



STATE OF NEW MEXICO  
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION

2040 S. PACHECO  
SANTA FE, NEW MEXICO 87505  
(505) 827-7131

March 27, 1996

**Amoco Production Company**  
**Southern Rockies Business Unit**  
**P. O. Box 800**  
**Denver, Colorado 80201**  
**Attention: J. W. Hawkins**

***Administrative Order DD-137***

Dear Mr. Hawkins:

Reference is made to Amoco Production Company's application dated February 7, 1996 for authorization to recomplete the existing Atlantic "D" Com D "LS" Well No. 5 (API No. 30-045-09857) by side tracking off of the vertical portion of the wellbore and drill a high angle slant hole to a pre-determined bottom-hole location in order to further develop the Blanco-Mesaverde Pool underlying its existing 320.60-acre standard gas spacing and proration unit ("GPU") comprising Lots 3 and 4 and the S/2 NW/4 and SW/4 (W/2 equivalent) of Section 2, Township 30 North, Range 10 West, NMPM, San Juan County, New Mexico.

**The Division Director Finds That:**

- (1) The application has been duly filed under the provisions of Rule 111(D) and (E) of the General Rules and Regulations of the New Mexico Oil Conservation Division ("Division"), revised by Division Order No. R-10388, issued by the Oil Conservation Commission in Case 11,274 on June 13, 1995;
- (2) The Atlantic "D" Com D "LS" Well No. 5, located at a standard gas well location 1650 feet from the South and West lines (Unit K) of said Section 2, was originally drilled and completed in 1954 as an initial Blanco-Mesaverde gas well, and was assigned the above-described 320.60-acre GPU;
- (3) By Order No. R-8170, as amended, the Division promulgated the "*General Rules For The Prorated Gas Pools of New Mexico/Special Rules and Regulations For The Blanco-Mesaverde Pool*", which includes provisions for 320-acre gas spacing and proration units and well location requirements whereby the initial well drilled on a GPU shall be located be no closer than 790 feet to the outer boundary of the quarter section on which the well is located and not closer than 130 feet to any quarter-quarter section line or subdivision inner boundary and the infill well drilled on an existing GPU shall be in the quarter section not containing a Mesaverde gas well and shall be located with respect to the restrictions as previously described;

- (4) Within this GPU Amoco is also producing Blanco-Mesaverde gas from its Atlantic "D" Com D "LS" Well No. 5-A (API No. 30-045-22522), located at a standard infill gas well location 1625 feet from the North line and 1475 feet from the West line (Unit F) of said Section 2;
- (5) A high angle slant hole drilled off of the existing vertical wellbore in the Atlantic "D" Com D "LS" Well No. 5 as proposed should provide Amoco a better opportunity to encounter the naturally occurring fracture system in the Mesaverde formation, which should result in a higher production rate and an increased ultimate recovery of gas from this well;
- (6) The applicant/operator proposes to kick-off from vertical at a depth of approximately 3,450 feet by milling a window in the existing production casing, drill in a southerly direction, build to an angle of approximately 28 degrees and continue drilling in such a manner as to bottom back into the Blanco-Mesaverde Pool, with total horizontal displacement of said wellbore to be approximately 850 feet;
- (7) The applicable drilling window or "producing area" for said wellbore should include that area within the SW/4 of said Section 2 that is no closer than 790 feet to the quarter section lines; and,
- (8) It appearing the applicant has satisfied all of the appropriate requirements prescribed in said Rule 111.D and E, the subject application should be approved and the well should be governed by the provisions contained within this order and all other applicable provisions of Division General Rule 111.

**IT IS THEREFORE ORDERED THAT:**

(1) The applicant, Amoco Production Company, is hereby authorized to recomplete its existing Atlantic "D" Com D "LS" Well No. 5 (API No. 30-045-0987), located at a standard gas well location 1650 feet from the South and West lines (Unit K) of Section 2, Township 30 North, Range 10 West, NMPM, San Juan County, New Mexico, by milling a window in the existing production casing at a depth of approximately 3,450 feet, kick-off from vertical in a southerly direction, build to an angle of approximately 28 degrees and continue drilling in such a manner as to bottom back into the Blanco-Mesaverde Pool (total horizontal displacement of said wellbore to be approximately 850 feet) within a drilling window or "producing area" comprising the SW/4 of said Section 2 that is no closer than 790 feet to the quarter section lines.

