

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

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

50-026-2442

Form C-101
Revised 10-1-78

NO. OF COPIES RECEIVED	
DISTRIBUTION	
SANTA FE	
FILE	
U.S.G.S.	
LAND OFFICE	
OPERATOR	

5A. Indicate Type of Lease
STATE ☒ FEE ☐
5. State Oil & Gas Lease No.
A-1646-9

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. Type of Work b. Type of Well DRILL ☒ DEEPEN ☐ PLUG BACK ☐ OIL WELL ☒ GAS WELL ☐ OTHER ☐ SINGLE ZONE ☒ MULTIPLE ZONE ☐				7. Unit Agreement Name	
2. Name of Operator AMOCO PRODUCTION COMPANY				8. Farm or Lease Name South Hobbs (GSA) Unit	
3. Address of Operator P.O. BOX 68 HOBBS, NEW MEXICO 88240				9. Well No. 198	
4. Location of Well SL/BHL UNIT LETTER <u>C</u> LOCATED <u>749/990</u> FEET FROM THE <u>North</u> LINE AND <u>1984/1622</u> FEET FROM THE <u>West</u> LINE OF SEC. <u>6</u> TWP. <u>19-S</u> REC. <u>38-E</u> NMPM				10. Field and Pool, or Wildcat HOBBS GSA	
				12. County LEA	
11. Elevations (Show whether Dr, RT, etc.) 3637.1' GL		21A. Kind & Status Plug. Bond BLANKET-ON-FILE		21B. Drilling Contractor N/A	
		19. Proposed Depth 4300'		19A. Formation GRAYBURG-SAN ANDRES	
				20. Rotary or C.T. ROTARY	
				22. Approx. Date Work will start 4th QUARTER 1985	

PROPOSED CASING AND CEMENT PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	SACKS OF CEMENT	EST. TOP
12-1/4"	8-5/8"	24#	1600'	Circulate to surface	
7-7/8"	5-1/2"	15.5#	4300'	Circulate to surface	

Propose to drill and equip well in the Grayburg-San Andres Formation. After reaching TD, logs will be run and evaluated. Perforate and stimulate as necessary in attempting commercial production. Reference Administrative Order No. DD-9.

Mud Program: 0 - 1600' Native Spud Mud
1600 - 3800' Brine Water
3800 - 4200' Salt Gel/Starch

BOP Diagram Attached

0+5 NMOCD, H 1-JRB 1-FJN 1-CMH 1-Shell 1-Arco

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM; IF PROPOSAL IS TO DEEPEN OR PLUG BACK, GIVE DATA ON PRESENT PRODUCTIVE ZONE AND PROPOSED NEW PRODUCTIVE ZONE. GIVE BLOWOUT PREVENTER PROGRAM, IF ANY.

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

Signed Charles M. Lerring Title Administrative Analyst (SG) Date 10/4/85

(This space for State Use)

Eddie W. Seay

APPROVED BY Oil & Gas Inspector TITLE Oil & Gas Inspector DATE OCT 8 - 1985

CONDITIONS OF APPROVAL, IF ANY:

RECEIVED
OCT - 7 1985
C.C.D.
HOBBS OFFICE

NE 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

Operator AMOCO PRODUCTION COMPANY		Lease SOUTH HOBBS GRAYBURG SAN ANDRES UNIT		Well No. 198
Unit Letter C	Section 6	Township 19 SOUTH	Range 38 EAST	County LEA
Actual Footage Location of Well: 749 feet from the NORTH line and 1981 feet from the WEST line				
Ground Level Elev. 3637.1'	Producing Formation Grayburg-San Andres	Pool Hobbs GSA	Dedicated Acreage: 40 Acres	

