ENERGY 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.

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:

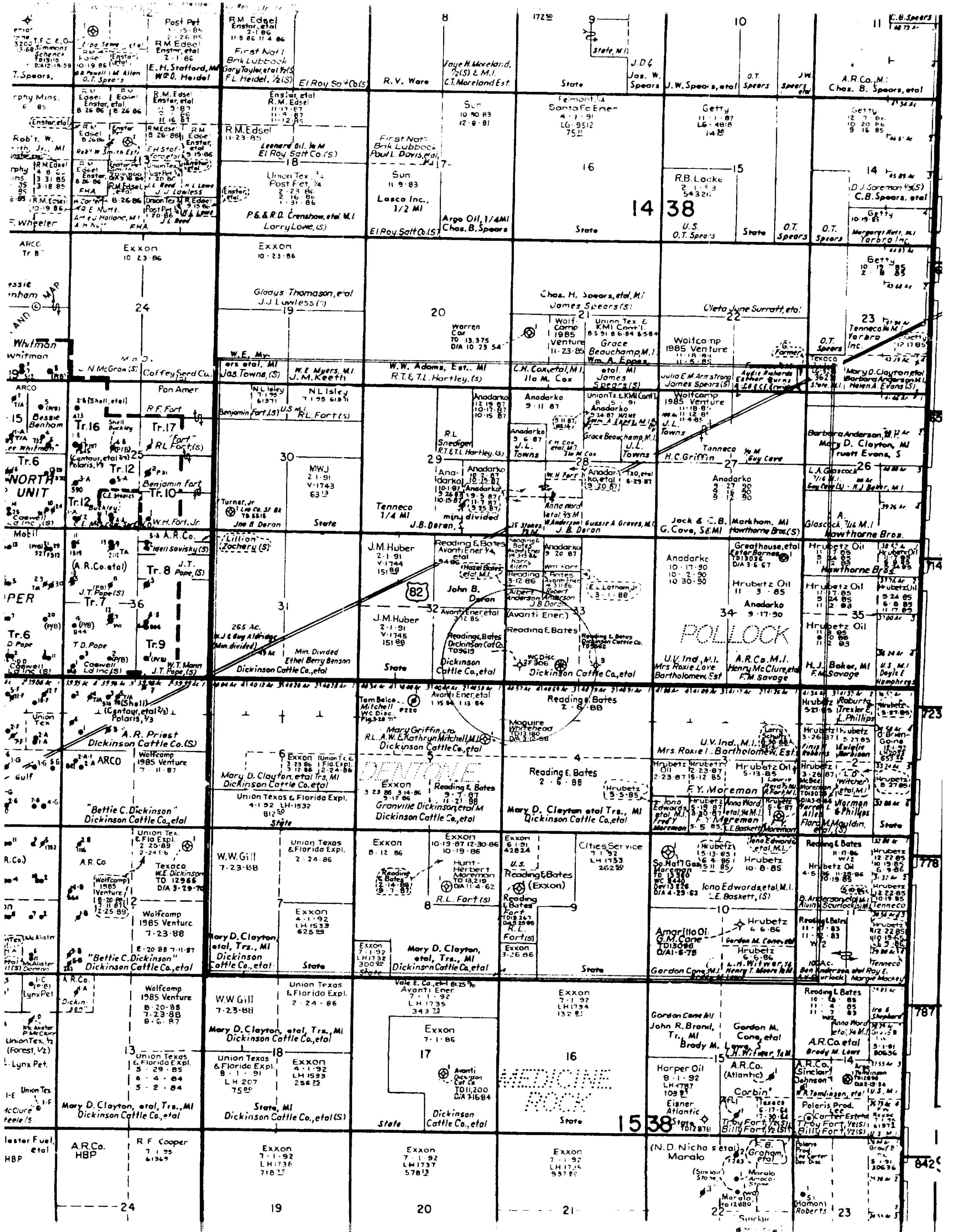
After complete study of the area, both on the surface and sub-surface, I find no indication of faults in the San Andres or overlying zones to indicate any possibility of injected water from this well coming as high as the base of the Ogalala.

XIII. Proof of Notice.

See attached.

XIV: Certification:

See attached.

