

CHECKLIST for ADMINISTRATIVE INJECTION APPLICATIONS

Operator: FORTSON OIL CO. Well: BIG EDDY No. 117

Contact: JODY DIXON Title: PETRO. TECH Phone: 915.201.4347

DATE IN 12.22.93 RELEASE DATE 1.5.94 DATE OUT 3.3.94

Proposed Injection Application is for: ☐ WATERFLOOD ☐ Expansion ☐ Initial

Original Order: R- ☐ Secondary Recovery ☐ Pressure Maintenance

☐ SENSITIVE AREAS

☒ SALT WATER DISPOSAL

☐ WIPP ☐ Capitan Reef ☐ Commercial Operation

Data is complete for proposed well(s)? YES Additional Data _____

AREA of REVIEW WELLS

6 Total # of AOR

0 # of Plugged Wells

YES Tabulation Complete

☐ Schematics of P & A's

YES Cement Tops Adequate N/A AOR Repair Required

INJECTION INFORMATION

Injection Formation(s) DELAWARE (BRUSHY CANYON)

Source of Water AREA DELAWARE PRODUCERS Compatible YES

PROOF OF NOTICE

☒ Copy of Legal Notice

☒ Information Printed Correctly

☒ Correct Operators

☐ Copies of Certified Mail Receipts

☐ Objection Received

☐ Set to Hearing _____ Date

NOTES: PINNACLE #2 (AOR) TUC = 2500' - O.K. (BS)

APPLICATION QUALIFIES FOR ADMINISTRATIVE APPROVAL YES

COMMUNICATION WITH CONTACT PERSON:

1st Contact:	☐ Telephoned	☐ Letter	_____	Date	_____	Nature of Discussion	_____
2nd Contact:	☐ Telephoned	☐ Letter	_____	Date	_____	Nature of Discussion	_____
3rd Contact:	☐ Telephoned	☐ Letter	_____	Date	_____	Nature of Discussion	_____

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

OIL CONSERVATION DIVISION

POST OFFICE BOX 2098
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87501FORM C-108
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: Fortson Oil Company
Address: 301 Commerce St., Suite 3301
Contact party: Robert E. Stauffer Phone: (817) 335-5641
- 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 SWD-551
- 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 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: M. W. Braden Title: Production Manager
Signature: M. W. Braden Date: 11/08/94
- * 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.

INJECTION WELL DATA SHEET

OPERATOR		LEASE		
FORTSON OIL COMPANY		BIG FENDY UNIT		
WELL NO.	FOOTAGE LOCATION	SLOTION	TOWNSHIP	RANGE
117	330' FSL & 330' FWL	26	22S	28E

SchematicTabular Data

See enclosed wellbore sketch

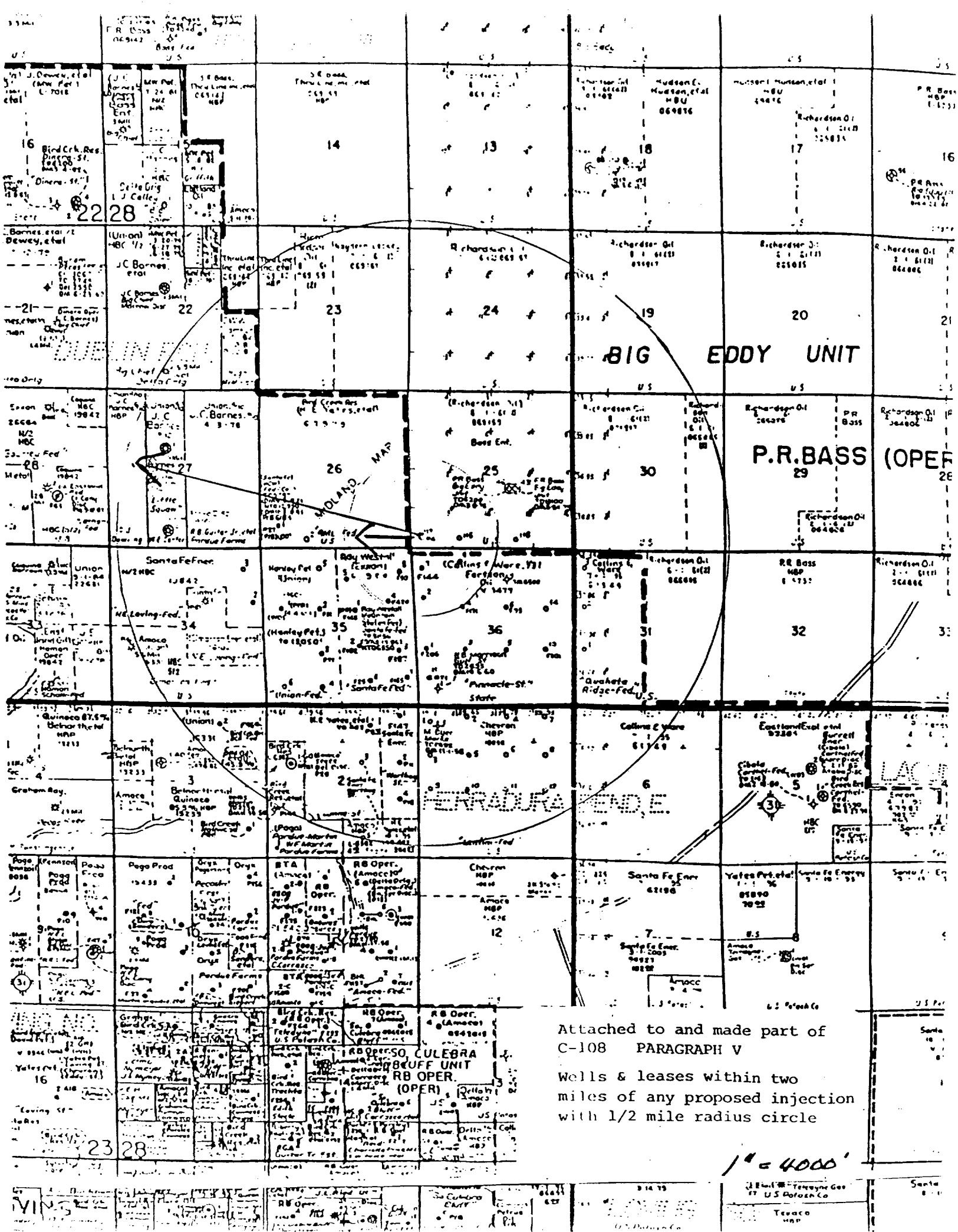
Surface CasingSize 11-3/4 " Cemented with 370 sx/Circ ¹⁵⁰ ex.TOC Surface feet determined by circulated 180 sxsHole size 15"Intermediate CasingSize 8-5/8 " Cemented with Circ ex.TOC Surface feet determined by circulated 196 sxsHole size 11"Long stringSize 5-1/2 " Cemented with 1st stg. cmt circTOC DV tool @ 4497' ^{TC 2nd st. 2450} feet determined by Hole size 7-7/8"Total depth 6484'Injection Interval2950-58 2968-72(perforated 2950-58 2968-72 feet to feet
(perforated 2950-58 2968-72 feet to feet, indicate which)

Tubing size 2-7/8" lined with Salta Line set in a
Sur-Loc (material) 2800 feet
 (brand and model) packer at

(or describe any other casing-tubing seal).

