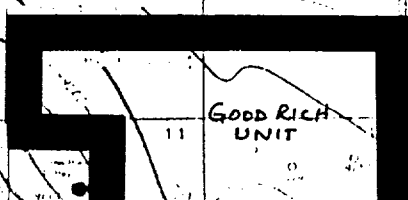
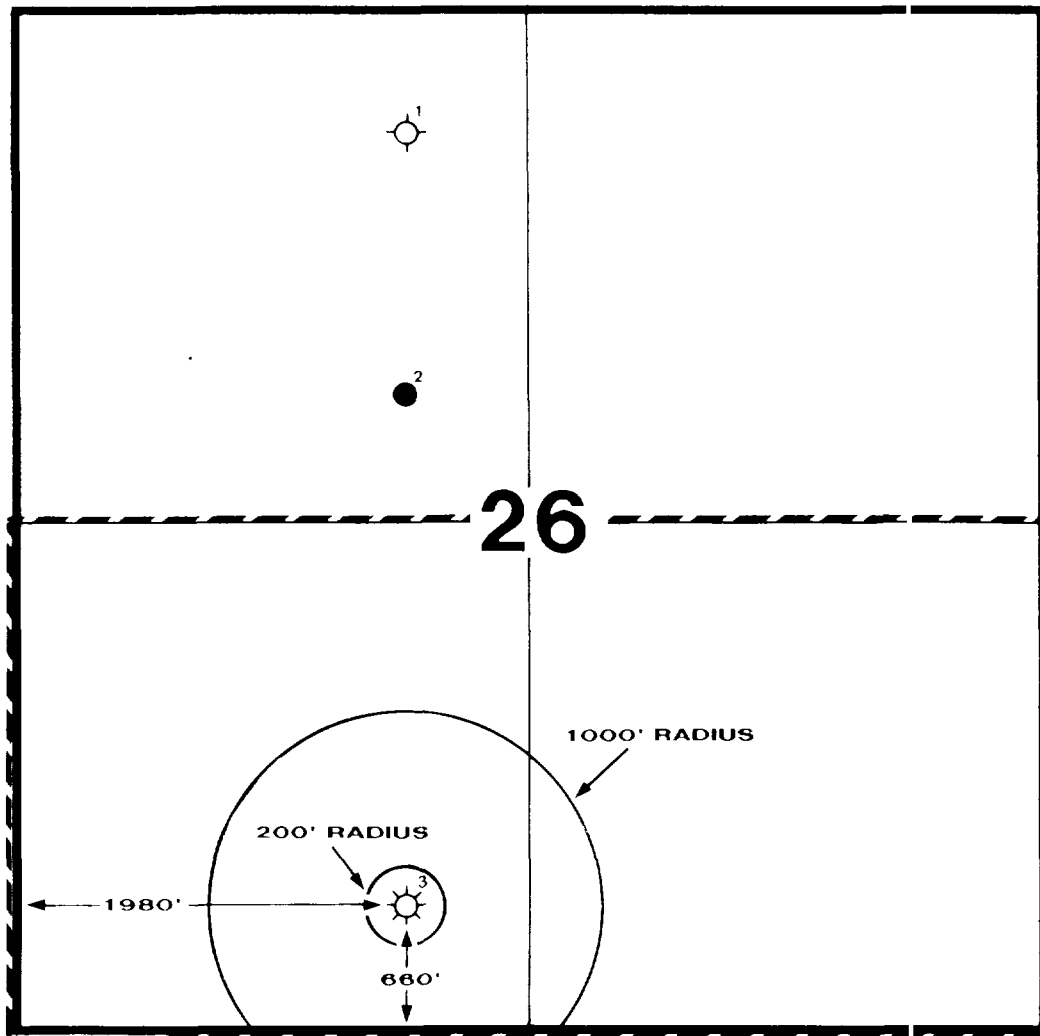


BEFORE EXAMINER CATANACH
OIL CONSERVATION DIVISION
HEYCO EXHIBIT NO. 6
CASE NO. 9935



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BEFORE EXAMINER CATANACH
OIL CONSERVATION DIVISION

HEYCO EXHIBIT NO. 7
CASE NO. 9935

HEYCO

ROSWELL, NEW MEXICO

DUNCAN UNIT AREA

LEA COUNTY, NEW MEXICO

SUBJECT WELL - DUNCAN UNIT #3

APRIL 1990

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN DUPLICATE*

(See other instructions on reverse side)

Form approved,
Budget Bureau No. 42-R355.6.

WELL COMPLETION OR RECOMPLETION REPORT AND LOG *

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

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

2. NAME OF OPERATOR
Harvey E. Yates Company

3. ADDRESS OF OPERATOR
P. O. Box 1933, Roswell, New Mexico 88201

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements)*
At surface 1980' FSL & 1980' FWL

At top prod. interval reported below

At total depth Same

14. PERMIT NO. _____ DATE ISSUED _____

5. LEASE DESIGNATION AND SERIAL NO.
NM-16648

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

Duncan Unit
8. FARM OR LEASE NAME

9. WELL NO.

3

10. FIELD AND POOL, OR WILDCAT
Wildcat

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

Sec. 26, T-13S, R-35E

12. COUNTY OR PARISH

Lea

13. STATE

NM

15. DATE SPURD 12/20/83 16. DATE T.D. REACHED 2/16/84 17. DATE COMPL. (Ready to prod.) 3/7/84 18. ELEVATIONS (DP, RND, RT, GR, ETC.)* 4020.8 19. ELEV. CASINGHEAD

20. TOTAL DEPTH, MD & TVD 13,600' 21. PLUG, BACK T.D., MD & TVD NA 22. IF MULTIPLE COMPL., HOW MANY* NA 23. INTERVALS DRILLED BY ROTARY TOOLS 0-13,600 CABLE TOOLS NA

