran
J.B Doran
Avanti Ener, etal
Avanti Ener.
POLLOCK
Tr.7
Tr.6
Tr.9
265 Ac.
Min. Divided
Ethel Berry Benson
J.M. Huber
Reading & Bates
Dickinson Cattle Co.
Dickinson Cattle Co., etal
T.D. Pope
Caswell Ld Inc (S)
W.T. Mann
J.T. Pope, (S)
Dickinson Cattle Co., etal
State
Dickinson Cattle Co., etal
U.V. Ind, M.I.
Mrs. Roxie Love
Bartholomew, Est
A.R.Co. M.I.
Henry McClure, etal
F.M. Savage
H.J. Baker, MI
F.M. Savage
U.S. M.I.
Doyle E. Humphreys
(Shell)
(Centour, etal ⅔)
Polaris, ⅓
A.R. Priest
Dickinson Cattle Co.(S)
Tom Balco
Mitchell
Avanti Ener, etal
Reading & Bates
2 · 6 · 88
Mary Griffin, etal
R.L., A.W. & Kathryn Mitchell, M.I.
Dickinson Cattle Co., etal
Maguire Whitehead
U.V. Ind., M.I.
Mrs. Roxie L. Bartholomew, Est.
Hrubetz
Roberta Trexler
L. Phillips
Union Tex.
ARCO
Wolfcamp 1985 Venture
Gulf
Exxon
Mary D. Clayton, etal Trs, MI
Dickinson Cattle Co. etal
DENTON E.
Reading & Bates
Union Texas & Florida Expl.
Granville Dickinson, etal M
Dickinson Cattle Co., etal
Mary D. Clayton etal Trs., MI
Dickinson Cattle Co., etal
F.Y. Moreman
Iona Edwards, etal M.I.
Anna Ward
L.E. Baskett
Harmon & Phillips
Flora M. Mauldin, etal (S)
State
"Bettie C. Dickinson"
Dickinson Cattle Co., etal
A.R. Co
Union Tex. & Fla. Expl.
W.W. Gill
7 · 23 · 88
Texaco
W.E. Dickinson
Union Texas & Florida Expl.
Exxon
Hunt-Herbert Moreman
Exxon
U.S.
Reading & Bates (Exxon)
Cities Service
So. Nat'l Gas
Hrubetz
Iona Edwards, etal, M.I.
L.E. Baskett, (S)
Reading & Bates
Hrubetz Oil
Wolfcamp 1985 Venture
R.L. Fort (s)
R.L. Fort (s)
Amarillo Oil
G.M. Cone
Gordon M. Cone, etal
Tenneco
Mary D. Clayton, etal, Trs., MI
Dickinson Cattle Co., etal
"Bettie C. Dickinson"
Dickinson Cattle Co., etal
Mary D. Clayton, etal, Trs., MI
Dickinson Cattle Co., etal
Gordon Cone, M.I.
Brady M. Lowe
Ben Anderson, etal Roy E.
A.V. Scurlock
Margie Mackey
Lynx Pet.
Wolfcamp 1985 Venture
W.W. Gill
Union Texas & Florida Expl.
Avanti Ener.
Exxon
Gordon Cone MI
John R. Brand, Tr., MI
Brady M. Lowe, S
Gordon M. Cone, etal
Reading & Bates
Anna Ward, etal, ¼ M.I.
A.R.Co. etal
Brady M. Lowe
Union Tex.
Lynx Pet.
Union Texas & Florida Expl.
Union Texas & Florida Expl.
Exxon
Exxon
Avanti
MEDICINE ROCK
Harper Oil
Eisner Atlantic
A.R.Co. (Atlantic)
Corbin
L.H. Witwer
A.R.Co. (Sinclair)
Johnson
Polaris Prod.
Troy Fort, ½(S)
Billy Fort, ½(S)
Mary D. Clayton, etal, Trs., MI
Dickinson Cattle Co., etal
State, MI
Dickinson Cattle Co., etal (S)
State
Dickinson Cattle Co., etal
State
15 38
Troy Fort, ½(S)
Billy Fort, ½(S)
McAlester Fuel
HBP
A.R.Co. HBP
R.F. Cooper
7 · 1 · 95
Exxon
7 · 1 · 92
LH 1736
Exxon
7 · 1 · 92
LH 1737
Exxon
7 · 1 · 92
LH 1738
(N.D. Nichols etal)
Marala
F.B. Graham, etal
Sinclair
Marala
Amoco
S.I. (Ramon) Roberts
Exxon

READING & BATES PETROLEUM CO.