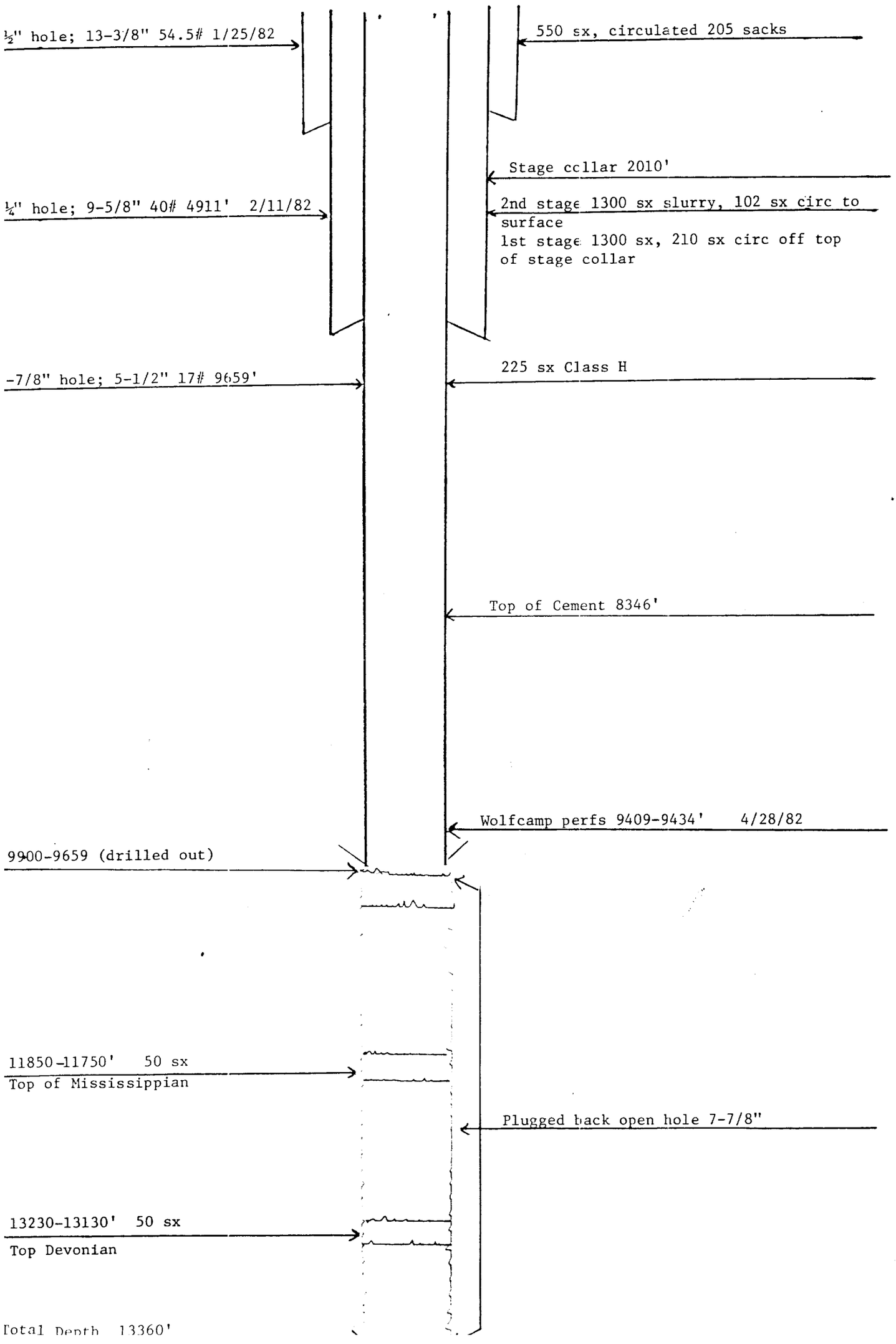


14 38
15 38
DENTON E
POLLOCK
MEDICINE ROCK
NORTH UNIT
Exxon
Dickinson Cattle Co., etal
Mary D. Clayton, etal, Trs., MI
Reading & Bates
Hrubetz Oil
Anadarko
Wolfcamp 1985 Venture
Union Texas & Florida Expl.
W.W. Gill
A.R.Co.
Tenneco
F.Y. Moreman
J.M. Huber
Cities Service
Harper Oil
R.B. Locke
R.M. Edsel
Getty
Sun
Chas. B. Speers, etal
El Roy Salt Co.(S)
R.V. Ware
Gladys Thomason, etal
J.J. Lawless
Chos. H. Speers, etal, M.I.
James Speers (S)
Cleta June Surratt, etal
W.W. Adams, Est., MI
C.H. Cox, etal, M.I.
Mary Griffin, etal
A.R. Priest
Bettie C. Dickinson
Hawthorne Bros.
Markham, MI
U.V. Ind., M.I.
Mrs Roxie L. Bartholomew, Est