24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)*
13,435' to 13,600' Austin Mississippian 25. WAS DIRECTIONAL SURVEY MADE NO

26. TYPE ELECTRIC AND OTHER LOGS RUN
DLL & Micro-SFL; CN; CBL 27. WAS WELL CORED NO

| 28. CASING RECORD (Report all strings set in well) | | | | | |
|--|-----------------|----------------|-----------|------------------|---------------|
| CASING SIZE | WEIGHT, LB./FT. | DEPTH SET (MD) | HOLE SIZE | CEMENTING RECORD | AMOUNT PULLED |
| 13 3/8 | 48# | 360' | 17 1/2 | 375 SXS | |
| 8 5/8 | 32, 39 & 54 | 4520' | 11 | 5200 SXS | |
| 5 1/2 | 17 & 20 | 13435' | 7 7/8 | 900 SXS | |

| 29. LINER RECORD | | | | 30. TUBING RECORD | | |
|------------------|----------|-------------|---------------|-------------------|-------|----------------|
| SIZE | TOP (MD) | BOTTOM (MD) | SACKS CEMENT* | SCREEN (MD) | SIZE | DEPTH SET (MD) |
| | | NA | | | 2 3/8 | 13397 |
| | | | | | | 13293 |

| 31. PERFORATION RECORD (Interval, size and number) | | 32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC. | |
|--|--|--|----------------------------------|
| Open Hole | | DEPTH INTERVAL (MD) | AMOUNT AND KIND OF MATERIAL USED |
| | | 13435-13600 | 5000 gal 20% MCA |
| | | | 500 gal Marflo |
| | | | 1500 gal 20% MCA |

| 33. PRODUCTION | | | | | | | |
|-----------------------|--|-------------------------|-------------------------|----------|------------|------------------------------------|---------------|
| DATE FIRST PRODUCTION | PRODUCTION METHOD (Flowing, gas lift, pumping—size and type of pump) | | | | | WELL STATUS (Producing or shut-in) | |
| 3/7/84 | Flowing | | | | | SI | |
| DATE OF TEST | HOURS TESTED | CHOKE SIZE | PROD'N. FOR TEST PERIOD | OIL—BBL. | GAS—MCF. | WATER—BBL. | GAS-OIL RATIO |
| 3/20/84 | 4 | 7/64" | → | - | 710 | - | - |
| FLOW, TUBING PRESS. | CASING PRESSURE | CALCULATED 24-HOUR RATE | OIL—BBL. | GAS—MCF. | WATER—BBL. | OIL GRAVITY-API (CORR.) | |
| 3048 | - | → | - | 3.2 AOF | - | | |

34. DISPOSITION OF GAS (Sold, used for fuel, vented, etc.)
Sold - WO pipeline

35. LIST OF ATTACHMENTS
Deviation Survey & Logs

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

SIGNED A. J. Deane TITLE V. P. of Drilling DATE 4/2/84

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

General: This form is designed for submitting a complete and correct well completion report and log on all types of lands and leases to either a Federal agency or a State agency, or both, pursuant to applicable Federal and/or State laws and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local, area, or regional procedures and practices, either are shown below or will be issued by, or may be obtained from, the local Federal and/or State office. See instructions on items 22 and 24, and 23, below regarding separate reports for separate completions.

If not filed prior to the time this summary record is submitted, copies of all currently available tests (tufflers, geologists, sample and core analysis, all types electric, etc.), formation and pressure tests, and directional surveys, should be attached hereto, to the extent required by applicable Federal and/or State laws and regulations. All attachments should be listed on this form, see item 32.

Item 4: If there are no applicable State requirements, locations on Federal or Indian land should be described in accordance with Federal requirements. Consult local State or Federal office for specific instructions.

Item 18: Indicate which elevation is used as reference (where not otherwise shown) for depth measurements given in other spaces on this form and in any attachments.

Items 22 and 24: If this well is completed for separate production from more than one interval zone (multiple completion), so state in item 22, and in item 24 show the producing intervals, top(s) and bottom(s) and name(s) of each interval zone. Submit a separate report (page) on this form, adequately identified, for each additional interval to be separately produced, showing the additional data pertinent to such interval.

Item 29: Attached supplemental records for this well should show the details of any multiple stage cementing and the location of the cementing tool. For each annular interval to be separately produced, showing the casing-head and the location of the cementing tool.

| 37. SUMMARY OF POROUS ZONES: SHOW ALL IMPORTANT ZONES OF POROSITY AND CONTENTS THEREOF; CORED INTERVALS; AND ALL DRILL-STEM TESTS, INCLUDING DEPTH INTERVAL TESTED, CUSHION USED, TIME TOOL OPEN, FLOWING, AND SHUT-IN PRESSURES, AND RECOVERIES | | | | 38. GEOLOGIC MARKERS | |
|--|-------|--------|-----------------------------|----------------------|---------------------------------|
| FORMATION | TOP | BOTTOM | DESCRIPTION, CONTENTS, ETC. | NAME | MEAN. DEPTH TRUE VERT. DEPTH |
| Red Bed | 0 | 3360 | | Rustler | 2130 |
| Anhy | 3360 | 3990 | | Salt | 2221 |
| Anhy, Li & sh | 3990 | 5670 | | Yates | 3063 |
| Sd & Anhy | 5670 | 7415 | | Seven Rivers | 3190 |
| Li & Sd | 7415 | 9569 | | | |
| Dolo & Li | 9569 | 10481 | | Queen | 3827 |
| Li & Sh | 10481 | 12570 | | Penrose | 3980 |
| Sh & Sd | 12570 | 13113 | | Grayburg | 4221 |
| Li & Sh & Sd | 13113 | 13600 | | San Andres | 4497 |
| | | | | Glorietta | 6005 |
| | | | | Tubb | 7444 |
| | | | | Abo | 8166 |
| | | | | Wolfcamp | 9709 |
| | | | | Bough | 10210 |
| | | | | Bursum | 10322 |
| | | | | Cisco | 10472 |
| | | | | Canyon | 11044 |
| | | | | Strawn Lime | 12044 |
| | | | | Atoka | 12407 |
| | | | | Morrow Lime | 13058 |
| | | | | Garnett Sh | 13370 |
| | | | | Austin Miss | 13434 |
| | | | | | 13600 |