Other DataDelaware (Brushy Canyon)

- Name of the injection formation Delaware (Brushy Canyon)
- Name of field or Pool (if applicable) East Herradura Bend
- Is this a new well drilled for injection? ☐ Yes ☒ No
 If no, for what purpose was the well originally drilled? Producer, was not commercial
- 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) CIBP 6130
CIBP @ 5950, 4325, 3050, Perf Intervals 6146-60 (60 holes) 6012-93 (432 holes)
4281-89 (33 holes) 2968-72 (17 holes) 2950-58 (33 holes)
- Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area. See Paragraph VI



WELLS/LEASES WITHIN TWO MILES
THAT PENETRATE ZONE OR DEEPERT22S, R28E, SECTION 26:

BIRD CREEK #1 RML FEDERAL BRUSHY CANYON

T22S, R28E, SECTION 27:J. C. BARNES #1 LITTLE SQUAW COM MORROW
J. C. BARNES #32 LITTLE SQUAW ATOKAT22S, R28E, SECTION 34:SANTA FE ENERGY #1 NE LOVING - FEDERAL ATOKA
SANTA FE ENERGY #2 NE LOVING - FEDERAL DELAWARE 3700'T22S, R28E, SECTION 35:HANLEY PETROLEUM #1 UNION FEDERAL ATOKA PB BRUSHY CANYON
HANLEY PETROLEUM #2 UNION FEDERAL BRUSHY CANYON
HANLEY PETROLEUM #3 UNION FEDERAL BRUSHY CANYON
HANLEY PETROLEUM #4 UNION FEDERAL BRUSHY CANYON
HANLEY PETROLEUM #5 UNION FEDERAL BRUSHY CANYON

RAY WESTFALL #1-8 SANTA FE FEDERAL BRUSHY CANYON

T22S, R28E, SECTION 36:

FORTSON OIL COMPANY #1-11 PINNACLE STATE BRUSHY CANYON

T22S, R29E, SECTION 31:

COLLINS & WARE #1 QUAHADA RIDGE FEDERAL BRUSHY CANYON

T23S, R28E, SECTION 1:

CHEVRON USA #1,2,4,5 LENTINI FEDERAL BRUSHY CANYON

T23S, R28E, SECTION 2:H. E. YATES #1 LOVING STATE BRUSHY CANYON
SANTA FE ENERGY #1-4 WARTHOG STATE BRUSHY CANYON
BIRD CREEK RESOURCES #1 GO AMOCO STATE WDW DELAWARE
CHERRY CANYONT23S, R28E, SECTION 3:

BIRD CREEK RESOURCES 31, 32 BCR FEDERAL BRUSHY CANYON

PARAGRAPH V

OFFSET OPERATORS

Bass Enterprises - Big Eddy Unit #117 Well, located in the SW/4 SW/4 of Section 25, T-22-S, R-28-E, N.M.P.M., Eddy County, New Mexico.

Tract 1 - all of Section 25, T-22-S, R-28-E:

Bass Enterprises Production Co.
201 Main Street, Suite 2900
Fort worth, TX 76102

Tract 2 - Section 36, T-22-S, R-28-E:

Fortson Oil Company
301 Commerce Street, Suite 3301
Fort Worth, TX 76102

Tract 3 - E/2 of Section 35, T-22-S, R-28-E:

Ray Westall
P.O. Box 4
Loco Hills, NM 88255

Tract 4 - W/2 of Section 35, T-22-S, R-28-E:

Hanley Petroleum, Inc.
415 W. Wall, Suite 1500
Midland, TX 797901

Tract 5 - SW/4 SW/4 of Section 26, T-22-S, R-28-E:

Bird Creek Resources
P.O. Box 21470
Tulsa, OK 74121

Tract 6 - N/2, SE/4, N/2 SW/4, SE/4 SW/4 of Section 26, T-22-S, R-28-E:

Fortson Oil Company
301 Commerce Street, Suite 3301
Fort Worth, TX 76102

Heyco - Harvey E. Yates Company
P.O. Box 1933
Roswell, NM 88201

Tract 7 - W/2 of Section 23, T-22-S, R-28-E:

Bass Enterprises Production Co.
201 Main Street, Suite 2900
Fort Worth, TX 76102

Tract 8 - E/2 of Section 23, T-22-S, R-28-E:

Ownership undetermined, currently being researched.

Tract 9 - Section 24, T-22-S, R-28-E:

Bass Enterprises Production Co.
201 Main Street, Suite 2900
Fort Worth, TX 76102

Tract 10 - Section 19, T-22-S, R-29-E:

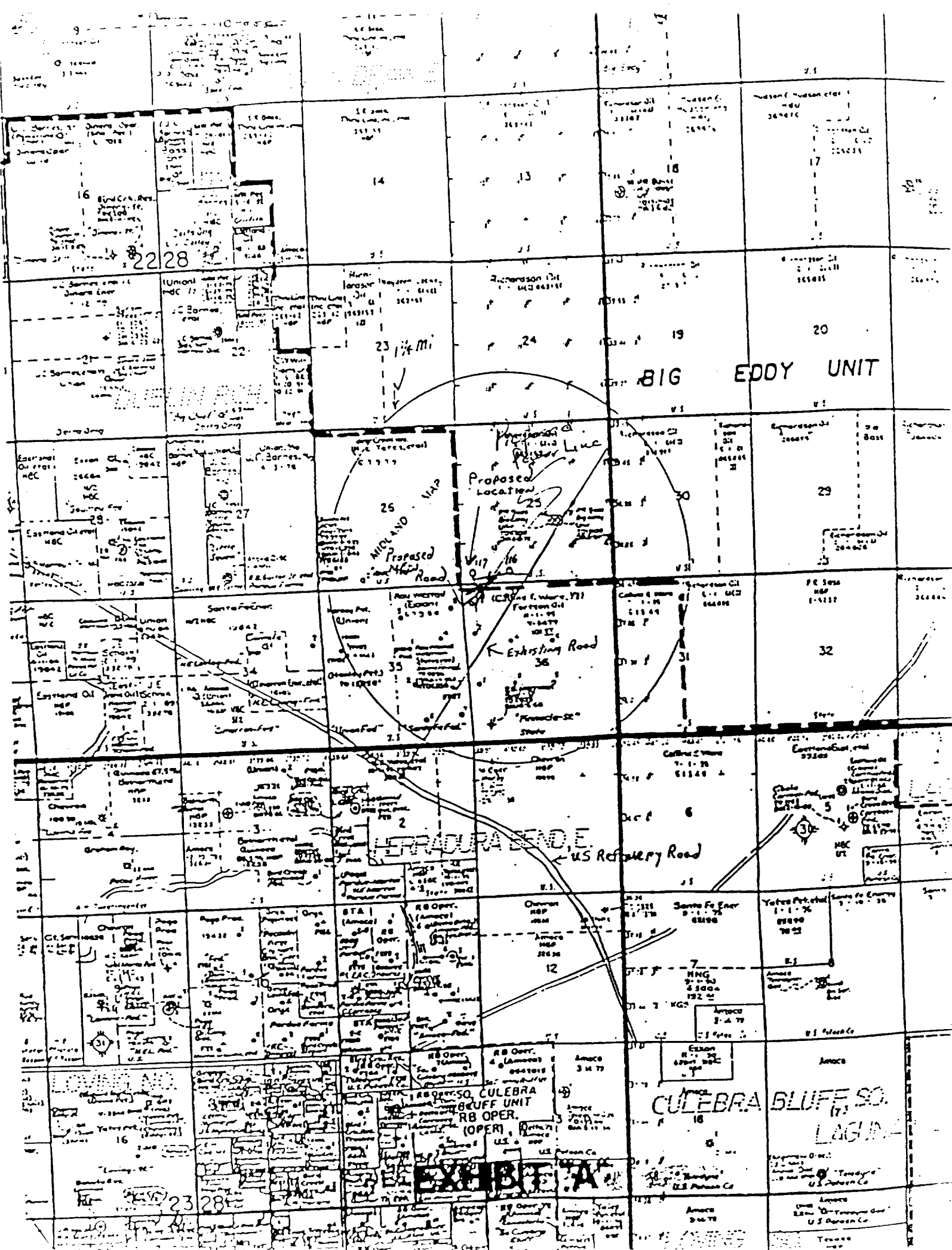
Bass Enterprises Production Co.
201 Main Street, Suite 2900
Fort Worth, TX 76102

Tract 11 - Section 11, T-22-S, R-29-E:

Bass Enterprises Production Co.
201 Main Street, Suite 2900
Fort Worth, TX 76102

Tract 12 - W/2 of Section 31, T-22-S, R-29-E:

Collins & Ware
303 W. Wall, Suite 2200
Midland, TX 79701



FORTSON OIL COMPANY

BIG EDDY UNIT #117

Section 25-T22S, R28E, Unit M

Eddy County, New Mexico

(330' FSL & 330' FWL)

Tubulated data of all producing wells on public record within area of review.

LEASE	Well NO	(ALL IN T22S, Location R28E)	Well Type	Date Drilled	Depth	Completion Interval
FORTSON OIL COMPANY						
Pinnacle State	2	1650' NL & 330' WL of Sec. 36E,	Oil	8/9/92 spud 9/18/92 comp.	6400	6184-6210 5970-6000
Pinnacle State	#4	1980 FN & 1650' WL Sec. 36F	Oil	9/3/92 Spud 12/10/92 Comp	6390	6000-6016
Pinacle State	#7	660' FN & 330' WL Sec. 36D	Oil	9/30/92 Spud 11/9/92 Comp	6440	6000-6032 6238-6258
Pinnacle State	#8	467' FN & 1650' FWL Sec. 36C	Oil	10/13/92 Spud 11/28/92 Comp	6430	6020-6066 6256-6270
RAY WESTALL						
Santa Fe Fed.	#4	1730' FN & 910' EL of Sec 35H	Oil	7/9/92 Spud 8/5/92 Comp	6370	5967-6009 6162-6233
Santa Fe Fed.	#8	760' FN & 460' EL of Sec 35A	Oil	10/21/92 Spud 11/16/92 Comp	6350	5996-6060 6170-6250

PARAGRAPH VI

1516 2 day LIMITED 11/1
SW 25-22S-28E

GL 3125

State Well

CMTD w/ 370 SKS
CIRC w/ 180 SKS

11 3/4 @ 448

5 1/2" 14 + 15.5 PPF
@ 6484

FC @ 6387

DV @ 449.7

2 85/8 CSG @ 2670 (CIRC. CAT TO SURF)

CIRC CMT on 1st Stage
TC 2nd Stage ± 2450'

CIBP 3050

Sq. Perfs 2950-58 (33 holes)
2968-72 (17 holes)
- Drill out ACIDIZED w/ 1000 gal

CIBP 4325

CIBP 5950

Drill out Perfs 4281-89 (33 holes)
Drill out ACIDIZED w/ 500 gal

CIBP 6130

* Perfs 6012-93 (432 holes)
Inject here FRAC'D w/ 12,000 #Perfs 6146-60 (60 holes)
Prod'd Dry - 300' water/hr.

PROPOSED CONVERSION OF BIG EDDY UNIT NO. 117

(See Attached C-108 for Questions)

- VII.
 - 1. Average Daily Injection Rate - (Initial) 1300 BWPD
Maximum Daily Injection Rate - (Initial) 1800 BWPD
 - 2. System is closed.
 - 3. Proposed Average Daily Injection Pressure - (Initial) 650 psi
Proposed Maximum Daily Injection Pressure - (Initial) 1200 psi
 - 4. Will be reinjecting produced water.
 - 5. Well is for disposal purposes.
- VIII. The proposed injection zone in the #117 Big Eddy Unit is the Bell Canyon member of the Delaware Mountain Group. More specifically the perforations are 2950-58'; 2968-72'. The injection zone is a fine-grained sandstone. In this wellbore the Bell Canyon occurs between 2812' and 3612'. There are no known fresh water aquifers below the top of the Rustler at 454'. Fresh water may be present in the zone from 0' - 454'. Additional perfs (4380-90', 4560-70', 4700-10', 4760-70', 4281-89'), a part of the Cherry Canyon member of the Delaware Mountain Group, will be added to this wellbore.
- IX. See Wellbore Sketch.
- X. Well logs already on file with NMOCD office in Artesia.
- XI. Not available.
- XII. Disposal well.