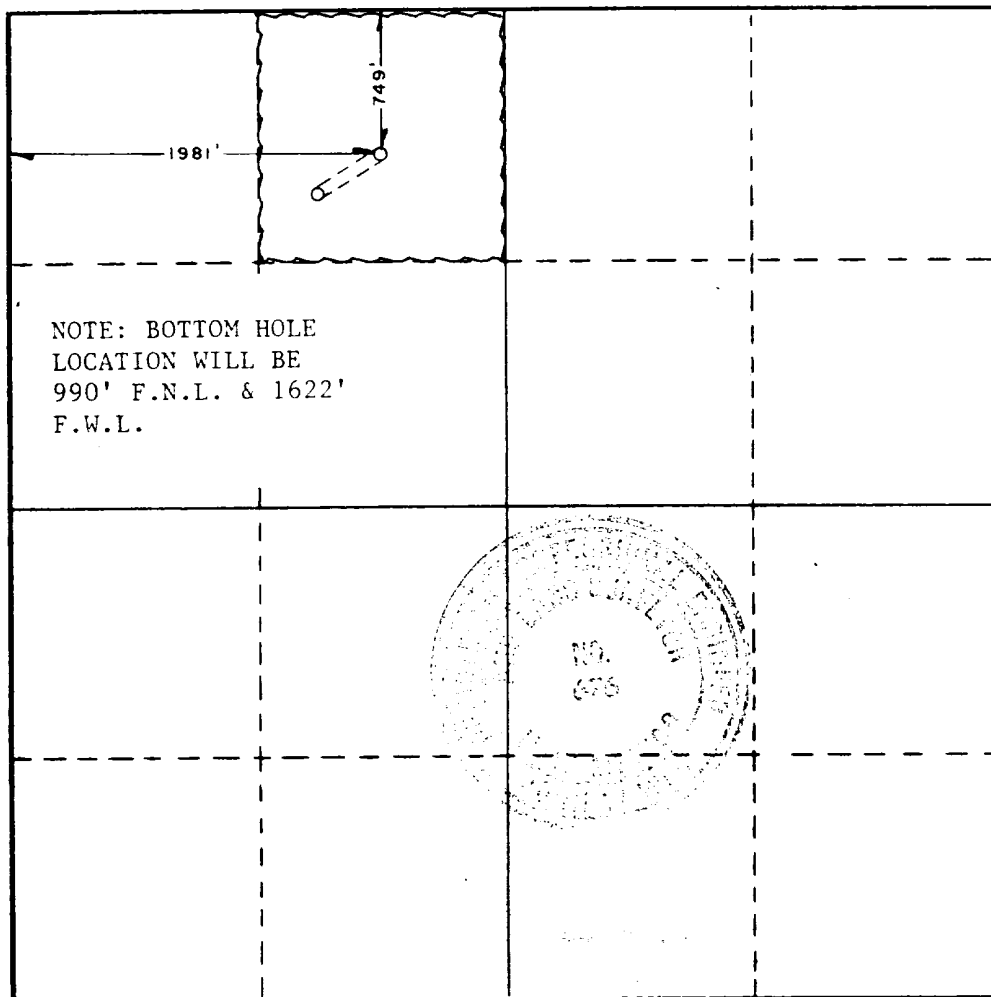
1. Outline the acreage dedicated to the subject well by colored pencil or hatchure marks on the plat below.
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
3. If more than one lease of different ownership is 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.

Name: Charles M. Lerring
Position: Administrative Analyst (SG)
Company: Amoco Production Company
Date: 10/4/85

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
AUGUST 28, 1985

Registered Professional Engineer
and/or Land Surveyor

John W. West
Certificate No. JOHN W. WEST, 676
RONALD J. EIDSON, 3239

RECEIVED
OCT - 7 1985
O.C.D.
HOBBS OFFICE

EASTMAN WHIPSTOCK, INC.