DICKINSON CATTLE CO. 33-1

660 FSL & 1980 FWL of Section 33
T-14-S, R-38-E, Lea County, New Mexico

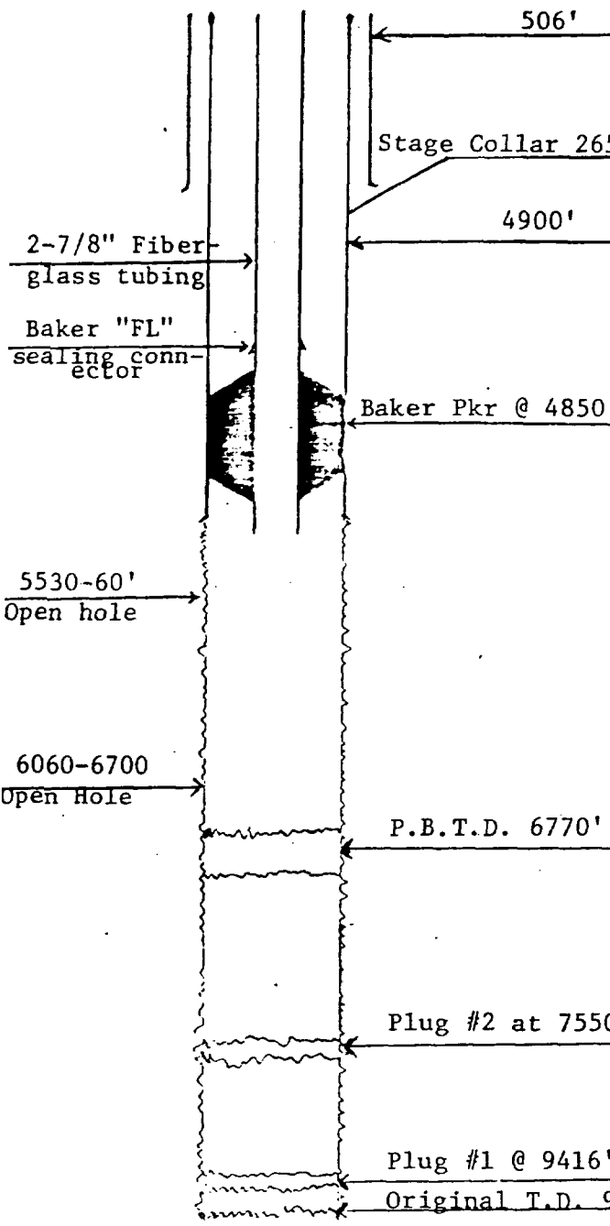


READING & BATES PETROLEUM ... Dickinson Cattle Co. 33"

OPERATOR LEASE

2	660' FSL & 560' FWL	33	T-14-S	R-38-E
WELL NO.	FOOTAGE LOCATION	SECTION	TOWNSHIP	RANGE

Schematic



Tabular Data

Surface Casing

Size 13-3/8 " Cemented with 450 sx.

TOC Surface feet determined by circulation

Hole size 17-1/4"

Intermediate Casing

Size 8-5/8 " Cemented with 2700 sx.

TOC Surface feet determined by circulation

Hole size 12-1/4"

Open Hole

Size _____ " Cemented with NA sx.

TOC NA feet determined by NA

Hole size 7-7/8"

Total depth _____

Injection interval Open Hole

4900 feet to 6700 feet

(perforated or open-hole, indicate which)

100 sack plug to be set after clean-out

Tubing size 2-7/8" lined with Fiberglass (material) set in a

Baker Model A-3 LokSet w/ "FL" seal connector (brand and model) packer at 4850 feet

(or describe any other casing-tubing seal).