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
Budget Bureau No. 1004-0135
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

1. Type of Well ☐ Oil Well ☐ Gas Well ☒ Other Disposal	5. Lease Designation and Serial No. LC-069159-A
2. Name of Operator Fortson Oil Company	6. If Indian, Allottee or Tribe Name
3. Address and Telephone No. 301 Commerce St., Suite 3301, Ft. Worth, TX 76102 (817) 335-5641	7. If Unit or CA, Agreement Designation Big Eddy Unit
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) 330' FSL & 330' FWL, Sec. 25, T22S, R28E, Unit M	8. Well Name and No. Big Eddy Unit #117
	9. API Well No. 30-015-027261
	10. Field and Pool, or Exploratory Area E. Herradura Bend, D.
	11. County or Parish, State Eddy Co., NM.

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

TYPE OF SUBMISSION	TYPE OF ACTION
☒ Notice of Intent	☐ Abandonment
☐ Subsequent Report	☐ Recompletion
☐ Final Abandonment Notice	☐ Plugging Back
	☐ Casing Repair
	☐ Altering Casing
	☒ Other Add perforations
	☐ 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.)*

Plan to drill out CIBP @ 3050' & 4325'. Perf additional zones from 4380-90', 4560-70', 4700-10' & 4760-70'. Acidize & frac these zones as well as perfs 4281-89' that are currently below the CIBP. Return well to injection status.

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

Signed Robert E. Stauffer Title Robert E. Stauffer Date 10/25/94

(This space for Federal or State office use)

Approved by _____ Title _____ Date _____
Conditions of approval, if any:

Application for Authorization for
Salt Water Disposal Well

1. Fortson Oil Company, 301 Commerce St., Suite 3301, Fort Worth, Texas 76102 Attn: Jane Foster, (817) 335-5641.

Will apply for permission to disposal of salt water through additional zones in the subject well.

2. Well Name and Number: Big Eddy Unit No. 117
Location: 330' FSL & 330' FWL Sec. 25
T22S, R28E
Eddy County, NM.
3. Formation Name: East Herradura Bend (Delaware)
Injection Interval: 2950-72', 2968-72', 4281-89', 4380-90', 4560-70',
4700-10', 4760-70'.
Maximum Inj. Rate: 1800 bbl/day/well
Maximum Pressure: ~~1200~~ psi 954 PSIG
4. Interested parties, who can show that they are adversely affected by this application, must file objections or requests for hearing with the Energy and Minerals Department, Oil and Gas Conservation Division, P. O. Box 2088, Santa Fe, New Mexico 87504, within 15 days after this publication.

Attached to and made part of C-108
XIII.

Affidavit of Publication

Nº 16297

State of New Mexico,
County of Eddy, ss.

Amy McKay,
being first duly sworn, on oath says:

That she is Business Manager
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:

October 29, 1994
_____, 19____
_____, 19____
_____, 19____
_____, 19____
_____, 19____

That the cost of publication is \$ 27.45,
and that payment thereof has been made and will
be assessed as court costs.

Amy McKay

Subscribed and sworn to before me this

31st day of October, 1994

Donna Crump

My commission expires 8/01/98
Notary Public

October 29, 1994

Application for Authorization for Salt Water Disposal Well

1. Fortson Oil Company, 301,
Commerce St., Suite 3301,
Fort Worth, Texas 76102 Attn:
Jane Foster, (817) 335-5641.

Will apply for permission to
disposal of salt water through
additional zones in the subject
well.

2. Well Name and Number:

Location:
Big Eddy Unit No. 117
330' FSL & 330' FWL Sec. 25
T22S, R28E
Eddy County, NM.

3. Formation Name:

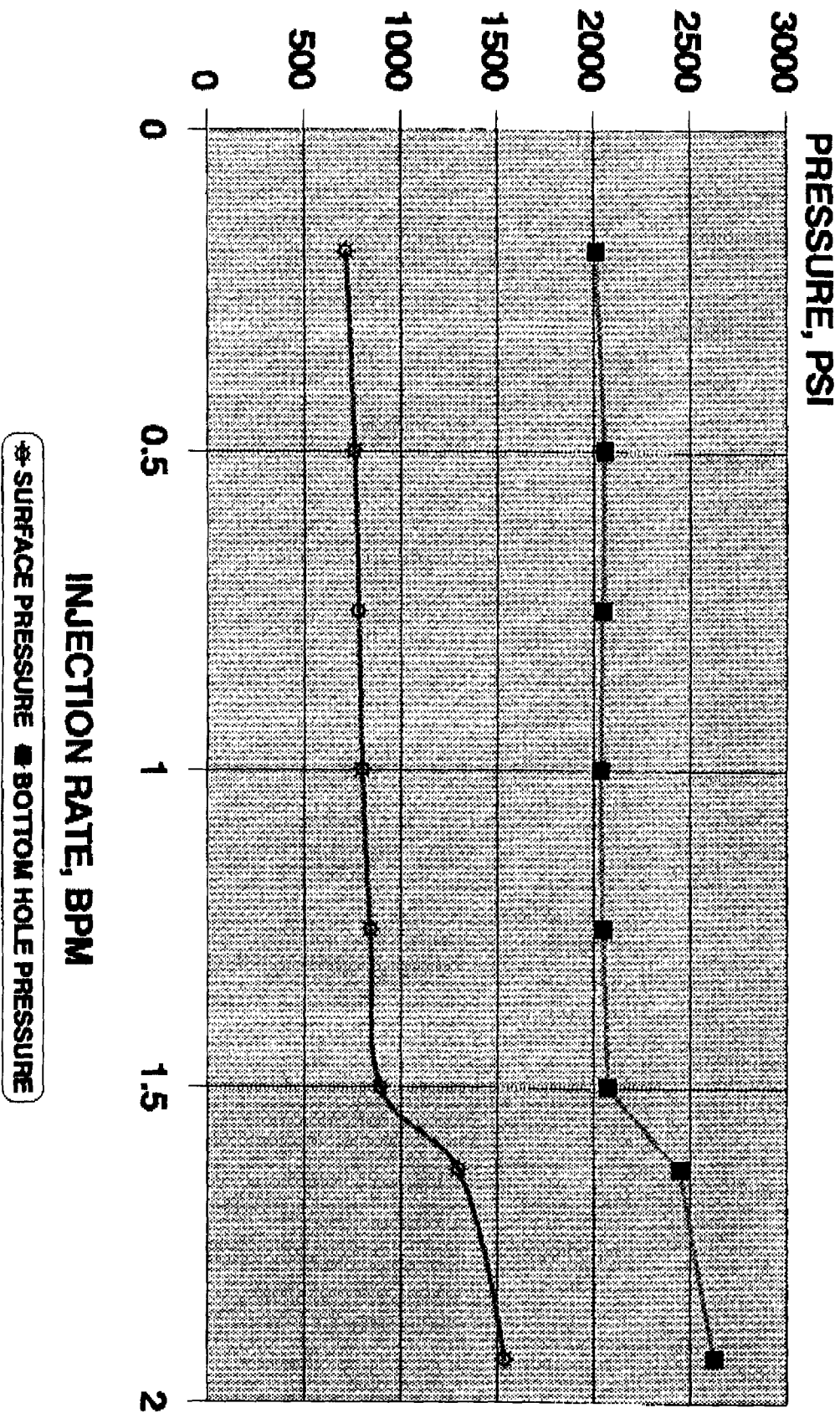
Injection Interval:
East Herradura Bend (Delaware)

2950-72', 2968-72', 4281-89',
4380-90', 4560-70', 4700-10',
4760-70'.