NEW MEXICO OIL CONSERVATION COMMISSION
WELL LOCATION AND ACREAGE DEDICATION PLAT

Form C-102
Supersedes C-128
Effective 1-1-65

All distances must be from the outer boundaries of the Section

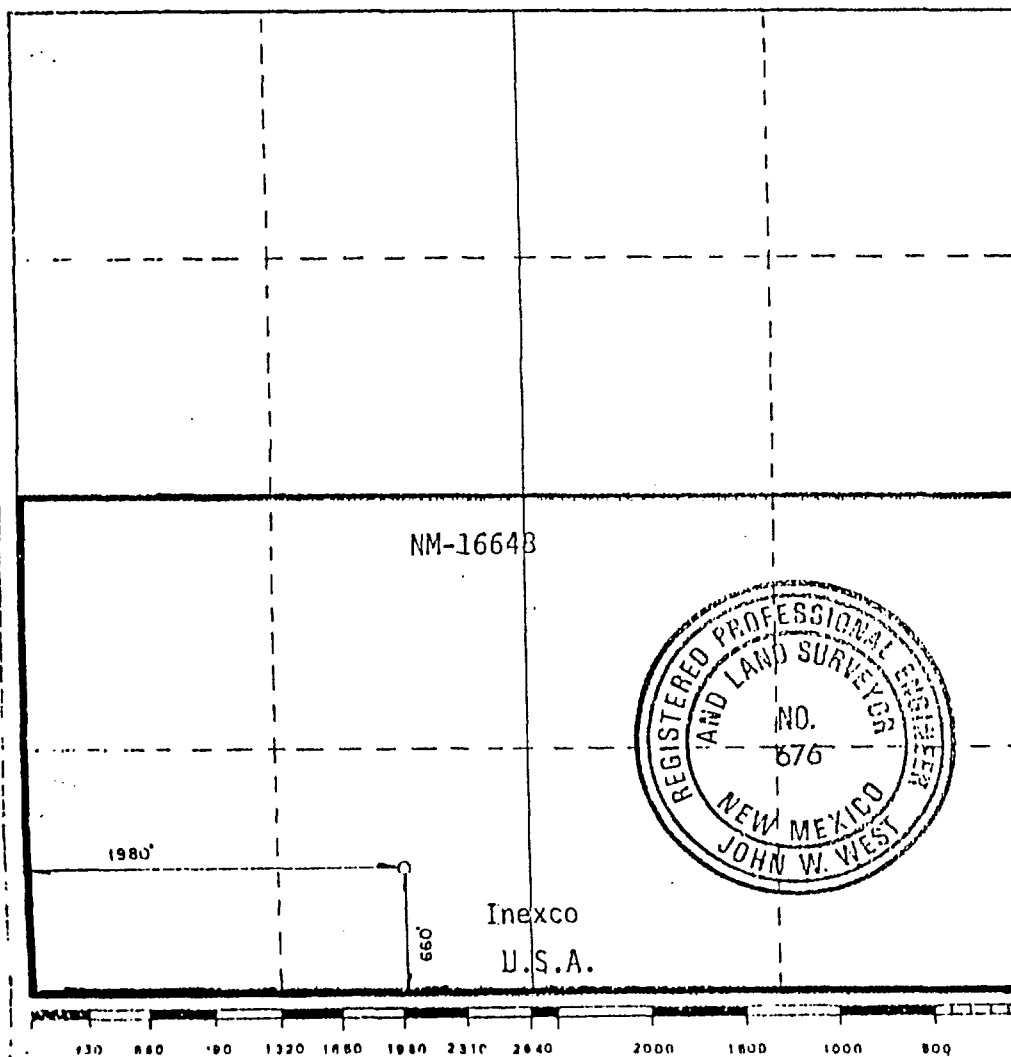
| | | | | |
|---|---|---|--|----------------------|
| Owner HARVEY E. YATES CO. | | Lease DUNCAN UNIT | | Well No. 3 |
| Section N | Section 26 | Township 13 SOUTH | Range 35 EAST | County LEA |
| Acres of Acreage Location of Well: 1980 feet from the WEST line and 660 feet from the SOUTH line | | | | |
| Ground Level Elev. 4020.8 | Producing Formation Mississippi | Pool Austin Mississippian, NW | Dedicated Acreage: 320 Acres | |

1. Outline the acreage dedicated to the subject well by colored pencil or hatchure marks on the plat below.
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
3. If more than one lease of different ownership is dedicated to the well, have the interests of all owners been consolidated by communitization, unitization, force-pooling, etc?

☒ Yes ☐ No If answer is "yes," type of consolidation Unitization

If answer is "no," list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary.) _____

No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interests, has been approved by the Commission.



CERTIFICATION

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

Ray F. Nokes

Name
Ray F. Nokes

Position
Reservoir Engineer

Company
Harvey E. Yates Company

Date
December 6, 1983

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my knowledge and belief.