Other Data

1. Name of the injection formation San Andres/Glorieta (Open Hole)

2. Name of Field or Pool (if applicable) NA

3. Is this a new well drilled for injection? / / Yes XX No

If no, for what purpose was the well originally drilled? Petroleum production in Wolfcamp. Drilled and abandoned 7/1/82

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

50 sacks 9416' 50 sacks 7550' 100 sacks 7000'

5. Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area. Pollock Wolfcamp

AFFIDAVIT OF PUBLICATION

State of New Mexico,

County of Lea.

I, Robert L. Summers

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

of One weeks.

Beginning with the issue dated March 3, 19 86

and ending with the issue dated March 3, 19 86

Robert L Summers
Publisher.

Sworn and subscribed to before me this 5 day of March, 1986

Vera Murphey
Notary Public.

My Commission expires Nov. 14, 1988
(Seal)

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

33

LEGAL NOTICE
MARCH 3, 1986

CONTACT PARTY:
DONALD J. KIPGEN
PHONE NO.
(915) 362-6302

Reading & Bates Petroleum Co., 2412 N. Grandview, Suite 201, Odessa, Texas 79761, intends to re-enter and complete as a salt water disposal well their Dickinson Cattle Company "33" Well Number 2, located 660' FSL and 560' FWL of Section 33 in Township 14 South, Range 38E, at depths of 5500' (San Andres Formation) and 6200' (Glorieta Formation).

Maximum injection rate will be 2000 barrels salt water per day at a pressure of 1000 psi.

Interested parties must file objections or requests for hearing with the Oil Conservation Division, P. O. Box 2088, Santa Fe, New Mexico 87501, within 5 days.

SIGNED: Donald J. Kipgen
Area Supt.
2412 N. Grandview,
Suite 201
Odessa, Texas 79761
(915) 362-6302

RB

READING & BATES PETROLEUM CO.

2410 N. Grandview, Suite 201
Odessa, Texas 79761
915 362-6302

FEBRUARY 21, 1986

CONTACT PARTY: DONALD J. KIPGEN
PHONE NO. (915) 362-6302

READING & BATES PETROLEUM CO., 2412 N. GRANDVIEW, SUITE 201, ODESSA, TEXAS 79761, INTENDS TO RE-ENTER AND COMPLETE AS A SALT WATER DISPOSAL WELL THEIR DICKINSON CATTLE COMPANY "33" WELL NUMBER 2, LOCATED 660' FSL AND 560' FWL OF SECTION 33 IN TOWNSHIP 14 SOUTH, RANGE 38E, AT DEPTHS OF 5500' (SAN ANDRES FORMATION) AND 6200' (GLORIETA FORMATION).

MAXIMUM INJECTION RATE WILL BE 2000 BARRELS SALT WATER PER DAY AT A PRESSURE OF 1000 PSI.

INTERESTED PARTIES MUST FILE OBJECTIONS OR REQUESTS FOR HEARING WITH THE OIL CONSERVATION DIVISION, P. O. BOX 2088, SANTA FE, NEW MEXICO 87501, WITHIN 5 DAYS.

SIGNED: _____
Donald J. Kipgen, Area Supt.