RECORD OF SURVEY

FOR

* OPERATOR : AMERICAN WHIPSTOCK COMPANY *
* WELL NAME : SOUTH HOPE UNIT *
* LOCATION : LEA COUNTY, NEW MEXICO *
* JOB NUMBER : *
* RIG : CACTUS RIG NO. 47 *
* DECLINATION : 9.00 E *
* PLANE OF VERTICAL SECTION *
* DIRECTION : S 56 7 W *

EW DISTRICT : WEST TEXAS DISTRICT

AMOCO PRODUCTION COMPANY
SOUTH HOBBS UNIT NO. 193
LEA COUNTY, NEW MEXICO

DATE PRINTED : 10-DEC-85
OUR REF. NO. : S01023.4AM
JOB NUMBER :

PAGE NO. 2

PBHL : S 56 7 W

MEASURED DEPTH	DRIFT ANGLE D M	DRIFT DIRECTION D M	COURSE LENGTH	TRUE VERTICAL DEPTH	VERTICAL SECTION	R E C T A N G U L A R C O O R D I N A T E S	DOGLEG SEVERITY
0.00	0 0	N 0 0 E	0.00	0.00	0.00	0.00 N 0.00 E	0.00
49.00	0 30	S 25 0 W	49.00	49.00	0.18	0.19 S 0.09 W	1.02
110.00	1 15	S 16 0 E	61.00	109.99	0.75	1.10 S 0.16 W	1.53
168.00	1 30	S 3 0 E	58.00	167.98	1.32	2.47 S 0.07 E	0.69
226.00	1 45	S 19 0 E	58.00	225.95	1.96	4.08 S 0.38 E	0.89
284.00	1 30	S 28 0 E	58.00	283.93	2.26	5.59 S 1.04 E	0.61
343.00	1 30	S 35 0 E	59.00	342.91	2.32	6.90 S 1.84 E	0.31
401.00	1 45	S 43 0 E	58.00	400.88	2.17	8.18 S 2.88 E	0.58
462.00	1 30	S 38 0 E	61.00	461.86	1.97	9.50 S 4.00 E	0.47
523.00	1 0	S 15 0 E	61.00	522.85	2.14	10.68 S 4.59 E	1.15
584.00	1 15	S 31 0 E	61.00	583.83	2.37	11.78 S 5.06 E	0.65
645.00	1 0	S 33 0 E	61.00	644.82	2.41	12.79 S 5.69 E	0.41
706.00	0 30	S 46 0 E	61.00	705.81	2.38	13.41 S 6.20 E	0.86
767.00	0 30	S 25 0 E	61.00	766.81	2.32	13.84 S 6.50 E	0.30
828.00	0 0	N 0 0 E	61.00	827.81	2.36	14.08 S 6.62 E	0.82
889.00	0 15	S 69 0 E	61.00	888.81	2.28	14.13 S 6.74 E	0.41
950.00	0 30	N 34 0 E	61.00	949.81	1.93	14.02 S 7.09 E	0.83
1011.00	0 30	N 26 0 E	61.00	1010.81	1.45	13.56 S 7.36 E	0.11
1072.00	0 45	N 58 0 E	61.00	1071.81	0.81	13.07 S 7.80 E	0.69
1133.00	0 15	N 31 0 E	61.00	1132.80	0.29	12.69 S 8.17 E	0.88
1194.00	0 30	N 41 0 E	61.00	1193.80	-0.08	12.37 S 8.40 E	0.42
1255.00	0 30	N 6 0 E	61.00	1254.80	-0.52	11.89 S 8.61 E	0.49
1316.00	0 15	N 29 0 E	61.00	1315.80	-0.83	11.51 S 8.73 E	0.47
1377.00	0 30	N 25 0 W	61.00	1376.80	-1.06	11.13 S 8.75 E	0.67
1438.00	0 30	N 14 0 E	61.00	1437.79	-1.31	10.61 S 8.70 E	0.55
1499.00	0 30	N 27 0 E	61.00	1498.79	-1.74	10.11 S 8.88 E	0.19
1560.00	0 15	N 45 0 E	61.00	1559.79	-2.11	9.79 S 9.12 E	0.45
1570.00	0 15	N 41 0 W	10.00	1569.79	-2.14	9.75 S 9.12 E	3.41
1652.00	1 0	N 27 0 E	82.00	1651.79	-2.52	8.91 S 9.01 E	1.14
1714.00	0 45	N 36 0 W	62.00	1713.78	-2.96	8.01 S 8.94 E	1.51

CONTINUED ON NEXT PAGE ...