Date Surveyed
DECEMBER 2, 1983

Registered Professional Engineer and Land Surveyor

John W. West

Certificate No. **JOHN W. WEST, 676**
RONALD J. EIDSON, 5239

HARVEY E. YATES COMPANY

DATE: 20-Apr-90

WELL NAME:

DUNCAN UNIT # 3

WO- AFE

AFE #

W-3

LOCATION:

N,660' FSL & 1980' FWL : SEC. 26, T-13S, R-35E, LEA CO. NM

FIELD:

AUSTIN MISSISSIPPIAN NORTHWEST

ELEVATION:

4020.8' GL (18.2' KB)

TD:

13,600'

PRTD:

13,000' (ORIGINALLY =13,600' (OPEN HOLE 13443-13600'))

FOREMAN

CURTIS TOLLE

624-1818

837

FOREMAN

BOB WILLIAMS

624-1818

867

OFFICE

623-6601

SUPERVISION:

RAY F. NOKES

624-1818

834

OR AT OFFICE

RECOMMENDED PROCEDURE:

PHASE # 1

1. MI & RU PU. ND WH NU BOP. POOH w/ 2 3/8" TBG. GIH w/ RTTS PKR & SET 600' ABOVE BOUGH PERF:(LOCATED @ 10,283-84' & 86-92').

SQZ. PERFS TO 3000#. UNSET PKR & REV. WITH ANNULAR VOL. PULL 20 STDS LOAD BACKSIDE & REV. TBG. CLEAN. SET PKR. & PRESS. UP TO 3000#.

2. POOH. GIH w/ BIT, SCRAPER, COLLARS & TBG. DRL OUT CMT & TEST SQZ PERFS. TO 1000#. CIRC. HOLE CLEAN & POOH.

3. PU BAILER w/ 4.625" OD X (4 .37" ID X 3.5" ID) X 13" LONG, w/ DOUBLE FLAPPER IN BAILER, 3.5" COLLARS, ON 2 3/8" N-80 TBG.

4. GIH TO FISH RET. SET DOWN ON RETAINER & STROKE BAILER. POH.

5. IF SUCCESSFUL, RETR. LOK-SET BP & CONT. TO STEP # 8. IF NOT PU 4 5/8" BIT ON BAILER & GIH. SPUD ON RET. (NOTE: 2.65" (OD) "FL" ON\OFF RECEPT. ON LOK-SET PKR & TOP 1 1/2" OF "FL" RECEPTICAL HAS ONLY .14" WALL THICKNESS).

OPTIONAL

DRL ON RET. & GAIN POSS. 5 TO 7 INCHES & POH.

OPTIONAL

6. GIH WITH 4 5/8" OD X 3 13/16" ID WASH PIPE WITH KUTRITE ON BOTTOM & SLICK OUTSIDE. CLEAN OFF TO TOP OF LOK-SET BP & CIRC. HOLE CLEAN. POOH.

NOTE:>>>>>>

HOLE TO BE CIRC. w/ NE AGENTS, CATIONIC SURFACTANTS & FOAMERS.

OPTIONAL

7. GIH WITH RETR. HEAD LATCH ONTO ON\OFF TOOL. RELEASE LOK-SET BP & POOH. IF UNABLE TO LATCH ONTO ON\OFF POOH & GIH w/ DRESS OFF MILL (2.65" ID)

AND MILL OVER ON\OFF TOOL. POOH. GIH WITH SHORT CATCH (RIGHT HAND RELEASE) & BUMPER SUB, JARS, ACCELLARATOR & COLLARS ON 2 3/8" N-80 TBG.

8. REL. LOK-SET BP & POOH. IF UNABLE, POOH & GIH TO MILL OVER PKR. SLIPS & PUSH LOK-SET BP TO BOTTOM OF OPEN HOLE. POOH.

GIH w/ 4.625" GR & JUNK BASKET TO 13,450'. RUN GR,CCL,CBL FROM 13,450

TO 12,450'.

9. ONCE THE LOK-SET BP IS REMOVED OR PUSHED TO BOTTOM THE WELL WILL BE SET UP TO TEST PRODUCTION FROM THE MISSISSIPPIAN. BHP BU WILL BE RUN IF

PRODUCTION VOLUMES ARE FAVORABLE. (NOTE: RUN FULL BORE PKR WITH TAILPIPE TO BE RUN TO 13,560' + OR -.

10. RU SDI & RUN FINDER INSIDE TBG, (WITHOUT/ THERMAL GUARD), FROM SURFACE TO 50' ABOVE SN & BACK.

PHASE # 2

11. MI & RU PU. KILL WELL w/ CATIONIC SURFACTANTS. ND WH, NU BOP. POOH.

(LAY DOWN 2 3/8" TBG & WILL PICK UP 2 7/8" N-80 FOR WORK STRING.)

BEFORE EXAMINED CATANACH
OIL CONSERVATION DIVISION

REYCO EXHIBIT NO. 16

CASE NO. 9935

20-Apr-90

HARVEY E. YATES COMPANY
WELLBORE SCHEMATIC & PROCEDURE SHEET
BY RAY F. NOKES

OPERATOR: HARVEY E. YATES COMPANY
WELL NAME: DUNCAN UNIT # 3
LEASE #: NM-16648
LOCATION: N, 660' FSL & 1980' FWL
FIELD: SEC. 26, T-13S, R-35E LEA CO., NM
ELEVATION: AUSTIN MISSISSIPPIAN NORTHWEST
4020.8' (18.2' KB)

SPUD DATE: 12/20/83
COMP DATE: 3/7/84
TD 13,600'
P8TD: 13,600'

SURFACE
WT & GRD 13 3/8" 48# J-55
DEPTH 360'
SXS CMT 375
TOC CIRC. 55 GYS
BIT SIZE 17 1/2"

INTERMEDIATE
WT & GRD 8 5/8" 32.28 & 24# J-55
DEPTH 4520'
SXS CMT 5200
TOC CIRC. 970 SXS
BIT SIZE 11"

TOC @ 9350' BY CBL ON 8-10-88 (RESULT OF 8-6-88 SQZ.)

8-10-88 PERFS: 10,283-84' & 86-92'.
X SPOT 250 GALS 15% SRA
ACDZ 2500 GALS 20% NEFE (ISIP 5400# 5"- 5200#)

7-29-88 2ND TOC @ 11,700'

HOWCO EZ-DRILL CMT RETAINER SPINNING ON TOP OF RETR. NECK.