DATE: 2/21/86

REBBCO CHEMICALS, INC

915/381-2595

OFFICE & PLANT
15301 WEST UNIVERSITY

P. O. BOX 6305
ODESSA, TEXAS 79760

WATER ANALYSIS REPORT

COMPANY READING & BATES ADDRESS

LEASE DICKENSON 33-1 DATE SAMPLED 5-1-85

ANALYSIS	PPM or Mg/L	EPM or Meq./L	Ionic PPM	
1. PH 6.80				
2. H_2S as a dissolved gas in apiece water analysis	→	0		
3. CO_2				
4. Specific Gravity 1.040				
5. Phenol Alkalinity ($CaCO_3$)	0.0			
6. M.P. Alkalinity ($CaCO_3$)	860.0			
7. Bicarbonate ($CaCO_3$)	860.0	17.2	HCO_3	1,049.2
8. Chlorides (Cl)	35,000.0	985.9	CL	35,000.0
9. Sulphates (SO_4)	3,875.0	80.7	SO_4	3,875.0
10. Total Hardness ($CaCO_3$)	7,250.0			
11. Calcium ($CaCO_3$)	6,250.0	125.0	Ca	2,500.0
12. Magnesium ($CaCO_3$)	1,000.0	20.0	Mg	244.0
13. Sodium (Na)		938.8	Na	21,592.4
14. Barium (Ba)			Ba	-
15. Iron (Fe)				0.2
16. Total Disolved Solids				64,260.8

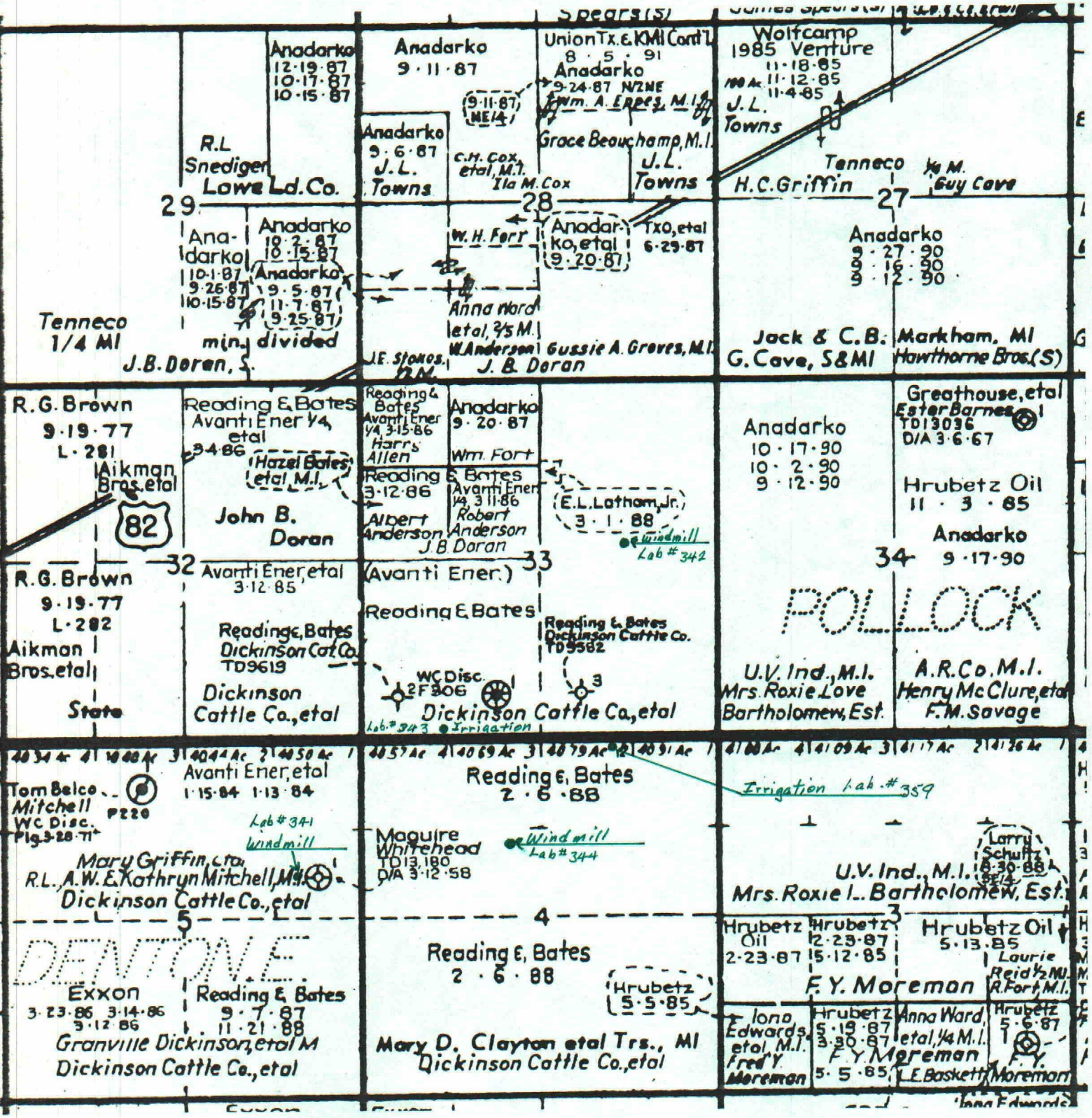
Remarks:

WRC
REPRESENTATIVE

Chemicals for the Petroleum Industry

Reading & Bates Petroleum Co.
Dickinson Cattle Co. 2-33
560 FWL 660 FSL Sec. 33
14S, 38E, Lea County, New Mexico

Fresh Water Wells Where Samples Were Taken



MOBILE ANALYTICAL LABORATORIES
& SOLAR ENERGY TESTING
P.O. BOX 6771
ODESSA, TEXAS 79767-6771
PHONE 337-4744

COMPANY: READING & BATES PETROLEUM CO.
2412 GRANDVIEW - SUITE 201
ODESSA, TEXAS 79761

DATE: 03-04-86
RECEIVED DATE: 02-28-86

This well produces from the Ogalala at approximately 110'.

ATTENTION OF: MR. DAVID MAGOUIRK

WATER ANALYSIS: DICKINSON CATTLE CO. 2-33 - #1 D.C.C. 1-33, LAB NO. 341

	DISSOLVED SOLIDS MEQ/L	IONIC MG/L
CATIONS		
SODIUM, Na	3.79	87
CALCIUM, Ca	3.04	61
MAGNESIUM, Mg	1.60	20
ANIONS:		
CHLORIDE, Cl	1.90	67
SULFATE, SO4	3.33	160
BICARBONATE, HCO3	3.20	195
TOTAL DISSOLVED SOLIDS		590

OTHER PROPERTIES

pH	7.78	P-ALKALINITY AS CaCO3	0 MG/L
IRON	0 MG/L	M-ALKALINITY AS CaCO3	160 MG/L
H2S	0 MG/L	SPECIFIC GRAVITY	1.000
CO2	4 MG/L	CONDUCTIVITY	450 MICROMHOS/CM
		CALCIUM HARDNESS	152 MG/L
		MAGNESIUM HARDNESS	80 MG/L
		TOTAL HARDNESS	232 MG/L

NOTE: SAMPLES CONTAINING HAZARDOUS AND TOXIC SUBSTANCES WILL BE RETURNED TO POINT OF ORIGIN FOR DISPOSAL. IF THIS IS NOT POSSIBLE AND MOBILE ANALYTICAL LABORATORIES HAS TO DISPOSE OF THE SAMPLE IN ACCORDANCE WITH EPA REGULATIONS, THEN ADDITIONAL CHARGES WILL BE BILLED TO COVER COST OF DISPOSAL OF THIS SAMPLE.

MOBILE ANALYTICAL LABORATORIES
& SOLAR ENERGY TESTING
P.O. BOX 6771
ODESSA, TEXAS 79767-6771
PHONE 337-4744

COMPANY: READING & BATES PETROLEUM CO.
2412 GRANDVIEW - SUITE 201
ODESSA, TEXAS 79761

DATE: 03-04-86
RECEIVED DATE: 02-28-86

This well produces from the Ogalala at approximately 110'.