Iona Edwards, etal, M.I.
Amarillo Oil
G.M. Cone
Gordon M. Cone, etal
John R. Brand, Tr., MI
Brody M. Lowe
Polaris Prod.

ADING & 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

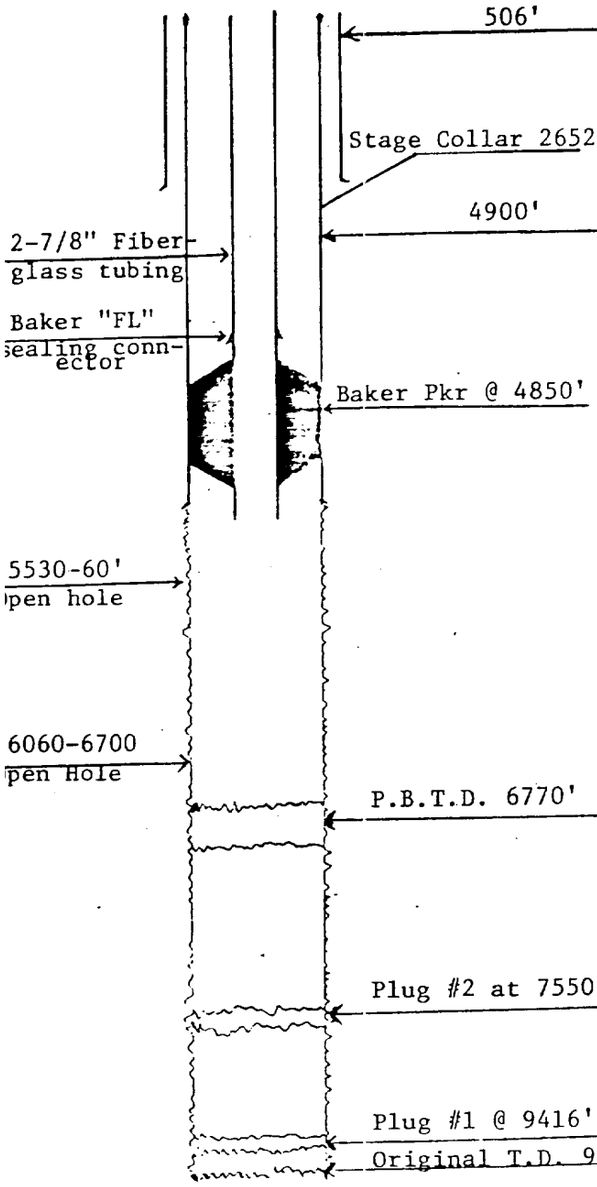


READING & BATES PETROLEUM ... Dickinson Cattle Co. 33"

OPERATOR LEASE

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

Schematic



Tabular Data

506' Surface Casing

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

TOC Surface feet determined by circulation

Hole size 17-1/4"

4900' 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)

P.B.T.D. 6770' - 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.