Maximum Inj. Rate:
Maximum Pressure:
5000 bbl/day/ well
1000 psi

4. Interested parties, who can
show that they are adversely
affected by this application,
must file objections or re-
quests for hearing with the
Energy and Minerals Department,
Oil and Gas Conservation
Division, P.O. Box 2088,
Santa Fe, New Mexico 87504,
within 15 days after this publication.

BIG EDDY NO. 117 STEP RATE TEST



Summary of SDF File : 0513/147_EXECUTION.SDF

TIME	IDTY PPG	WHP PSI	TOFL BPM	CUVO BBL	MESSAGES
14:53:40	0	1164	1.658	110.1	
14:54:00	0	1173	1.649	110.6	
14:54:20	0	1196	1.644	111.2	
14:54:40	0	1215	1.64	111.7	
14:55:00	0	1242	1.631	112.3	
14:55:20	0	1274	1.636	112.8	
14:55:40	0	1279	1.631	113.4	
14:56:00	0	1302	1.623	113.9	
14:56:20	0	1311	1.623	114.4	
14:56:40	0	1315	1.618	115	
14:57:00	0	1338	1.623	115.5	
14:57:20	0	1338	1.618	116.1	RATE 2 BPM
14:57:40	0	1416	1.797	116.6	
14:58:00	0	1421	1.937	117.3	
14:58:20	0	1434	1.937	117.9	
14:58:40	0	1425	1.937	118.6	
14:59:00	0	1430	1.932	119.2	
14:59:20	0	1453	1.932	119.8	
14:59:40	0	1448	1.932	120.5	
15:00:00	0	1457	1.932	121.1	
15:00:20	0	1462	1.937	121.8	
15:00:40	0	1467	1.932	122.4	
15:01:00	0	1453	1.928	123.1	
15:01:20	0	1471	1.932	123.7	
15:01:40	0	1476	1.932	124.4	
15:02:00	0	1489	1.928	125	
15:02:20	0	1480	1.932	125.6	
15:02:40	0	1476	1.932	126.3	
15:03:00	0	1494	1.932	126.9	
15:03:20	0	1489	1.924	127.6	
15:03:40	0	1499	1.928	128.2	
15:04:00	0	1499	1.928	128.9	
15:04:20	0	1508	1.928	129.5	
15:04:40	0	1499	1.924	130.1	
15:05:00	0	1517	1.928	130.8	
15:05:20	0	1499	1.928	131.4	
15:05:40	0	1531	1.928	132.1	
15:06:00	0	1512	1.928	132.7	
15:06:20	0	1535	1.924	133.4	
15:06:40	0	1526	1.928	134	
15:07:00	0	1540	1.919	134.6	
15:07:20	0	1558	1.928	135.3	
15:07:40	0	1535	1.924	135.9	
15:08:00	0	1325	0.554	136.4	SHUTDOWN
15:08:20	0	1320	0	136.4	
15:08:40	0	1325	0	136.4	

Summary of SDF File : 0513/147_EXECUTION.SDF

TIME	IDTY PPG	WHP PSI	TOFL BPM	CUVO BBL	MESSAGES
14:38:20	0	880.4	1.479	86.17	
14:38:40	0	880.4	1.474	86.66	
14:39:00	0	898.7	1.474	87.16	
14:39:20	0	885	1.474	87.65	
14:39:40	0	885	1.474	88.14	
14:40:00	0	885	1.474	88.63	
14:40:20	0	885	1.479	89.12	
14:40:40	0	894.2	1.479	89.62	
14:41:00	0	889.6	1.479	90.11	
14:41:20	0	889.6	1.474	90.6	
14:41:40	0	894.2	1.479	91.09	
14:42:00	0	880.4	1.474	91.58	
14:42:20	0	894.2	1.479	92.08	
14:42:40	0	885	1.479	92.57	
14:43:00	0	885	1.474	93.06	
14:43:20	0	885	1.479	93.55	
14:43:40	0	889.6	1.479	94.05	
14:44:00	0	898.7	1.474	94.54	
14:44:20	0	885	1.474	95.03	
14:44:40	0	898.7	1.479	95.52	
14:45:00	0	885	1.483	96.02	
14:45:20	0	903.3	1.474	96.51	
14:45:40	0	898.7	1.479	97	
14:46:00	0	880.4	1.474	97.49	
14:46:20	0	898.7	1.479	97.99	
14:46:40	0	894.2	1.474	98.48	
14:47:00	0	894.2	1.479	98.97	
14:47:20	0	939.9	1.562	99.47	RATE 2 BPM
14:47:40	0	926.2	1.688	100	
14:48:00	0	930.8	1.688	100.6	
14:48:20	0	935.4	1.688	101.2	
14:48:40	0	949.1	1.688	101.7	
14:49:00	0	939.9	1.688	102.3	
14:49:20	0	944.5	1.679	102.8	
14:49:40	0	949.1	1.688	103.4	
14:50:00	0	949.1	1.684	104	
14:50:20	0	958.3	1.684	104.5	
14:50:40	0	981.2	1.679	105.1	
14:51:00	0	990.3	1.679	105.6	
14:51:20	0	1013	1.675	106.2	
14:51:40	0	1036	1.675	106.8	
14:52:00	0	1050	1.666	107.3	
14:52:20	0	1068	1.666	107.9	
14:52:40	0	1091	1.662	108.4	
14:53:00	0	1109	1.658	109	
14:53:20	0	1132	1.653	109.5	