ATTENTION OF: MR. DAVID MAGOUIRK

WATER ANALYSIS: DICKINSON CATTLE CO. 2-33 - #2 D.C.C. 1-33, LAB NO. 342

DISSOLVED SOLIDS

CATIONS	MEQ/L	IONIC MG/L
SODIUM, Na	4.19	96
CALCIUM, Ca	2.64	53
MAGNESIUM, Mg	1.48	18
ANIONS:		
CHLORIDE, Cl	1.80	64
SULFATE, SO4	3.23	155
BICARBONATE, HCO3	3.28	200
TOTAL DISSOLVED SOLIDS		586

OTHER PROPERTIES

pH	7.78	P-ALKALINITY AS CaCO3	0 MG/L
IRON	0 MG/L	M-ALKALINITY AS CaCO3	164 MG/L
H2S	0 MG/L	SPECIFIC GRAVITY	1.000
CO2	4 MG/L	CONDUCTIVITY	445 MICROMHOS/CM
		CALCIUM HARDNESS	132 MG/L
		MAGNESIUM HARDNESS	74 MG/L
		TOTAL HARDNESS	206 MG/L

NOTE: SAMPLES CONTAINING HAZARDOUS AND TOXIC SUBSTANCES WILL BE RETURNED TO POINT OF ORIGIN FOR DISPOSAL. IF THIS IS NOT POSSIBLE AND MOBILE ANALYTICAL LABORATORIES HAS TO DISPOSE OF THE SAMPLE IN ACCORDANCE WITH EPA REGULATIONS, THEN ADDITIONAL CHARGES WILL BE BILLED TO COVER COST OF DISPOSAL OF THIS SAMPLE.

MOBILE ANALYTICAL LABORATORIES
& SOLAR ENERGY TESTING
P.O. BOX 6771
ODESSA, TEXAS 79767-6771
PHONE 337-4744

COMPANY: READING & BATES PETROLEUM CO.
2412 GRANDVIEW - SUITE 201
ODESSA, TEXAS 79761

DATE: 03-04-86
RECEIVED DATE: 02-28-86

This well produces from the Ogalala at approximately 110'.

ATTENTION OF: MR. DAVID MAGOUIRK

WATER ANALYSIS: DICKINSON CATTLE CO. 2-33 - #3 SEC 33-14S-38E
SW #1 DCC, LAB NO. 343

DISSOLVED SOLIDS

CATIONS	MEQ/L	IONIC MG/L
SODIUM, Na	3.95	91
CALCIUM, Ca	3.00	60
MAGNESIUM, Mg	1.60	20
ANIONS:		
CHLORIDE, Cl	1.90	67
SULFATE, SO4	3.13	150
BICARBONATE, HCO3	3.52	215
TOTAL DISSOLVED SOLIDS		603

OTHER PROPERTIES

pH	7.95	P-ALKALINITY AS CaCO3	0 MG/L
IRON	0 MG/L	M-ALKALINITY AS CaCO3	176 MG/L
H2S	0 MG/L	SPECIFIC GRAVITY	1.000
CO2	4 MG/L	CONDUCTIVITY	445 MICROMHOS/CM
		CALCIUM HARDNESS	150 MG/L
		MAGNESIUM HARDNESS	80 MG/L
		TOTAL HARDNESS	230 MG/L

NOTE: SAMPLES CONTAINING HAZARDOUS AND TOXIC SUBSTANCES WILL BE RETURNED TO POINT OF ORIGIN FOR DISPOSAL. IF THIS IS NOT POSSIBLE AND MOBILE ANALYTICAL LABORATORIES HAS TO DISPOSE OF THE SAMPLE IN ACCORDANCE WITH EPA REGULATIONS, THEN ADDITIONAL CHARGES WILL BE BILLED TO COVER COST OF DISPOSAL OF THIS SAMPLE.

MOBILE ANALYTICAL LABORATORIES
& SOLAR ENERGY TESTING
P.O. BOX 6771
ODESSA, TEXAS 79767-6771
PHONE 337-4744

COMPANY: READING & BATES PETROLEUM CO.
2412 GRANDVIEW - SUITE 201
ODESSA, TEXAS 79761

DATE: 03-04-86
RECEIVED DATE: 02-28-86

This well produces from the Ogalala at approximately 110'.