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

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

91 381-2595

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 a prior water analysis*		→	[illegible]		
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

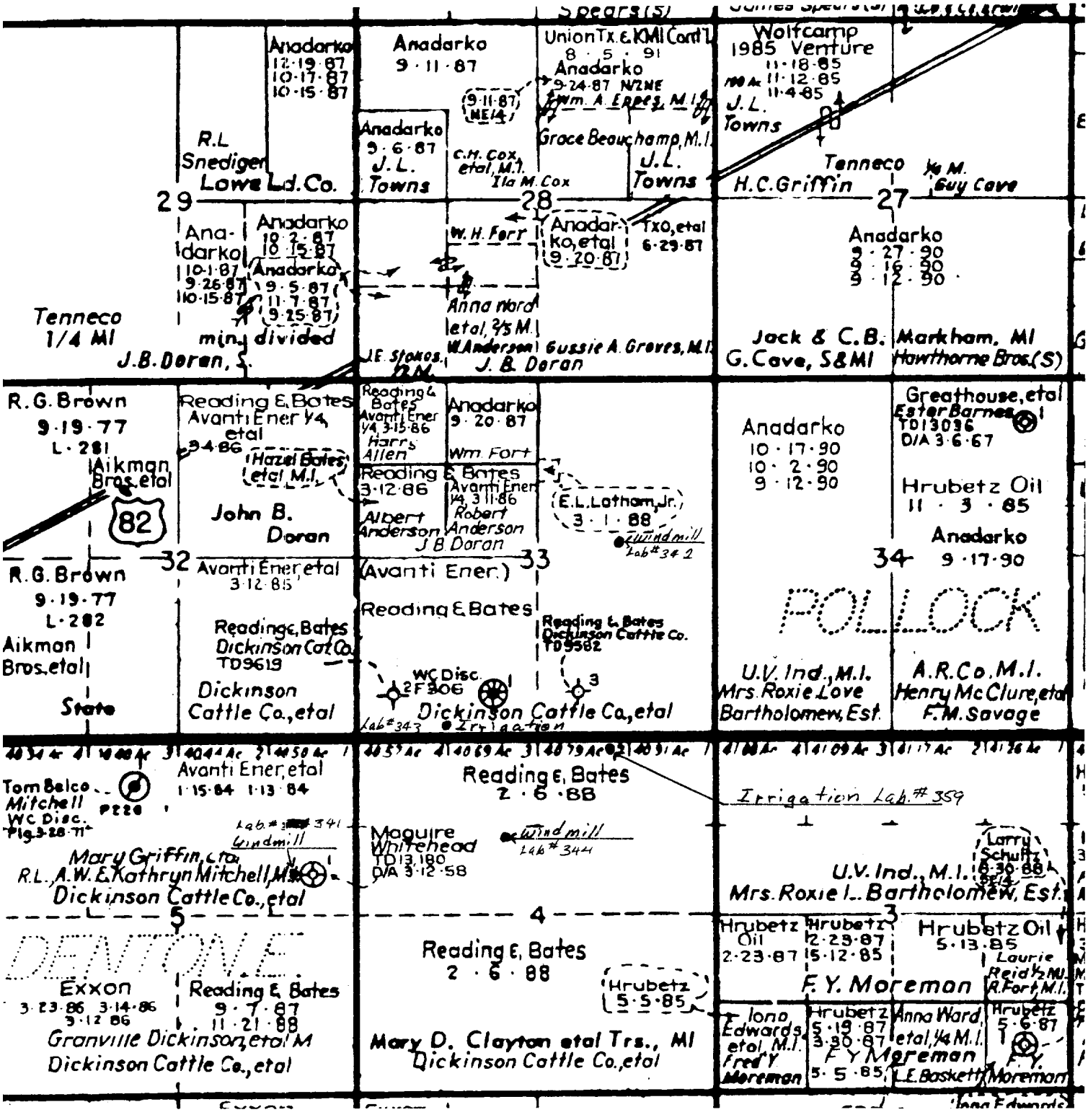
Remarks:

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. DATE: 03-04-86
2412 GRANDVIEW - SUITE 201 RECEIVED DATE: 02-28-86
ODESSA, TEXAS 79761

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. DATE: 03-04-86
2412 GRANDVIEW - SUITE 201 RECEIVED DATE: 02-28-86
ODESSA, TEXAS 79761

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

CATIONS	DISSOLVED SOLIDS 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. DATE: 03-04-86
2412 GRANDVIEW - SUITE 201 RECEIVED DATE: 02-28-86
ODESSA, TEXAS 79761

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 MEQ/L	IONIC MG/L
CATIONS		
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
[illegible]	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 MEQ/L	IONIC MG/L
CATIONS		
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
CO3	0 MG/L	M-ALKALINITY AS CaCO3	188 MG/L
HCO3	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 MEQ/L	IONIC MG/L
CATIONS		
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~~ 3804
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.