X X X
X X X
RETR. NECK FOR 5 1/2" LOK-SET RRP @ 13,000'

PRODUCTION:
WT & GRD 5 1/2" 17& 20# N-80 & S-95
DEPTH 13,435' TALLEY
SXS CMT 400
TOC 12,500' BY CBL
BIT SIZE 7 7/8"
PKR SHOE @ 13,435'
MARKER JOINT NA

TUBING: 2 3/8" N-80
SIZE: TBG @ 13,000' OPEN ENDED
DEPTH: NA
PKR/ANCHOR: NA

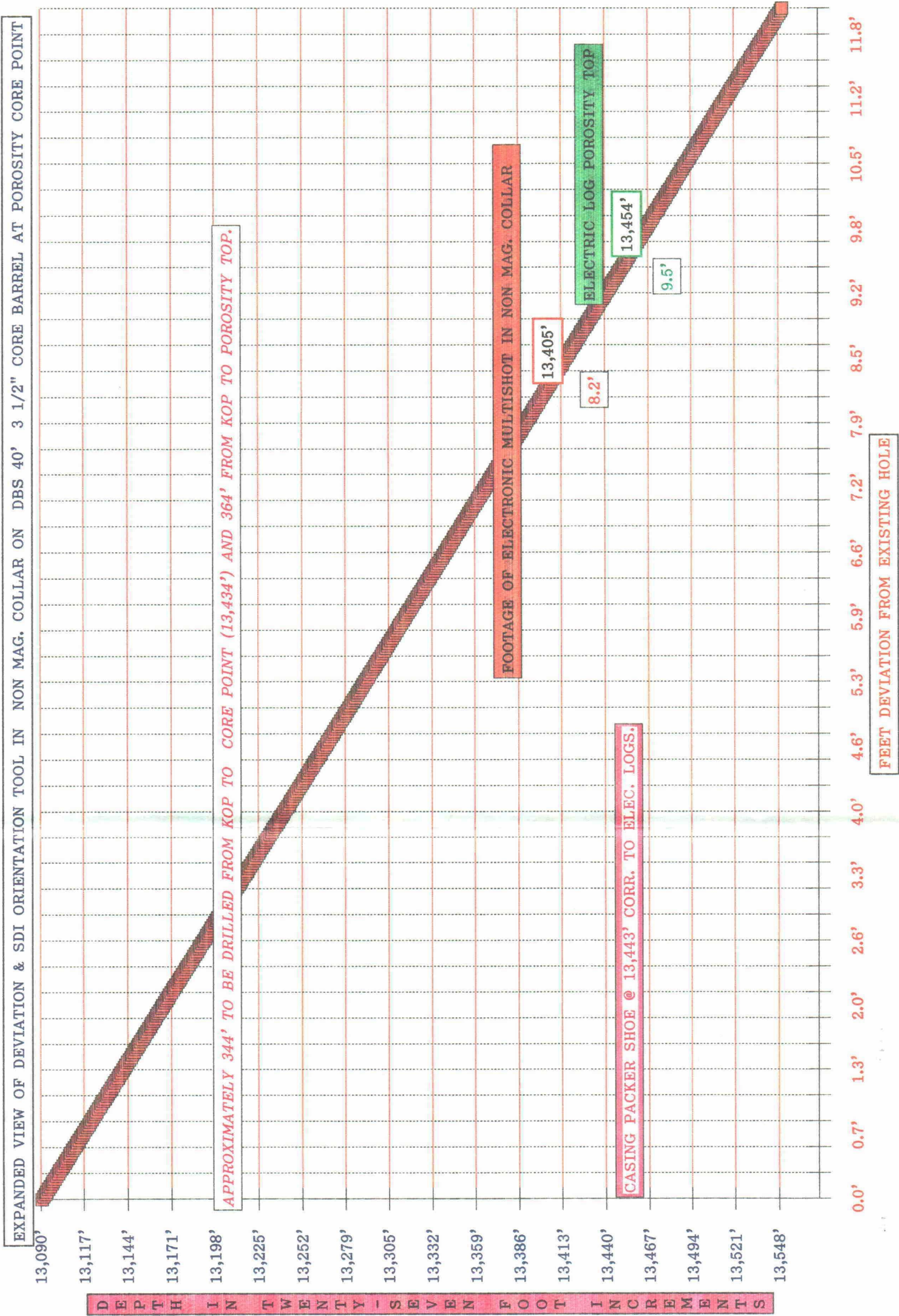
7 7/8" HOLE
V
13,600' TD
< OPEN
< HOLE= 157'

CSG PKR SHOE @ 13,443'
PER GR\CNL CORR.