**PROVIDED HOWEVER THAT** prior to commencing directional drilling operations in said wellbore, the applicant shall establish the location of the kick-off point by means of a directional survey acceptable to the Division.

**PROVIDED FURTHER THAT** during or upon completion of directional drilling operations, the applicant shall conduct an accurate wellbore survey from the kick-off point to total depth in order that the subsurface bottomhole location, as well as the wellbore's true depth and course, may be determined.

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(2) The applicant shall notify the supervisor of the Aztec district office of the Division of the date and time said wellbore surveys are to be conducted so that they may be witnessed. The applicant shall further provide a copy of said wellbore surveys to the Santa Fe and Aztec offices of the Division upon completion.

(3) Blanco-Mesaverde gas production from both the existing Atlantic "D" Com D "LS" Well No. 5-A (API No. 30-045-22522), located at a standard infill gas well location 1625 feet from the North line and 1475 feet from the West line (Unit F) of said Section 2, and Atlantic "D" Com D "LS" Well No. 5, as described above, shall be attributed to the existing 320.60-acre non-standard gas spacing and proration unit ("GPU") comprising Lots 3 and 4 and the S/2 NW/4 and SW/4 (W/2 equivalent) of said Section 2.

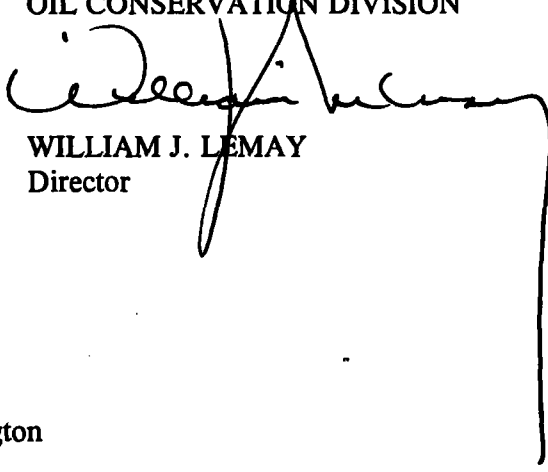
(4) The operator shall comply with all requirements and conditions set forth in Division General Rule 111.E(2) and any applicable requirements in 111.D and F and Order No. R-8170, as amended.

(5) Form C-105 shall be filed in accordance with Division Rule 1105 and the operator shall indicate thereon true vertical depth in addition to measured depths.

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

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

STATE OF NEW MEXICO  
OIL CONSERVATION DIVISION

  
WILLIAM J. LEMAY  
Director

S E A L

WJL/MES/kv

cc: Oil Conservation Division - Aztec  
U. S. Bureau of Land Management - Farmington

DD-AMOC. 11

Rec. 2/12/96  
Susp. 3/4/96  
Released 3/26/96

March 26, 1996

Amoco Production Company  
Southern Rockies Business Unit  
P. O. Box 800  
Denver, Colorado 80201

Attention: J. W. Hawkins

137  
Administrative Order DD-\*\*\*\*\*

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**IT IS THEREFORE ORDERED THAT:**

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

STATE OF NEW MEXICO  
OIL CONSERVATION DIVISION

WILLIAM J. LEMAY  
Director

S E A L

WJL/MES/kv



*Administrative Order DD-\*\*\*\**

*Amoco Production Company*

*March 26, 1996*

*Page No. 4*

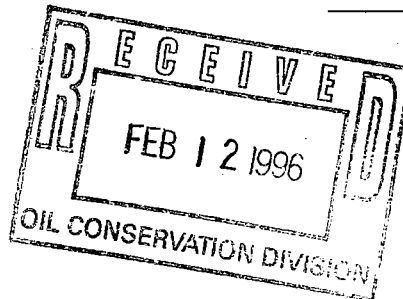
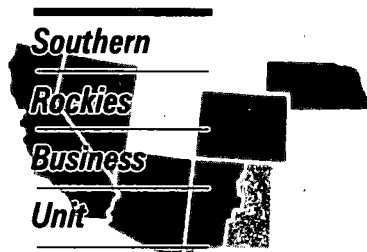
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cc: Oil Conservation Division - Aztec  
U. S. Bureau of Land Management - Farmington



February 7, 1996

Mr. William J. LeMay, Director  
New Mexico Oil Conservation Division  
2040 S. Pacheco Street  
P.O. Box 6429  
Santa Fe, NM 87505