Summary of SDF File : 05137147_EXECUTION.SDF

TIME	IDTY PPG	WHP PSI	TOFL BPM	CUVO BBL	MESSAGES
14:23:00	0	802.6	1.008	68.31	
14:23:20	0	820.9	1.012	68.64	
14:23:40	0	816.3	1.016	68.98	
14:24:00	0	825.5	1.016	69.32	
14:24:20	0	807.2	1.021	69.66	
14:24:40	0	811.7	1.025	70	
14:25:00	0	830.1	1.029	70.34	
14:25:20	0	807.2	1.029	70.69	
14:25:40	0	802.6	1.021	71.03	
14:26:00	0	811.7	1.029	71.37	
14:26:20	0	816.3	1.016	71.71	
14:26:40	0	820.9	1.016	72.05	
14:27:00	0	834.6	1.156	72.41	RATE 1.25
14:27:20	0	825.5	1.169	72.8	
14:27:40	0	830.1	1.178	73.2	
14:28:00	0	830.1	1.182	73.59	
14:28:20	0	839.2	1.178	73.98	
14:28:40	0	834.6	1.173	74.37	
14:29:00	0	839.2	1.178	74.77	
14:29:20	0	834.6	1.178	75.16	
14:29:40	0	834.6	1.178	75.55	
14:30:00	0	834.6	1.173	75.94	
14:30:20	0	834.6	1.178	76.33	
14:30:40	0	830.1	1.178	76.73	
14:31:00	0	834.6	1.178	77.12	
14:31:20	0	834.6	1.178	77.51	
14:31:40	0	834.6	1.178	77.9	
14:32:00	0	825.5	1.182	78.3	
14:32:20	0	830.1	1.182	78.69	
14:32:40	0	834.6	1.182	79.09	
14:33:00	0	830.1	1.182	79.48	
14:33:20	0	843.8	1.182	79.87	
14:33:40	0	820.9	1.186	80.27	
14:34:00	0	839.2	1.178	80.66	RATE 1.5
14:34:20	0	834.6	1.186	81.06	
14:34:40	0	834.6	1.182	81.45	
14:35:00	0	834.6	1.186	81.85	
14:35:20	0	839.2	1.186	82.24	
14:35:40	0	830.1	1.186	82.64	
14:36:00	0	848.4	1.182	83.03	
14:36:20	0	830.1	1.186	83.43	
14:36:40	0	839.2	1.191	83.82	
14:37:00	0	898.7	1.261	84.23	
14:37:20	0	898.7	1.47	84.7	
14:37:40	0	885	1.479	85.19	
14:38:00	0	894.2	1.474	85.68	

Summary of SDF File : 05137147 EXECUTION.SDF

TIME	IDTY PPG	WHP PSI	TOFL BPM	CUVO BBL	MESSAGES
14:07:40	0	770.5	0.619	55.56	
14:08:00	0	784.3	0.654	55.77	
14:08:20	0	775.1	0.698	56	
14:08:40	0	779.7	0.685	56.23	
14:09:00	0	775.1	0.602	56.44	
14:09:20	0	775.1	0.628	56.64	
14:09:40	0	793.4	0.694	56.87	
14:10:00	0	775.1	0.728	57.1	
14:10:20	0	770.5	0.733	57.35	
14:10:40	0	784.3	0.72	57.59	
14:11:00	0	775.1	0.724	57.83	
14:11:20	0	775.1	0.728	58.07	
14:11:40	0	779.7	0.737	58.32	
14:12:00	0	779.7	0.75	58.57	
14:12:20	0	775.1	0.724	58.81	
14:12:40	0	779.7	0.733	59.06	
14:13:00	0	770.5	0.737	59.3	
14:13:20	0	784.3	0.746	59.55	
14:13:40	0	779.7	0.742	59.8	
14:14:00	0	766	0.724	60.04	
14:14:20	0	775.1	0.733	60.28	
14:14:40	0	779.7	0.737	60.53	
14:15:00	0	788.9	0.746	60.77	
14:15:20	0	779.7	0.737	61.02	
14:15:40	0	779.7	0.733	61.27	
14:16:00	0	784.3	0.742	61.51	
14:16:20	0	788.9	0.746	61.76	
14:16:40	0	848.4	0.798	62.01	
14:17:00	0	802.6	0.995	62.33	
14:17:20	0	834.6	0.986	62.65	
14:17:40	0	839.2	0.995	62.98	
14:18:00	0	834.6	0.99	63.32	
14:18:20	0	839.2	0.99	63.65	
14:18:40	0	839.2	0.99	63.98	
14:19:00	0	830.1	0.999	64.31	
14:19:20	0	807.2	0.999	64.64	
14:19:40	0	802.6	0.99	64.97	
14:20:00	0	807.2	0.995	65.3	
14:20:20	0	820.9	1.003	65.64	
14:20:40	0	834.6	0.999	65.97	
14:21:00	0	820.9	0.999	66.3	
14:21:20	0	811.7	0.995	66.63	
14:21:40	0	807.2	1.003	66.97	
14:22:00	0	825.5	1.003	67.3	
14:22:20	0	802.6	1.003	67.64	
14:22:40	0	816.3	1.003	67.97	

Summary of SDF File : 0513714/_EXECUTION.SDF

TIME	IDTY PPG	WHP PSI	TOFL BPM	CUVO BBL	MESSAGES
13:52:20	0	683.5	0.196	49.14	
13:52:40	0	701.9	0.201	49.21	
13:53:00	0	701.9	0.196	49.27	
13:53:20	0	697.3	0.205	49.34	
13:53:40	0	697.3	0.201	49.41	
13:54:00	0	697.3	0.196	49.47	
13:54:20	0	711	0.214	49.54	
13:54:40	0	692.7	0.192	49.61	
13:55:00	0	692.7	0.201	49.68	
13:55:20	0	711	0.196	49.74	
13:55:40	0	697.3	0.201	49.81	
13:56:00	0	715.6	0.201	49.88	
13:56:20	0	733.9	0.266	49.95	INCREASE RATE .05
13:56:40	0	747.6	0.489	50.09	
13:57:00	0	756.8	0.493	50.25	
13:57:20	0	752.2	0.497	50.42	
13:57:40	0	747.6	0.489	50.58	
13:58:00	0	752.2	0.493	50.75	
13:58:20	0	766	0.484	50.91	
13:58:40	0	756.8	0.48	51.07	
13:59:00	0	756.8	0.48	51.23	
13:59:20	0	766	0.489	51.39	
13:59:40	0	752.2	0.484	51.55	
14:00:00	0	761.4	0.489	51.71	
14:00:20	0	756.8	0.48	51.88	
14:00:40	0	766	0.475	52.03	
14:01:00	0	752.2	0.475	52.19	
14:01:20	0	770.5	0.48	52.35	
14:01:40	0	756.8	0.48	52.51	
14:02:00	0	761.4	0.48	52.67	
14:02:20	0	756.8	0.475	52.83	
14:02:40	0	770.5	0.471	52.99	
14:03:00	0	770.5	0.471	53.15	
14:03:20	0	752.2	0.475	53.3	
14:03:40	0	770.5	0.48	53.46	
14:04:00	0	756.8	0.475	53.62	
14:04:20	0	766	0.48	53.78	
14:04:40	0	761.4	0.467	53.94	
14:05:00	0	761.4	0.467	54.1	
14:05:20	0	761.4	0.48	54.25	
14:05:40	0	761.4	0.48	54.41	
14:06:00	0	766	0.48	54.57	
14:06:20	0	761.4	0.48	54.73	
14:06:40	0	802.6	0.563	54.9	RATE .75
14:07:00	0	770.5	0.724	55.13	
14:07:20	0	775.1	0.624	55.35	