Handwritten:
Run 11/3 MCF
545 BE

HEXCO 9935 11

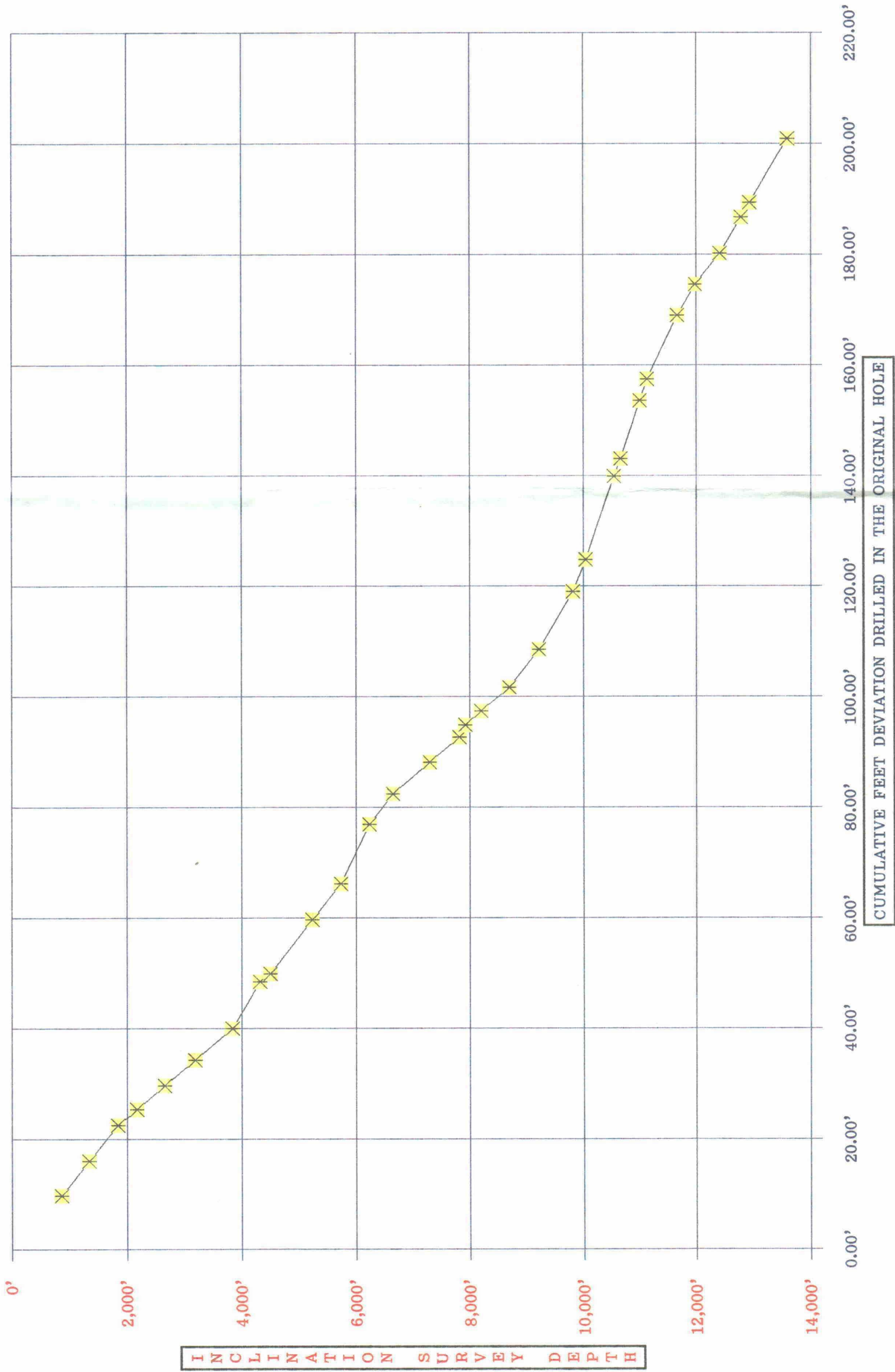
PROPOSED DUNCAN UNIT # 3 (1.5 DEGREE) WHIPSTOCK TO CORE MISSISSIPPIAN LIME



BEFORE EXAMINER CATANACH
OIL CONSERVATION DIVISION
HEYCO EXHIBIT NO. 12
CASE NO. 9935

BEFORE EXAMINER CATANACH
OIL CONSERVATION DIVISION
HEYCO EXHIBIT NO. 13
CASE NO. 9935

DUNCAN UNIT # 3 CUMULATIVE DEVIATION IN THE ORIGINAL HOLE



DUNCAN UNIT # 3 CUMULATIVE DEVIATION IN THE ORIGINAL HOLE

DATE: 20-Apr-90

WELL NAME: DUNCAN UNIT # 3

LEGAL LOCATION: N, 660' FSL & 1980' FWL

SEC. 26, T-13S, R-35E LEA CO., NM

OPERATOR: HARVEY E. YATES COMPANY

CONTRACTOR: HONDO DRILLING (INCLINATION SURVEY DATED FEB. 28TH, 1984)