AMOCO PRODUCTION COMPANY
SOUTH HOBBS UNIT NO. 198
LEA COUNTY, NEW MEXICO

DATE PRINTED : 10-DEC-85
OUR REF. NO. : S01023.4AM
JOB NUMBER :

PAGE NO. 3

PBHL : S 56 7 W

MEASURED DEPTH	DRIFT ANGLE D M	DRIFT DIRECTION D M	COURSE LENGTH	TRUE VERTICAL DEPTH	VERTICAL SECTION	R E C T A N G U L A R C O O R D I N A T E S	DOGLEG SEVERITY
1777.00	4 0	S 64 0 W	63.00	1776.72	-1.35	7.43 S 6.61 E	6.25
1839.00	7 0	S 63 0 W	62.00	1838.42	4.55	10.08 S 1.29 E	4.84
1902.00	8 0	S 63 0 W	63.00	1900.88	12.71	13.82 S 6.03 W	1.59
1964.00	8 45	S 60 0 W	62.00	1962.22	21.70	18.12 S 13.97 W	1.40
2027.00	10 0	S 58 0 W	63.00	2024.38	31.95	23.41 S 22.76 W	2.05
2089.00	10 45	S 58 0 W	62.00	2085.36	43.11	29.33 S 32.23 W	1.21
2152.00	11 15	S 59 0 W	63.00	2147.21	55.12	35.61 S 42.48 W	0.85
2214.00	11 30	S 59 0 W	62.00	2207.99	67.33	41.90 S 52.96 W	0.40
2277.00	11 30	S 60 0 W	63.00	2269.72	79.87	48.28 S 63.78 W	0.32
2339.00	11 45	S 60 0 W	62.00	2330.45	92.33	54.53 S 74.61 W	0.40
2401.00	12 0	S 60 0 W	62.00	2391.99	103.06	60.91 S 85.65 W	0.40
2464.00	12 15	S 60 0 W	63.00	2452.72	119.27	67.52 S 97.11 W	0.40
2526.00	12 15	S 60 0 W	62.00	2518.33	131.37	74.10 S 108.51 W	0.00
2589.00	12 15	S 58 0 W	63.00	2574.87	144.74	80.98 S 119.96 W	0.67
2651.00	12 15	S 60 0 W	62.00	2635.46	157.88	87.76 S 131.24 W	0.68
2714.00	12 15	S 61 0 W	63.00	2697.03	171.21	94.34 S 142.87 W	0.34
2776.00	12 0	S 61 0 W	62.00	2757.64	184.18	100.65 S 154.26 W	0.40
2839.00	11 30	S 62 0 W	63.00	2819.32	196.95	106.78 S 165.54 W	0.86
2901.00	11 15	S 63 0 W	62.00	2880.11	209.11	112.42 S 176.38 W	0.51
2964.00	10 45	S 63 0 W	63.00	2941.95	221.04	117.88 S 187.09 W	0.79
3026.00	10 30	S 64 0 W	62.00	3002.89	232.38	122.98 S 197.33 W	0.50
3089.00	10 15	S 65 0 W	63.00	3064.86	243.60	127.87 S 207.57 W	0.49
3151.00	10 0	S 67 0 W	62.00	3125.89	254.34	132.30 S 217.52 W	0.70
3190.00	9 45	S 67 0 W	39.00	3164.31	260.91	134.91 S 223.68 W	0.64
3221.00	9 0	S 68 0 W	31.00	3194.90	265.86	136.84 S 228.34 W	2.48
3283.00	8 30	S 67 0 W	62.00	3256.18	275.10	140.45 S 237.06 W	0.84
3346.00	8 45	S 71 0 W	63.00	3318.46	284.31	143.84 S 245.88 W	1.03
3406.00	7 15	S 72 0 W	60.00	3377.88	292.36	146.49 S 253.80 W	2.51
3468.00	7 45	S 76 0 W	62.00	3439.35	300.06	148.72 S 261.57 W	1.17
3529.00	6 30	S 77 0 W	61.00	3499.88	307.15	150.48 S 268.93 W	2.06

CONTINUED ON NEXT PAGE ...