**Application to Drill a Directional Well**  
**Atlantic D Com D #5 Well**  
**1650' FSL, 1650' FWL, Section 2-T~~31~~<sup>30</sup>N-R10W**  
**Blanco Mesaverde Pool**  
**San Juan County, New Mexico**

Amoco Production Company hereby requests administrative approval to enter the existing wellbore in the Atlantic D Com D #5 well referenced above and directionally drill the well in the Blanco Mesaverde Pool. The well is currently completed as a shut-in well in the Blanco Mesaverde Pool. Amoco believes that directionally drilling the well will help place the wellbore away from the original openhole completion and provide an opportunity to encounter the naturally occurring fracture system in the Mesaverde formation which will increase the producing rate and ultimate recovery of gas for this well. We are requesting the Project Area for this well to be the Blanco Mesaverde gas proration unit consisting of W/2 Section 2, T31N-R10W with the Producing Area for the well to consist of a rectangle inside the gas proration unit that is not closer than 790' from the outer boundaries of the gas proration unit.

In accordance with Rule 111-D.(2), attached to aid in your review are:

- 1) a plat showing the well location, project area and producing area for the project well and the offset spacing units, their wells and operators;
- 2) a vertically oriented plan view for the project well showing top and bottom of the pool, degree of angle to be built, kickoff point, penetration point and lateral length;
- 3) a horizontal plan view for the project well showing the project area, producing area, estimated azimuth and maximum length of the lateral;
- 4) a type log section identifying the top and bottom of the pool.

As notification, a copy of this application will be sent by certified mail return receipt requested to the offset operators shown on the attached list advising them that if they have any objection, it must be filed in writing within twenty (20) days of the date notice was sent.