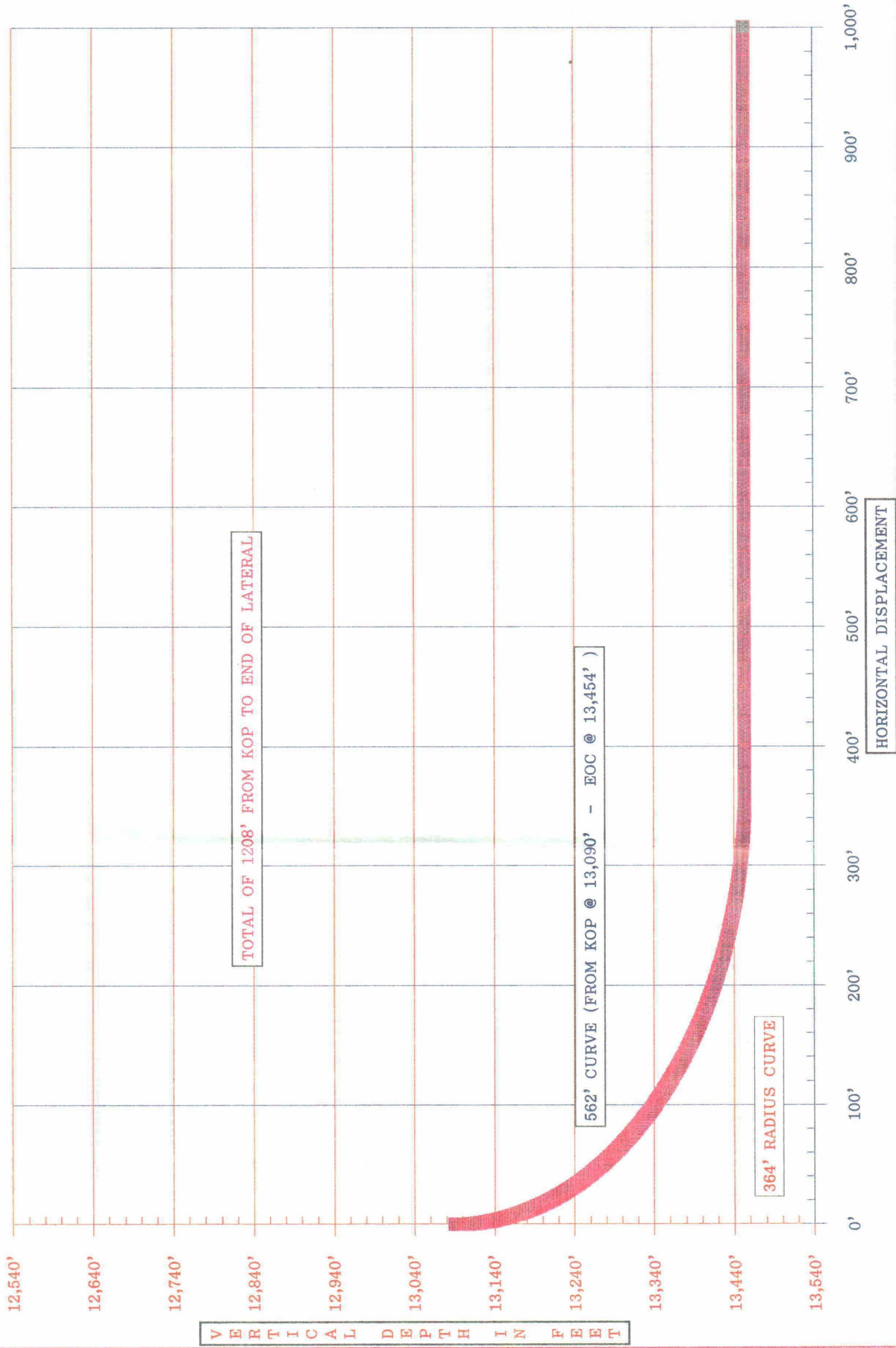
| TOTCO DEGREES | SURVEY DEPTH (MD /FT) | DEVIATION IN FEET | CUM DEV. IN FEET |
|---------------|-----------------------|-------------------|------------------|
| 1 0.5 | 360' | 3.14' | 3.14' |
| 2 0.75 | 863' | 6.58' | 9.73' |
| 3 0.75 | 1,348' | 6.35' | 16.08' |
| 4 0.75 | 1,840' | 6.44' | 22.52' |
| 5 0.5 | 2,171' | 2.89' | 25.40' |
| 6 0.5 | 2,660' | 4.27' | 29.67' |
| 7 0.5 | 3,192' | 4.64' | 34.31' |
| 8 0.5 | 3,845' | 5.70' | 40.01' |
| 9 1 | 4,328' | 8.43' | 48.44' |
| 10 0.5 | 4,500' | 1.50' | 49.95' |
| 11 0.75 | 5,243' | 9.73' | 59.67' |
| 12 0.75 | 5,736' | 6.45' | 66.13' |
| 13 1.25 | 6,234' | 10.87' | 76.99' |
| 14 0.75 | 6,650' | 5.45' | 82.44' |
| 15 0.5 | 7,301' | 5.68' | 88.12' |
| 16 0.5 | 7,826' | 4.58' | 92.70' |
| 17 1.25 | 7,927' | 2.20' | 94.90' |
| 18 0.5 | 8,212' | 2.49' | 97.39' |
| 19 0.5 | 8,706' | 4.31' | 101.70' |
| 20 0.75 | 9,230' | 6.86' | 108.56' |
| 21 1 | 9,828' | 10.44' | 119.00' |
| 22 1.5 | 10,047' | 5.73' | 124.73' |
| 23 1.75 | 10,546' | 15.25' | 139.98' |
| 24 1.5 | 10,668' | 3.19' | 143.18' |
| 25 1.75 | 11,009' | 10.42' | 153.59' |
| 26 1.75 | 11,135' | 3.85' | 157.44' |
| 27 1.25 | 11,663' | 11.52' | 168.96' |
| 28 1 | 11,982' | 5.57' | 174.53' |
| 29 0.75 | 12,417' | 5.69' | 180.23' |
| 30 1 | 12,787' | 6.46' | 186.69' |
| 31 1 | 12,937' | 2.62' | 189.30' |
| 32 1 | 13,600' | 11.57' | 200.88' |

TOTALS: 29.00 DEGREES

200.88'

0.91 AVERAGE

PROPOSED DUNCAN UNIT # 3 (MISSISSIPPIAN HORIZONTAL)



STATE OF NEW MEXICO
ENERGY, MINERALS, AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION

IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
DIVISION FOR THE PURPOSE OF
CONSIDERING:

CASE NO. 9935
Order No. R-9188

APPLICATION OF HARVEY E. YATES
COMPANY FOR A HORIZONTAL
DIRECTIONAL DRILLING PILOT
PROJECT AND SPECIAL OPERATING
RULES THEREFOR, LEA COUNTY, NEW
MEXICO.

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 8:15 a.m. on May 2, 1990, at Santa Fe, New Mexico, before Examiner David R. Catanach.

NOW, on this 30th day of May, 1990, the Division Director, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

FINDS THAT:

(1) Due public notice having been given as required by law, the Division has jurisdiction of this cause and the subject matter thereof.