AMOCO PRODUCTION COMPANY
SOUTH HOBBS UNIT NO. 198
LEA COUNTY, NEW MEXICO

DATE PRINTED : 10-DEC-85
OUR REF. NO. : S01023.4AM
JOB NUMBER :

PAGE NO. 4

PBHL : S 56 7 W

MEASURED DEPTH	DRIFT ANGLE D M	DRIFT DIRECTION D M	COURSE LENGTH	TRUE VERTICAL DEPTH	VERTICAL SECTION	RECTANGULAR COORDINATES	DOGLEG SEVERITY
3589.00	5 15	S 72 O W	60.00	3559.56	312.98	152.13 S 274.85 W	2.25
3651.00	5 45	S 69 O W	62.00	3621.27	318.74	154.11 S 280.45 W	0.93
3712.00	5 30	S 66 O W	61.00	3681.98	324.60	156.40 S 285.97 W	0.63
3773.00	5 30	S 63 O W	61.00	3742.70	330.38	158.91 S 291.25 W	0.47
3835.00	5 45	S 63 O W	62.00	3804.40	336.41	161.67 S 296.66 W	0.40
3898.00	5 30	S 67 O W	63.00	3867.10	342.52	164.28 S 302.26 W	0.74
3961.00	4 15	S 67 O W	63.00	3929.87	347.77	166.37 S 307.19 W	1.98
4023.00	5 0	S 78 O W	62.00	3991.66	352.56	167.87 S 311.95 W	1.87
4085.00	7 45	S 76 O W	62.00	4053.28	358.99	169.42 S 318.65 W	4.45
4147.00	6 45	S 68 O W	62.00	4114.78	366.51	171.84 S 326.09 W	2.29
4248.00	7 15	S 68 O W	16.00	4232.90	376.33	176.45 S 337.50 W	0.50
4264.00	7 15	S 68 O W	16.00	4248.90	380.53	177.21 S 339.37 W	0.00

CLOSURE - DISTANCE : 382.83
DIRECTION : S 62 26 W

SURVEY CALCULATION METHOD : Radius of curvature

SURVEY RUN INFORMATION

=====

MAGNETIC MULTI SHOT SURVEY	430-0001
SURVEYOR: TROY ONEY	(0'-1570')
MAGNETIC MULTI SHOT SURVEY	430-0001
SURVEYOR: GARY DESPAIN	(1570'-3190')
MAGNETIC MULTI-SHOT SURVEY	132-M-1285-073
SURVEYOR: TROY DUNCAN	(3190'-4264')

THIS IS THE TD SURVEY ON THIS WELL. AMF SCIENTIFIC DRILLING
INTERNATIONAL RAN THE SURVEY.



(915) 563-0511

P.O. Box 6341/Terminal Station/Midland, TX 79711-0341

SURVEY CERTIFICATION SHEET

STATE OF TEXAS
COUNTY OF MIDLAND

I, Troy Oney, in the employ of Eastman Whipstock, Inc., did on the days of 11-18, 19 85 thru 11-19, 19 85 conduct or supervise the taking of a Magnetic Multi Shot survey by the method of magnetic orientation from a depth of 0 feet to 1570 feet, with recordings of inclination and direction being obtained at approximate intervals of 60 feet.

This survey was conducted at the request of Amoco Production Company for their South Hobbs Unit Well No. 198 Lea County, State of New Mexico, in the field.

This data for this survey and the calculation were obtained and performed by me according to standards and procedures as set forth by Eastman Whipstock, Inc. and is true and correct to the best of my knowledge.

Troy Oney
Directional Supervisor/Surveyor

The data for this survey has been examined by me and conforms to principles and procedures set forth by Eastman Whipstock, Inc.