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

1 Susanne Day

2 SIGNATURE OF ADDRESSEE'S AGENT, IF ANY

DATE DELIVERED MAR 13 1986

SHOW WHERE DELIVERED *(only if requested)*

USPS MAR 13 1986 AMARILLO, TEXAS

No. 307305

RECEIPT FOR CERTIFIED MAIL—30¢

SENT TO Dickinson Cattle Co.

POSTMARK OR DATE

STREET AND NO. P. O. Box 3408

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

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

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OIL CONSERVATION DIVISION

P. O. BOX 2088
SANTA FE, NEW MEXICO 87501

Form C-103
Revised 10-1-78

5a. Indicate Type of Lease: State [ ] Fee [X]

5. State Oil & Gas Lease No.

SUNDRY NOTICES AND REPORTS ON WELLS

(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT —" (FORM C-101) FOR SUCH PROPOSALS.)

7. Unit Agreement Name

1. OIL WELL [X] GAS WELL [ ] OTHER-

2. Name of Operator
READING & BATES PETRCLEUM COMPANY

8. Farm or Lease Name
Dickinson Cattle Co. 33

3. Address of Operator
810 NORTH DIXIE BLVD. ROOM 202 ODESSA, TEXAS 79761

9. Well No.
2

4. Location of Well
UNIT LETTER M, 660 FEET FROM THE South LINE AND 560 FEET FROM THE West LINE, SECTION 33 TOWNSHIP 14-S RANGE 38-E NMPM.

10. Field and Pool, or Wildcat
East Denton (Wolfcamp)

15. Elevation (Show whether DF, RT, GR, etc.)
3776' GR

12. County
LEA

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

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
PERFORM REMEDIAL WORK [ ]	PLUG AND ABANDON [X]	REMEDIAL WORK [ ]	ALTERING CASING [ ]
TEMPORARILY ABANDON [ ]		COMMENCE DRILLING OPNS. [ ]	PLUG AND ABANDONMENT [ ]
PULL OR ALTER CASING [ ]	CHANGE PLANS [ ]	CASING TEST AND CEMENT JOB [ ]	
OTHER [ ]		OTHER [ ]	

17. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work) SEE RULE 1103.

Set plug #1 @ 9416' 50 sx (Wolfcamp)

Set plug #2 @ 7550' 50 sx (Tubb)

Set plug #3 @ 6000' 50 sx (Glorietta)

Set plug #4 @ 4900' 50 sx (Across the shoe of the intermediate casing.)

Set plug #5 @ 2200' 50 sx (Top Salt)

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

SIGNED Dor. J. Kipgen TITLE Production Superintentent DATE 7-8-82

APPROVED BY Orig. Signed by Les Clements TITLE Oil & Gas Insp. DATE JUL 19 1982

CONDITIONS OF APPROVAL, IF ANY:

Revised 10-1-78

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

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OIL CONSERVATION DIVISION

P. O. BOX 2088
SANTA FE, NEW MEXICO 87501

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

5a. Indicate Type of Lease: State [ ] Fee [X]
5. State Oil & Gas Lease No.:

1a. TYPE OF WELL: OIL WELL [ ] GAS WELL [ ] DRY [X] OTHER
b. TYPE OF COMPLETION: NEW WELL [ ] WORK OVER [ ] DEEPEN [ ] PLUG BACK [ ] DIFF. RESVR. [ ] OTHER P&A

7. Unit Agreement Name:
8. Farm or Lease Name: Dickinson Cattle Co. 33
9. Well No.: 2
10. Field and Pool, or Wildcat: East Denton (Wolfcamp)

2. Name of Operator: READING & BATES PETROLEUM COMPANY
3. Address of Operator: 810 NORTH DIXIE BLVD. Rm. 202 ODESSA, TEXAS 79761
4. Location of Well: UNIT LETTER M LOCATED 660 FEET FROM THE South LINE AND 560 FEET FROM THE West LINE OF SEC. 33 TWP. 14-S RGE. 38-E NMPM
12. County: LEA