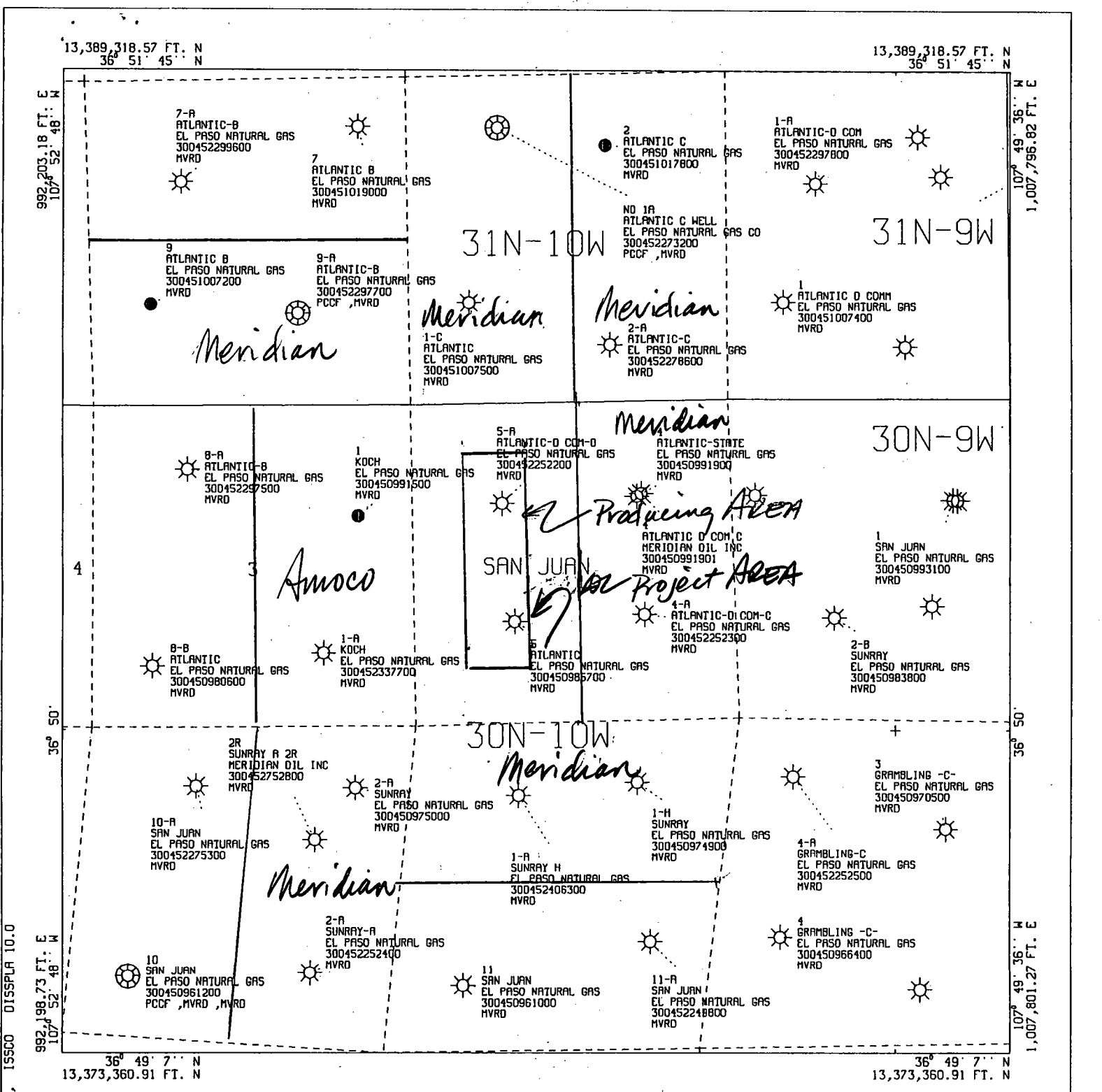
Sincerely,

J. W. Hawkins  
cc: Mike Kutas  
Patty Haefele

Frank Chavez, Supervisor  
NMOCD District III  
1000 Rio Brazos Road  
Aztec, NM 87410

**OFFSET OWNERS**

Meridian Oil Inc.  
Attn: Alan Alexander  
PO Box 4289  
Farmington NM 87499



All geological and geophysical data, including the interpretation thereof, appearing on this map is the private and confidential property of Amoco Production Company. The publication or reproduction thereof without the written permission of said Company is strictly prohibited.