Before me, the undersigned authority, on this day personally appeared Troy Oney, known to me to be the person whose name is subscribed to this instrument, who after being by me duly sworn on oath, states that he has knowledge of all the facts stated above and that this instrument is a true statement of facts therein recited.

Subscribed and sworn to before me on this 04 day of December, 19 85



Timothy R. Stephens
Notary Public, State of Texas
My Commission Expires 4-1-88

Timothy R. Stephens
Notary Public in and for the
County of Midland, Texas
My commission expires _____



(915) 563-0511

P.O. Box 6341/Terminal Station/Midland, TX 79711-0341

SURVEY CERTIFICATION SHEET

STATE OF TEXAS
COUNTY OF MIDLAND

I, Gary DeSpain, in the employ of Eastman Whipstock, Inc., did on the days of Dec. 5, 1985 thru Dec. 6, 1985 conduct or supervise the taking of a Magnetic Multi Shot survey by the method of magnetic orientation from a depth of 1570 feet to 3190 feet, with recordings of inclination and direction being obtained at approximate intervals of 62 feet.

This survey was conducted at the request of Amoco Production Company for their South Hobbs Unit No. 198, Lea County, State of New Mexico, in the field.

This data for this survey and the calculation were obtained and performed by me according to standards and procedures as set forth by Eastman Whipstock, Inc. and is true and correct to the best of my knowledge.

Gary DeSpain
Directional Supervisor/ Surveyor

The data for this survey has been examined by me and conforms to principles and procedures set forth by Eastman Whipstock, Inc.

Before me, the undersigned authority, on this day personally appeared Gary DeSpain, known to me to be the person whose name is subscribed to this instrument, who after being by me duly sworn on oath, states that he has knowledge of all the facts stated above and that this instrument is a true statement of facts therein recited.

Subscribed and sworn to before me on this 11 day of December, 1985



Timothy R. Stephens
Notary Public, State of Texas
My Commission Expires 4-1-89

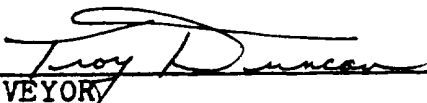
Timothy R. Stephens
Notary Public in and for the
County of Midland, Texas
My commission expires _____

SCIENTIFIC DRILLING CONTROLS

SURVEY CERTIFICATION

COMPANY Amoco Production WELL NAME & NO. SHU #198
DATE of CERTIFICATION 12-10-85 LOCATION Lea County, New Mexico
TYPE of SURVEY Magnetic Directional FROM 3221 TO 4264
JOB NUMBER 132M1285073 TICKET NUMBER 102565

THE ABOVE SURVEY WAS PERFORMED BY ME ON December 9 1985
THE RESULTS OBTAINED FROM ACTUAL FIELD DATA CONFORM TO ESTABLISHED
STANDARDS AND ARE TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE.



SURVEYOR
Troy Duncan

FILM TRANSFER RECEIPT

I HEREBY ACKNOWLEDGE RECEIPT OF ORIGINAL FILM OBTAINED ON THE ABOVE
SURVEY.