15. Date Spudded	16. Date T.D. Reached	17. Date Compl. (Ready to Prod.)	18. Elevations (DF, RKB, RT, GR, etc.)	19. Elev. Cashinghead
5-14-82	6-27-82	-	3776' GR	3774.5'

20. Total Depth	21. Plug Back T.D.	22. If Multiple Compl., How Many	23. Intervals Drilled By	Rotary Tools	Cable Tools
9619'	-	-	→	0-9619'	

24. Producing Interval(s), of this completion — Top, Bottom, Name:
25. Was Directional Survey Made: Yes - 1½ degree
26. Type Electric and Other Logs Run: DIL --SEL
27. Was Well Cored: No

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

CASING SIZE	WEIGHT LB./FT.	DEPTH SET	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
13 3/8	54.50#	503'	17½	450 sx Class "C" Neat	
8 5/8	32.00#	4900'	12¼	2200 sx B.J. Lite, Class "H" 35-65-6 Poz	
				500 sx Class H neat	

29. LINER RECORD

SIZE	TOP	BOTTOM	SACKS CEMENT	SCREEN

30. TUBING RECORD

SIZE	DEPTH SET	PACKER SET

31. Perforation Record (Interval, size and number)

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

DEPTH INTERVAL	AMOUNT AND KIND MATERIAL USED

33. PRODUCTION

Date First Production	Production Method (Flowing, gas lift, pumping — Size and type pump)	Well Status (Prod. or Shut-in)
NONE		

Date of Test	Hours Tested	Choke Size	Prod'n. For Test Period →	Oil — Bbl.	Gas — MCF	Water — Bbl.	Gas—Oil Ratio

Flow Tubing Press.	Casing Pressure	Calculated 24-Hour Rate →	Oil — Bbl.	Gas — MCF	Water — Bbl.	Oil Gravity — API (Corr.)

34. Disposition of Gas (Sold, used for fuel, vented, etc.)
Test Witnessed By

35. List of Attachments

36. I hereby certify that the information shown on both sides of this form is true and complete to the best of my knowledge and belief.

SIGNED Don J. Kipgen TITLE Production Superintendent DATE 7-13-82

INSTRUCTIONS

This form is to be filed with the appropriate District Office of the Division not later than 20 days after the completion of any newly-drilled or deepened well. It shall be accompanied by one copy of all electrical and radio-activity logs run on the well and a summary of all special tests conducted, including drill stem tests. All depths reported shall be measured depths. In the case of directionally drilled wells, true vertical depths shall also be reported. For multiple completions, Items 30 through 34 shall be reported for each zone. The form is to be filed in quintuplicate except on state land, where six copies are required. See Rule 1105.

INDICATE FORMATION TOPS IN CONFORMANCE WITH GEOGRAPHICAL SECTION OF STATE

Southeastern New Mexico				Northwestern New Mexico			
T. Anhy		T. Canyon		T. Ojo Alamo		T. Penn. "B"	
T. Salt	2200'	T. Strawn		T. Kirtland-Fruitland		T. Penn. "C"	
B. Salt		T. Atoka		T. Pictured Cliffs		T. Penn. "D"	
T. Yates		T. Miss		T. Cliff House		T. Leadville	
T. 7 Rivers		T. Devonian		T. Menefee		T. Madison	
T. Queen		T. Silurian		T. Point Lookout		T. Elbert	
T. Grayburg		T. Montoya		T. Mancos		T. McCracken	
T. San Andres		T. Simpson		T. Gallup		T. Ignacio Qtzte	
T. Glorieta	6000'	T. McKee		Base Greenhorn		T. Granite	
T. Paddock		T. Ellenburger		T. Dakota		T.	
T. Blinebry		T. Gr. Wash		T. Morrison		T.	
T. Tubb	7550'	T. Granite		T. Todilto		T.	
T. Drinkard		T. Delaware Sand		T. Entrada		T.	
T. Abo		T. Bone Springs		T. Wingate		T.	
T. Wolfcamp	9416'	T.		T. Chinle		T.	
T. Penn.		T.		T. Permian		T.	
T Cisco (Bough C)		T.		T. Penn. "A"		T.	