POLYCONIC CENTRAL MERIDIAN - 107° 51' 12" W LON  
SPHEROID - 6

AMOCO PRODUCTION COMPANY  
PLAT MAP  
Atlantic D Com D LS 5  
Mesaverde

SCALE 1 IN. = 2,000 FT. FEB 7, 1996

HORIZONTAL DATUM NAD27

JOB-P1118002, ISSCO DISSPLA 10.0  
12.54.20 WED 7 FEB, 1996

JH11180---RUN=96038124414

# Amoco Production Company

## ENGINEERING CHART

Sheet No. \_\_\_\_\_ of \_\_\_\_\_

File \_\_\_\_\_

Appn \_\_\_\_\_

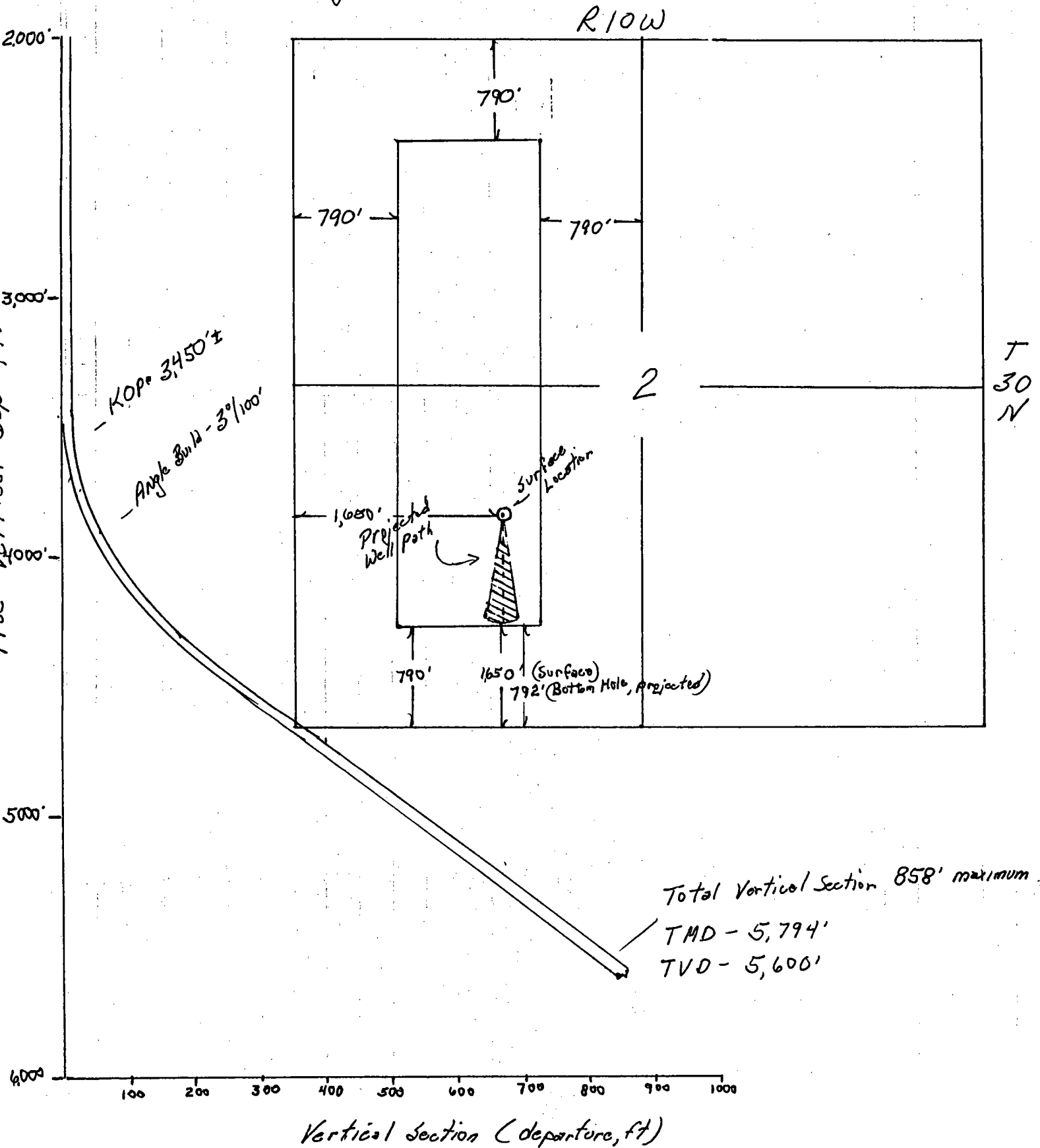
Date 2/5/96

By [Signature]