Summary of SDF File : 05137147_EXECUTION.SDF

WHPWellhead Pressure

IDTYInjected Density

Wellhead Pressure

Injected Density

CHANNELS DESCRIPTION :		Min.	Max.
TIME	Time	41940 S	54864 S
U1PR	Unit 1 Pressure	0 PSI	2954.602 PSI
U1FP	Unit 1 Pump 1 Flowrate	0 BPM	1.936748 BPM
U1TF	Unit 1 Total Flowrate	0 BPM	1.936748 BPM
U12F	Unit 1 + Unit 2 Total Flowrate	0 BPM	1.936748 BPM
TOFL	Total Flowrate	0 BPM	1.936748 BPM
WHP	Wellhead Pressure	0 PSI	2954.602 PSI
IDTY	Injected Density	0 PPG	0 PPG
CUVO	Cumulated Volume	0.0727 BBL	136.3676 BBL

INDEX DESCRIPTION :

TIME : Time from41940 to54864 S

Spacing :20 S

SENSORS DATA

TIME	IDTY PPG	WHP PSI	TOFL BPM	CUVO BBL	MESSAGES
13:45:00	0	363	0	48.54	START JOB
13:45:00	0	363	0	48.54	START PAUSE
13:45:00	0	363	0	48.54	END PAUSE
13:45:00	0	363	0	48.54	PRESSURE TEST LINE
13:45:00	0	363	0	48.54	RESET VOLUME
13:45:00	0	363	0	48.54	RESET VOLUME
13:45:00	0	363	0	48.54	RESET VOLUME
13:45:00	0	363	0	48.54	RESET VOLUME
13:45:00	0	363	0	48.54	RESET VOLUME
13:45:00	0	363	0	48.54	RESET VOLUME
13:45:00	0	363	0	48.54	SHUTDOWN
13:45:00	0	363	0	48.54	START PAUSE
13:45:00	0	363	0	48.54	END PAUSE
13:45:00	0	363	0	48.54	START PAUSE
13:45:00	0	363	0	48.54	END PAUSE
13:45:00	0	363	0	48.54	RESET VOLUME
13:45:00	0	363	0	48.54	START PAUSE
13:45:00	0	363	0	48.54	END PAUSE
13:45:20	0	326.4	0	48.54	START INJECTION
13:45:40	0	628.6	0.401	48.6	
13:46:00	0	679	0.523	48.78	
13:46:20	0	624	0.27	48.91	
13:46:40	0	642.3	0.209	48.97	
13:47:00	0	651.5	0.205	49.05	
13:52:00	0	683.5	0.218	49.07	

(15)