OIL OR GAS SANDS OR ZONES

No. 1, from ..... to ..... No. 4, from ..... to .....

No. 2, from ..... to ..... No. 5, from ..... to .....

No. 3, from ..... to ..... No. 6, from ..... to .....

IMPORTANT WATER SANDS

Include data on rate of water inflow and elevation to which water rose in hole.

No. 1, from ..... to ..... feet. .....

No. 2, from ..... to ..... feet. .....

No. 3, from ..... to ..... feet. .....

No. 4, from ..... to ..... feet. .....

FORMATION RECORD (Attach additional sheets if necessary)

From	To	Thickness in Feet	Formation	From	To	Thickness in Feet	Formation
9416'	7550'	1866'	Dolomite, Shale & Anyhdrite				
7550'	6000'	1550'	Dolomite, Limestone				
6000'	4900'	1100'	Anyhdrite, Dolo, Anhy.				
4900'	2200'	2700'	Salt, Anhy, & Dolo.				

RECEIVED

JUL 16 1982

O. C. D.

HOBBS OFFICE

VERNA Corporation

P. O. BOX 1000 LEVELLAND, TEXAS 79336
806 / 894-9686

DATE: JULY 7, 1982

OPERATOR: READING & BATES PETROLEUM
1100 MID CONTINENT BLDG.
409 SOUTH BOSTON
TULSA, OKLAHOMA 74103

LEASE NAME & WELL NUMBER: DICKINSON CATTLE CO. #1078

LEGAL DESCRIPTION:

COUNTY & STATE: LEA NEW MEXICO

MEASURED DEPTH	COURSE LENGTH	ANGLE OF INCLINATION	DISPLACEMENT PER 100 FEET	COURSE DISPLACEMENT	ACCUMULATIVE DISPLACEMENT
504	5.04	.25	.44	2.22	2.22
1282	7.78	.50	.88	6.85	9.07
1776	4.94	.50	.88	4.35	13.42
2273	4.97	.50	.88	4.37	17.79
2767	4.94	.75	1.31	6.47	24.26
3355	5.88	.50	.88	5.17	29.43
3852	4.97	1.00	1.75	8.70	38.13
4177	3.25	1.00	1.75	5.69	43.82
4668	4.91	.50	.88	4.32	48.14
5361	6.93	.75	1.31	9.08	57.22
5922	5.61	1.00	1.75	9.82	67.04

I declare under penalties prescribed in Article 6036c, R.S.C., that I am authorized to make this certification, that I have personal knowledge of the inclination data and facts placed on both sides of this form and that such data and facts are true, correct, and complete to the best of my knowledge.

SIGNATURE OF AUTHORIZED REPRESENTATIVE

Subscribed and sworn to before me this
8th day of July, 1982

LaVaron Humphreys Hockley
Notary Public County

(Commission expires 8-10-85)

MEASURED DEPTH	COURSE LENGTH	ANGLE OF INCLINATION	DISPLACEMENT PER 100 FEET	COURSE DISPLACEMENT	ACCUMULATIVE DISPLACEMENT
6698	7.76	1.00	1.75	13.58	80.62
7198	5.00	1.00	1.75	8.75	89.37
7698	5.00	1.50	2.63	13.15	102.52
8206	5.08	1.50	2.63	13.36	115.88
8743	5.37	1.50	2.63	14.12	130.00
9619	8.76	1.00	1.75	15.33	145.33

DST REPORT SHEET

I. GENERAL DATA

Well Name Dickinson Coulle Co. #2-33 Date 6-24-82

DST Number #1 Formation Wolfcamp

Test Interval 9425' to 9469' Packer Setting Depth(s) 9419 & 9425

Water Cushion — Ft. (— bbl) Test Tools 44' Ft.

II. SURFACE FLOW DATA

Tools on Bottom 6:30 A.M./P.M.

Initial Flow 15 Min.

Description 1/4 orv.; 6:45, TSTM; 6:50, Fair Increase to Strong; Close w/5#

Initial SI 30 Min.

2nd Initial Flow 60 Min.