ATTENTION OF: MR. DAVID MAGOUIRK

WATER ANALYSIS: DICKINSON CATTLE CO. 2-33 - #4 WINDMILL 1/2 S. DCC #1
SEC 4-155 NW/NW, LAB NO. 344

DISSOLVED SOLIDS

CATIONS	MEQ/L	IONIC MG/L
SODIUM, Na	4.05	93
CALCIUM, Ca	3.20	64
MAGNESIUM, Mg	1.64	20
ANIONS:		
CHLORIDE, Cl	1.90	67
SULFATE, SO4	3.23	155
BICARBONATE, HCO3	3.76	229
TOTAL DISSOLVED SOLIDS		628

OTHER PROPERTIES

pH	7.5	P-ALKALINITY AS CaCO3	0 MG/L
IRON	0 MG/L	M-ALKALINITY AS CaCO3	188 MG/L
H2S	0 MG/L	SPECIFIC GRAVITY	1.000
CO2	4 MG/L	CONDUCTIVITY	440 MICROMHOS/CM
		CALCIUM HARDNESS	160 MG/L
		MAGNESIUM HARDNESS	82 MG/L
		TOTAL HARDNESS	242 MG/L

NOTE: SAMPLES CONTAINING HAZARDOUS AND TOXIC SUBSTANCES WILL BE RETURNED TO POINT OF ORIGIN FOR DISPOSAL. IF THIS IS NOT POSSIBLE AND MOBILE ANALYTICAL LABORATORIES HAS TO DISPOSE OF THE SAMPLE IN ACCORDANCE WITH EPA REGULATIONS, THEN ADDITIONAL CHARGES WILL BE BILLED TO COVER COST OF DISPOSAL OF THIS SAMPLE.

MOBILE ANALYTICAL LABORATORIES
& SOLAR ENERGY TESTING
P.O. BOX 6771
ODESSA, TEXAS 79767-6771
PHONE 337-4744

COMPANY: READING & BATES PETROLEUM CO. DATE: 03-06-86
2412 GRANDVIEW - SUITE 201 RECEIVED DATE: 03-05-86
ODESSA, TEXAS 79761

ATTENTION OF: MR. DON KIPGEN

WATER ANALYSIS: DICKINSON CATTLE CO. 33-1 - EAST IRRIGATION WELL
NE/NW/NE, LAB NO. 359

DISSOLVED SOLIDS

CATIONS	MEQ/L	IONIC MG/L
SODIUM, Na	3.92	90
CALCIUM, Ca	1.96	39
MAGNESIUM, Mg	1.28	16
ANIONS:		
CHLORIDE, Cl	2.00	71
SULFATE, SO4	2.60	125
BICARBONATE, HCO3	2.56	156
TOTAL DISSOLVED SOLIDS		497

OTHER PROPERTIES

pH	7.45	P-ALKALINITY AS CaCO3	0 MG/L
IRON	0 MG/L	M-ALKALINITY AS CaCO3	128 MG/L
H2S	0 MG/L	SPECIFIC GRAVITY	1.000
CO2	7 MG/L	CONDUCTIVITY	480 MICROMHOS/CM
		CALCIUM HARDNESS	98 MG/L
		MAGNESIUM HARDNESS	64 MG/L
		TOTAL HARDNESS	162 MG/L

NOTE: SAMPLES CONTAINING HAZARDOUS AND TOXIC SUBSTANCES WILL BE RETURNED TO POINT OF ORIGIN FOR DISPOSAL. IF THIS IS NOT POSSIBLE AND MOBILE ANALYTICAL LABORATORIES HAS TO DISPOSE OF THE SAMPLE IN ACCORDANCE WITH EPA REGULATIONS, THEN ADDITIONAL CHARGES WILL BE BILLED TO COVER COST OF DISPOSAL OF THIS SAMPLE.

RB

READING & BATES PETROLEUM CO.