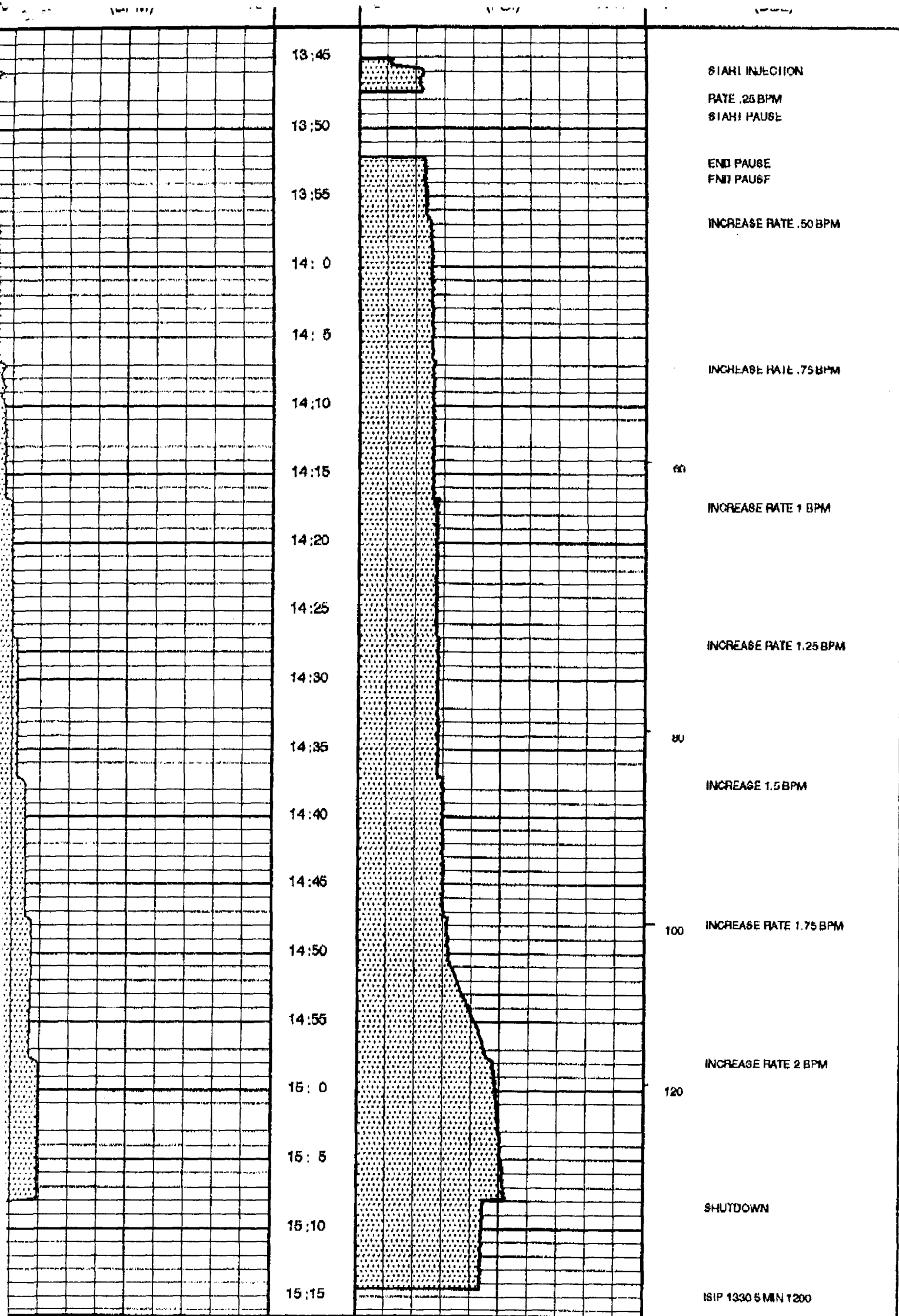
DOWELL SCHLUMBERGER INCORPORATED

4) - 18-74

WELL NAME AND NUMBER Big Eddy #117		LOCATION (LEGAL) Herradura Bend		DS LOCATION Antesin nm		TREATMENT NUMBER 0517-7147	
FORMATION Brushy Canyon		STATE New Mexico		ALLOWABLE PRESSURE T.B.G. 2000 CSG 0		PERFORATED INTERVALS	
COUNTY/PARISH Eddy		PRIMARY TREATING FLUID Produced water		Casing Size 5 1/2 WT 15.6 DEPTH		TOP TO BOTTOM NO. OF HOLES	
TYPE OF SERVICE ☐ MATRIX TREATMENT ☐ SAND CONTROL ☐ FRACTURING ☒ OTHER				TUBING SIZE 2 3/8 WT 4.7 DEPTH 2900		TO	
OPERATOR NAME Fortson Oil Co				PACKER TYPE Production PACKER DEPTH 2900		TO	
SERVICE INSTRUCTIONS Injection step test				TUBING VOLUME 11.2 ANNULAR VOL -		TO	
				OPEN HOLE - CASING VOL 1.3		TO	
				DISPLACEMENT 12.5		TO	
FOR CONVERSION PURPOSES 24 BBL'S EQUALS 1000 GALLONS				C.T.B.G. ☐ TUBING ☒ JOBS DONE DOWN		C.T.B.G. ☐ TUBING ☒ JOBS DONE DOWN	
ARRIVED ON LOCATION: 1130		LEFT LOCATION: 1530				C.T.B.G. ☐ TUBING ☒ JOBS DONE DOWN	

[illegible]

FLUID		NITROGEN		BPM AVERAGE INJECTION RATES		CARBON DIOXIDE		TOTAL W/PROP		PW		WATER/ACID		OIL		VOLUME FLUID INJECTED		NITROGEN		CARBON DIOXIDE	
1.25										88.9		BGLS				BGLS		CCF			
MAXIMUM		FINAL		TREATING PRESSURE SUMMARY		AVERAGE		IMMCO S.D.P		5 MIN S.I.P		TOTAL INJECTED		QUANTITY PROPANT PLACED		TOTAL ORDERED/DISIGNED					
1530		1530		1150		1330		1290						LBS							
PRODUCTION PRIOR TO THIS TREATMENT										☐ Test ☒ Stabilized		PAD VOLUME _____ GALS % PAD _____									
CUSTOMER REPRESENTATIVE						DS SERVICE SUPERVISOR						FRACTURE GRADIENT									
Wayne Pruitt						Larry M Green						PAGE 1 OF 1 P.									



Total Flowrate		Wellhead Pressure		Recorded Volume	
(BPM)	10	0	(PSI) 3000	-2	(BBL) -1
Injected Density		(Free)		(Free)	
(PPG)	1	-2	-1	-2	-1

Schlumberger

Dowell

EXECUTION

FORTSON OIL

Well : BIG EDDY 117

Field : HERRADURA BEND

EDDY

USA

Prepared for : WAYNE PRUIT

Service Point : ARTESIA

Business Phone : 505-748-1391

Proposal :

Prepared by : LARRY GREEN

Date : 4-16-94

Disclaimer Notice

The information presented in this report is based on state-of-the-art technique applied to the well data made available at time of design. It is presented in good faith, but no warranty is given and Dowell assumes no liability for advice or recommendations made concerning results to be obtained from the use of any product or service.

EXECUTION

THE INFORMATION PRESENTED IN THIS REPORT IS A TRUE AND ACCURATE RECORD OF THE JOB, AS EXECUTED, FOLLOWING HIGH QUALITY DOWELL SAFETY STANDARDS AND BEST INDUSTRY ACCEPTED PRACTICES. BECAUSE OF EVOLVING WELL CONDITIONS AND THE NECESSITY OF RELYING ON FACTS AND SUPPORTING SERVICES FURNISHED BY OTHERS OR BECAUSE OF ANY OTHER UNKNOWN INFORMATION, NO GUARANTEE IS GIVEN AS TO THE ACCURACY OF ANY INTERPRETATION, ANALYSIS, RECOMMENDATION, DATA FURNISHED BY DOWELL OR TO THE EFFECTIVENESS OR RESULTS OF ANY TREATMENT OR SERVICES.

Injected Density		(Free)	(Free)
(PPG)	1	-2 -1	-2 -1
Total Flowrate		Wellhead Pressure	Recorded Volume
(BPM)	10	0 (PSI) 3000	-2 (BBL) -1
	13:45		START INJECTION
			DATE OF RUN

Summary of SDF File : 05137147_EXECUTION.SDF

TIME	IDTY PPG	WHP PSI	TOFL BPM	CUVO BBL	MESSAGES
15:09:00	0	1315	0.009	136.4	
15:09:20	0	1315	0	136.4	
15:09:40	0	1306	0	136.4	
15:10:00	0	1320	0	136.4	
15:10:20	0	1311	0	136.4	
15:10:40	0	1306	0	136.4	
15:11:00	0	1311	0	136.4	
15:11:20	0	1293	0	136.4	
15:11:40	0	1311	0	136.4	
15:12:00	0	1306	0	136.4	
15:12:20	0	1297	0	136.4	
15:12:40	0	1293	0	136.4	
15:13:00	0	1297	0	136.4	
15:13:20	0	1288	0	136.4	
15:13:40	0	1293	0	136.4	
15:14:00	0	1288	0	136.4	
15:14:20	0	1293	0	136.4	ISIP 1330 5 MIN 1290

FORTSON OIL COMPANY

3325 W. Wadley
Suite ~~213~~ 213
MIDLAND, TEXAS 79707
(915)520-4347

Telecopy Number 915-697-8490TELECOPIER COVER LETTER

PLEASE DELIVER THE FOLLOWING PAGES TO:

NAME: DAVID CATANACHFROM: JOE IGOTOTAL NUMBER OF PAGES INCLUDING COVER LETTER IS: 2DATE: 4-26-94TIME: 10:10 AM

IF YOU DO NOT RECEIVE ALL THE PAGES, PLEASE CALL BACK AS SOON AS POSSIBLE.

Telecopier Operator: _____

COMMENTS: David, when you receive
this call me. Thanks

08:07:57 JOB 1

DOWELL/SCHLUMBERGER

7482133

04-25-94 15:49

WELL : BIG EDDY 117

FIELD : HERRADURA BEND

CLIENT : FORTSON OIL

COUNTRY : USA

JOB DATE : 4-15-94

EXECUTION SUMMARY