Description 1/4 orv, 7:30, TSTM; 7:33-1#, 7:35-2#, 7:38-3#, 7:46-4#, 7:50-3#, 7:54-2#, 7:58-1#, 8:01-1#, 8:03-TSTM, Close @ 8:31 dead

2nd Initial SI — Min.

Final Flow — Min.

Description —

Final SI 120 Min.

III. RECOVERY DATA

Depth to Fluid 200 Ft. Total Recovery 9200 Ft. (130 bbl)

Breakdown of Recoveries:

6200 Ft. (88 bbl) of Formation Water

3000 Ft. (42 bbl) of Very Slightly O.1 Cut

Ft. (bbl) of Formation Water

Ft. (bbl) of

Sample Chamber Recovery:

.05 cfg. @ 350 psi.

350 cc of Oil

2000 cc of Water

cc of

IV. PRESSURE RECORDER DATA

Top Bomb

9404'

IHP 4310 psi

IFP 319 psi to 2131 psi

ISIP 4158 psi

2nd IFP — psi to — psi

2nd ISIP — psi

FFP 2128 psi to 4158 psi

FSIP 4171 psi

FHP 4336 psi

BHT 142 °F

Bottom Bomb (Same as Top)

9469'

IHP psi

IFP psi to psi

ISIP psi

2nd IFP psi to psi

2nd ISIP psi

FFP psi to psi

FSIP psi

FHP psi

VI. MISCELLANEOUS DATA

	Resistivity	Chlorides	Nitrates
Mud	.68 @ 72°F	ppm	ppm
Mud Filtrate	@	ppm	ppm
Top Sample	.18 @ 74°F	ppm	ppm
Middle Sample	.1 @ 74°F	ppm	ppm
Sample Chamber	.1 @ 74°F	ppm	ppm

Remarks:

EQUIPMENT DATA

See Attached Sheet.

DST REPORT SHEET

I. GENERAL DATA

Well Name Dickinson Cattle Co. Date 6/24/87

DST Number 2 Formation Wolf camp

Test Interval 9470 to 9490 Packer Setting Depth(s) 9464 TO 9490

Water Cushion — Ft. (— bbl) Test Tools ~~9464 - 9465~~ Ft.

II. SURFACE FLOW DATA

Tools on Bottom ~~5:45~~ 6:35 A.M./P.M.

Initial Flow 15 Min.

Description Blow to bottom of bucket & increasing to 8# on ½ choke @ 9 shut in

Initial SI 30 Min.

2nd Initial Flow ~~—~~ Min.

Description

2nd Initial SI Min.

Final Flow 60 Min.

Description Blow to bottom of bucket & increasing to 3.9# on ½ choke @ 9 shut in

Final SI 120 Min.

III. RECOVERY DATA

Depth to Fluid 2790 Ft. Total Recovery 6829 Ft. (— bbl)

Breakdown of Recoveries: ~~6829~~ Ft. (— bbl) of

— Ft. (— bbl) of

— Ft. (— bbl) of

— Ft. (— bbl) of

Sample Chamber Recovery: 0 cfg. @ 9900 psi.

2400 cc of water

— cc of

— cc of

IV. PRESSURE RECORDER DATA

Top Bomb		Bottom Bomb	
IHP	~~4327~~ psi	IHP	psi
IFP	97 psi to 1041 psi	IFP	psi to psi
ISIP	4175 psi	ISIP	psi
2nd IFP	~~1045~~ psi to ~~3118~~ psi	2nd IFP	psi to psi
2nd ISIP	psi	2nd ISIP	psi
FFP	1045 psi to 3118 psi	FFP	psi to psi
FSIP	4251 psi	FSIP	psi
FHP	4334 psi	FHP	psi
BHT	144°		

VI. MISCELLANEOUS DATA

	Resistivity	Chlorides	Nitrates
Mud	1.20 @ 80	14000 ppm	— ppm
Mud Filtrate	~~0.18~~ @	— ppm	— ppm
Top Sample	0.18 @ 80	— ppm	15000 ppm
Middle Sample	0.12 @ 80	— ppm	32000 ppm
Sample Chamber	90 @ 80	— ppm	31000 ppm

Remarks:

V. EQUIPMENT DATA

See Attached Sheet.