(2) The applicant, Harvey E. Yates Company, seeks authority to initiate a horizontal directional drilling pilot project in the S/2 of Section 26, Township 13 South, Range 35 East, NMPM, Lea County, New Mexico, forming a standard 320-acre gas spacing and proration unit in the Northwest Austin-Mississippian Gas Pool by utilizing its existing Duncan Unit Well No. 3 located at a standard gas well location 660 feet from the South line and 1980 feet from the West line (Unit N) of said Section 26, to drill a lateral wellbore in the following manner:

CASE NO. 9935
Order No. R-9188
Page -2-

Kick off from vertical at a depth of approximately 13,090 feet at a deviation of 1.5 degrees and drill to a depth of approximately 13,548 feet. During this drilling procedure well will be cored in the Mississippian formation and logged to determine the proper direction (either north or northeast) for horizontal extension. Plug back to a depth of 13,090 feet and commence a medium radius curve in the pre-determined direction to encounter the Mississippian formation at approximately 13,434 feet at which point the well will be drilled horizontally within the Mississippian formation a distance of approximately 646 feet.

(3) The applicant further seeks special rules and provisions within the pilot project area including the designation of a prescribed area limiting the horizontal displacement of the proposed wellbore such that it cannot be closer than 1980 feet from the end boundaries nor closer than 660 feet from the side boundaries of the proration unit.

(4) The subject well is located within the Northwest Austin-Mississippian Gas Pool which is currently governed by General Rule No. 104 (C)(II) of the Division Rules and Regulations which require 320-acre gas spacing with wells to be located no closer than 1980 feet from the end boundary nor closer than 660 feet from the side boundary of the proration unit nor closer than 330 feet from any quarter-quarter section or subdivision inner boundary.

(5) Through its evidence and testimony, the applicant demonstrated that the proposed horizontal wellbore, which is experimental in nature, should encounter a substantially greater number of natural fractures within the Mississippian formation than would a conventional wellbore, which may ultimately result in the recovery of a greater amount of gas from the subject proration unit, thereby preventing waste.

(6) The subject well is located within the Duncan Unit Area, which is currently owned and operated by the applicant.

(7) No interest owner appeared at the hearing in opposition to the proposed horizontal directional drilling pilot project.

CASE NO. 9935
Order No. R-9188
Page -3-

(8) Approval of the proposed pilot project should result in the recovery of an additional amount of gas from the subject proration unit which may not otherwise be recovered, thereby preventing waste, and will not violate correlative rights provided that the well is drilled as per the bottomhole location restrictions as described above.

(9) The applicant should be required to conduct a directional survey on the vertical portion of the wellbore prior to commencing directional drilling operations, and on the horizontal portion of the wellbore subsequent to directional drilling operations in order that the direction, extent, and terminus of said wellbore may be determined to be in compliance with the proposed bottomhole location.

(10) The applicant should further be required to submit copies of said directional surveys to the Santa Fe and Hobbs district offices of the Division.

(11) The applicant should notify the supervisor of the Hobbs district office of the Division of the date and time of commencement of directional drilling operations and of the conductance of any directional surveys on the proposed well in order that these operations may be witnessed.

IT IS THEREFORE ORDERED THAT:

(1) The application of Harvey E. Yates Company for a horizontal directional drilling pilot project in the S/2 of Section 26, Township 13 South, Range 35 East, NMPM, Northwest Austin-Mississippian Gas Pool, Lea County, New Mexico, is hereby approved.

(2) The applicant is further authorized to utilize its existing Duncan Unit Well No. 3 located at a standard gas well location 660 feet from the South line and 1980 feet from the West line (Unit N) of said Section 26, to drill a lateral wellbore in the following manner:

Kick off from vertical at a depth of approximately 13,090 feet at a deviation of 1.5 degrees and drill to a depth of approximately 13,548 feet. During this drilling procedure well will be cored in the Mississippian formation and logged to determine the proper direction (either north or northeast) for horizontal extension. Plug back to a depth of

CASE NO. 9935
Order No. R-9188
Page -4-

13,090 feet and commence a medium radius curve in the pre-determined direction to encounter the Mississippian formation at approximately 13,434 feet at which point the well will be drilled horizontally within the Mississippian formation a distance of approximately 646 feet.

PROVIDED HOWEVER THAT, the S/2 of said Section 26 shall be dedicated to the subject well forming a standard 320-acre gas spacing and proration unit for said Northwest Austin-Mississippian Gas Pool and;

PROVIDED FURTHER THAT, the horizontal portion of the subject well shall be located no closer than 1980 feet from the end boundaries nor closer than 660 feet from the side boundaries of the subject proration unit.

(3) The applicant shall be required to conduct a directional survey on the vertical portion of the wellbore prior to commencing directional drilling operations, and on the horizontal portion of the wellbore subsequent to the directional drilling operations in order that the direction, extent, and terminus of said wellbore may be determined to be in compliance with the proposed bottomhole location.

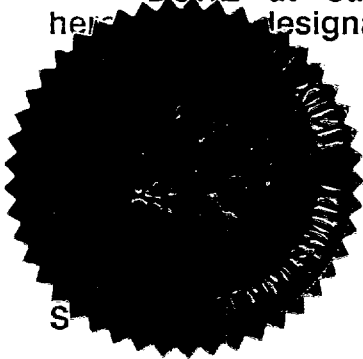
(4) The applicant shall further be required to submit copies of said directional surveys to the Santa Fe and Hobbs district offices of the Division.

(5) The applicant shall notify the supervisor of the Hobbs district office of the Division of the date and time of commencement of directional drilling operations and of the conductance of any directional surveys on the proposed well in order that these operations may be witnessed.

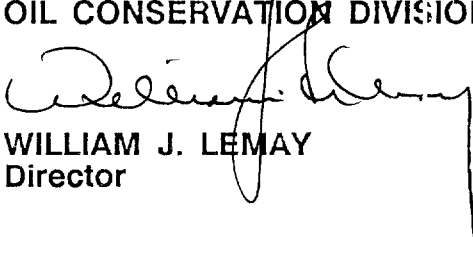
(6) Jurisdiction of this cause is retained for the entry of such further orders as the Division may deem necessary.

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DONE at Santa Fe, New Mexico, on the day and year
here designated.



STATE OF NEW MEXICO
OIL CONSERVATION DIVISION


WILLIAM J. LEMAY
Director