DATE RECEIVED 19____

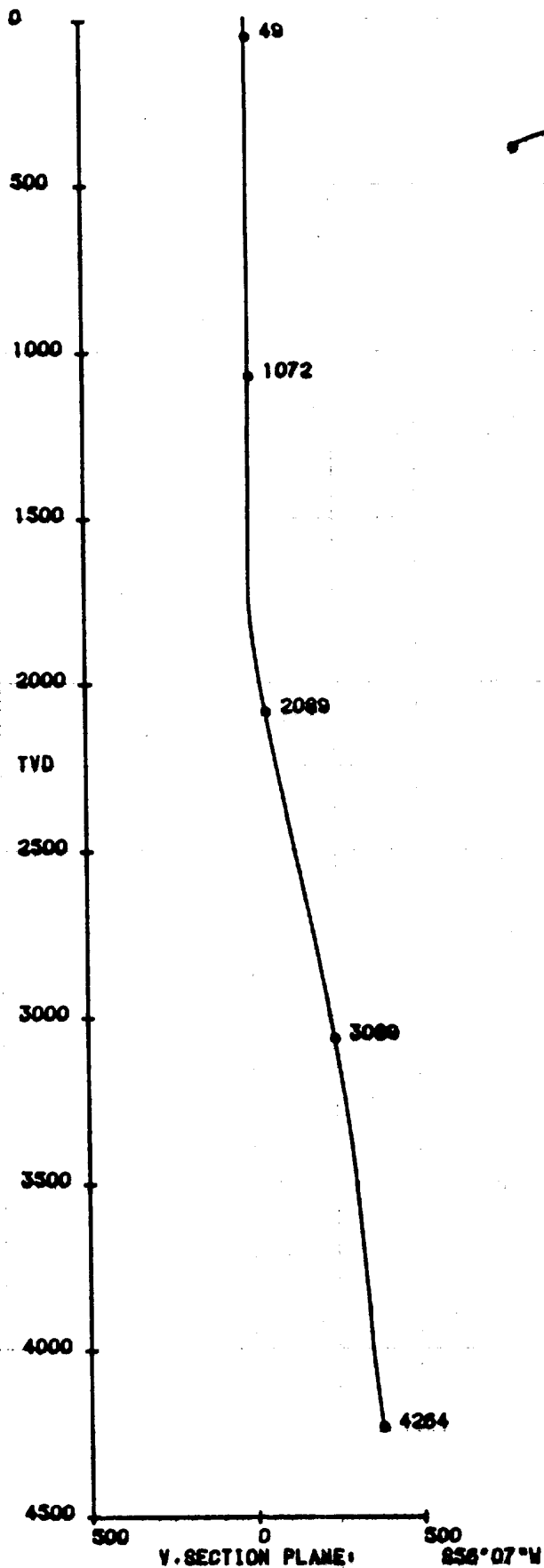
COMPANY REPRESENTATIVE

SURVEY CONFIRMATION

I HAVE EXAMINED THE ABOVE SURVEY AND FOUND THE DATA AND RESULTS
ACCEPTABLE ACCORDING TO CURRENT SCIENTIFIC DRILLING CONTROLS STANDARDS.

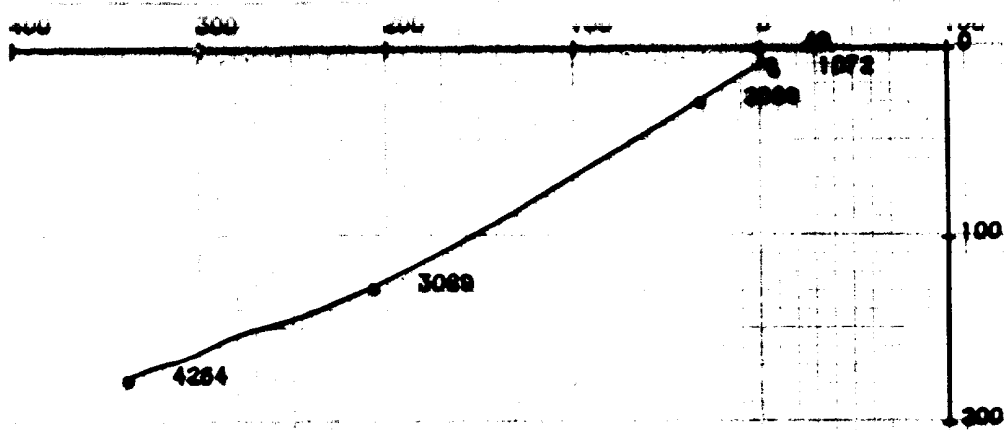


S.D.C. REPRESENTATIVE
Troy Duncan



SURVEY: 801023.4AM

SCALE 1"=500FT.



SCALE 1"=100FT.
NOTE: COORDINATES RELATIVE
TO SLOT

AMOCO PRODUCTION COMPANY

SOUTH HOBBS UNIT NO. 198

LEA COUNTY, NEW MEXICO

WELL: OHU NO. 128

SLOT: 1