2410 N. Grandview, Suite 201
Odessa, Texas 79761
915 362-6302

March 7, 1986

Dickinson Cattle Co.
P. O. Box 3408
Amarillo, Texas 79106

Attn: Dr. Walter Dickinson

Dear Dr. Dickinson:

Reading & Bates Petroleum Co. is planning on making their Dickinson Cattle Co. "33" No. 2 (presently plugged and abandoned well) a salt water disposal well into the San Andres and Glorieta formations at depths 5500 to 6400'. The volume of salt water to be disposed of will be from 1000 to 2000 barrels per day.

Casing is presently set at 4900' and cemented back to the surface. Also, there is surface casing in this well to a depth of 506' which was also cemented back to the surface as the accompanying schematic of the well indicates.

Our plan is to keep all wellhead connections and lines 18" below ground level and go back west from this well until we are outside the west fence line of the cultivated field. Our water transfer line from the Dickinson 33 No. 1 we plan to lay as follows:

> Directly south from the tank battery at the No. 1 Dickinson along the east right-of-way of our lease road to the section or fence line and following the fence line west approximately 1800'. From that point north outside the west fence line of the cultivated field approximately 660' then east approximately 270' to our wellhead. All these lines will be buried as deep as possible in the rocky soil (a foot to foot and half).

In the event that we need pressure to dispose of this water we will need to set a plunger pump and salt water holding tank at that point 270' west of the well and outside the cultivated field approximately 100'. All this information is drawn out on the enclosed map of the lease.

If you agree with this please sign as a waiver in the provided space below.

Yours very truly,

READING & BATES PETROLEUM CO.

Donald J. Kipgen
Area Superintendent

Approved as stated above:

DICKINSON CATTLE CO.

_____
Dr. Walter Dickinson

cc: Gordon Dickinson
P. O. Box 247
Roswell, New Mexico 88201

Dickie Wheeler
Rt. 1, Box 505
Lovington, New Mexico 88260

INSTRUCTIONS TO DELIVERING EMPLOYEE

☒ Show to whom and date delivered ☐ Show to whom, date, and address where delivered ☐ Deliver ONLY to addressee

(Additional charges required for these services)

RECEIPT

Received the numbered article described below.

REGISTERED NO.

CERTIFIED NO. 307305

INSURED NO.

DATE DELIVERED MAR 13 1986

* SIGNATURE OR NAME OF ADDRESSEE (Must always be filled in)

1 Susanne Day

2 SIGNATURE OF ADDRESSEE'S AGENT, IF ANY

SHOW WHERE DELIVERED (only if requested)

USPS MAR 13 1986 AMARILLO, TX

No. 307305

RECEIPT FOR CERTIFIED MAIL—30¢

SENT TO
Dickinson Cattle Co.

STREET AND NO.
P. O. Box 3408

P. O., STATE, AND ZIP CODE
Amarillo, Texas 79106

POSTMARK OR DATE

EXTRA SERVICES FOR ADDITIONAL FEES

Return Receipt

Shows to whom and date delivered	Shows to whom, date, and where delivered	Deliver to Addressee Only
☑ 10¢ fee	☐ 35¢ fee	☐ 50¢ fee

POD Form 3800 Mar. 1966

NO INSURANCE COVERAGE PROVIDED— NOT FOR INTERNATIONAL MAIL

(See other side)

STATE OF NEW MEXICO

ENERGY AND MINERALS DEPARTMENT

OIL CONSERVATION DIVISION
HOBBS DISTRICT OFFICE

TONEY ANAYA
GOVERNOR

March 20, 1986

POST OFFICE BOX 1980
HOBBS, NEW MEXICO 88240
(505) 393-6161

OIL CONSERVATION DIVISION
P. O. BOX 2088
SANTA FE, NEW MEXICO 87501

RE: Proposed:
MC_____
DHC_____
NSL_____
NSP_____
SWD X
WFX_____
PMX_____

Gentlemen:

I have examined the application for the:

Reading & Bates Pet. Co.	Dickinson Cattle Co. 33 #2-M		33-14-38
Operator	Lease & Well No.	Unit	S-T-R

and my recommendations are as follows:

OK -- Jerry SExton

Yours very truly,

Jerry Sexton
Supervisor, District 1

/mc