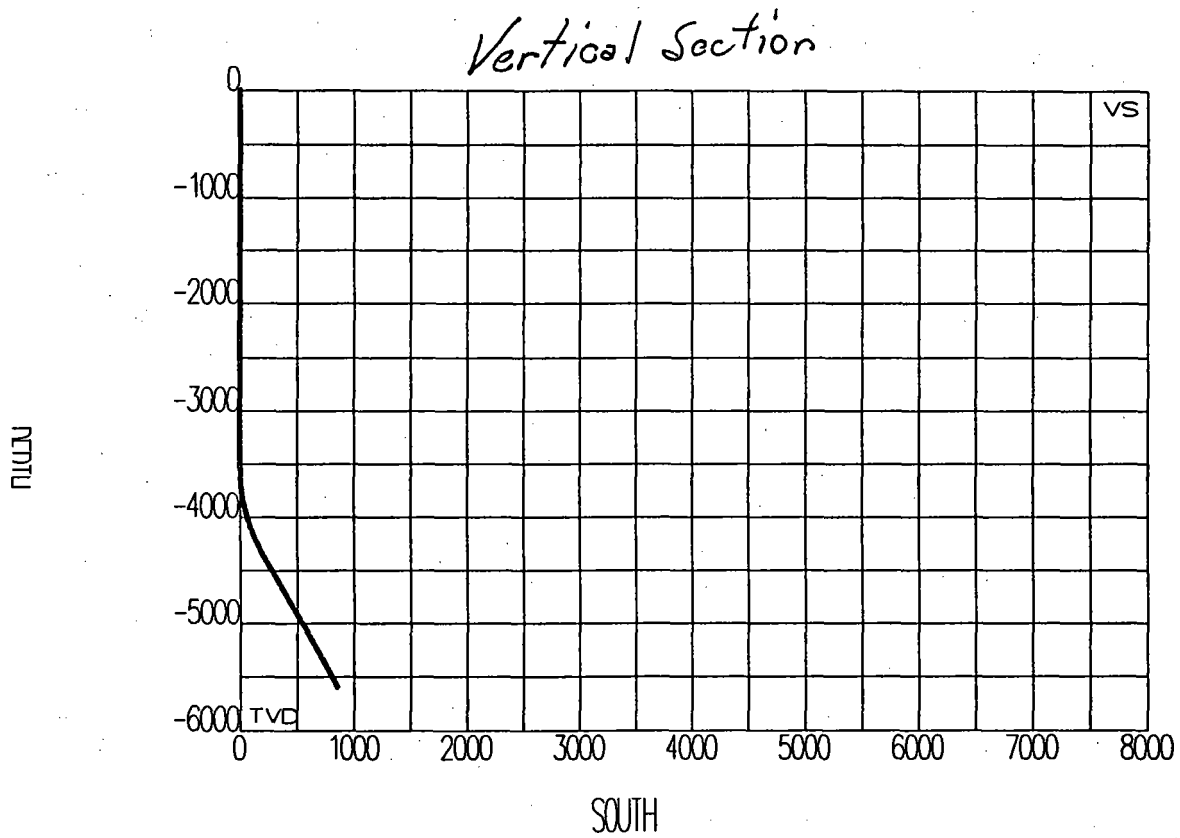
SUBJECT Atlantic D Com "D" LS #5

1650' FSL, 1650' FWL Sect 2, 30N, 10W

San Juan County, New Mexico



Atlantic D Com'D" LS #5  
1650' FSL, 1650' FNL  
Seat 2K, 30N, 10W  
San Juan County, New Mexico



*Atlantic D Com D<sup>a</sup> L S<sup>m</sup> 5*  
*1650' FSL, 1650' FWL*  
*Section 2K, T30N, R10W*  
*San Juan County, New Mexico*

Units are FEET

T I	Meas. Depth	Survey Incl Dir		Depth (TVD)	North -South	East -West	Vert. Section	Closure Dist Dir		Dog Leg
	.00	.00	180.00	.00	.00	.00	.00	0	0	.0
	3450.00	.00	180.00	3450.00	.00	.00	.00	0	0	.0
	3500.00	1.50	180.00	3499.99	-.65	.00	.65	1	180	3.0
	3600.00	3.00	180.00	3599.91	-4.58	.00	4.58	5	180	1.5
	3700.00	6.00	180.00	3699.59	-12.43	.00	12.43	12	180	3.0
	3800.00	9.00	180.00	3798.73	-25.48	.00	25.48	25	180	3.0
	3900.00	12.00	180.00	3897.04	-43.70	.00	43.70	44	180	3.0
	4000.00	15.00	180.00	3994.27	-67.04	.00	67.04	67	180	3.0
	4100.00	18.00	180.00	4090.14	-95.44	.00	95.44	95	180	3.0
	4200.00	21.00	180.00	4184.39	-128.81	.00	128.81	129	180	3.0
	4300.00	24.00	180.00	4276.77	-167.08	.00	167.08	167	180	3.0
	4400.00	27.00	180.00	4367.02	-210.13	.00	210.13	210	180	3.0
	4500.00	28.00	180.00	4455.72	-256.30	.00	256.30	256	180	1.0
	4600.00	28.00	180.00	4544.01	-303.25	.00	303.25	303	180	.0
	4700.00	28.00	180.00	4632.31	-350.19	.00	350.19	350	180	.0
	4800.00	28.00	180.00	4720.60	-397.14	.00	397.14	397	180	.0
	4900.00	28.00	180.00	4808.90	-444.09	.00	444.09	444	180	.0
	5000.00	28.00	180.00	4897.19	-491.04	.00	491.04	491	180	.0
	5100.00	28.00	180.00	4985.49	-537.98	.00	537.98	538	180	.0
	5200.00	28.00	180.00	5073.78	-584.93	.00	584.93	585	180	.0
	5300.00	28.00	180.00	5162.08	-631.88	.00	631.88	632	180	.0
	5400.00	28.00	180.00	5250.37	-678.82	.00	678.82	679	180	.0
	5500.00	27.00	180.00	5339.07	-725.00	.00	725.00	725	180	1.0
	5600.00	27.00	180.00	5428.17	-770.40	.00	770.40	770	180	.0
	5700.00	27.00	180.00	5517.27	-815.80	.00	815.80	816	180	.0
	5793.00	27.00	180.00	5600.14	-858.02	.00	858.02	858	180	.0

Atlantic D Com D 5

Lewis - 3162'  
 Cliff House - 4725'  
 Point Lobos - 5366'  
 TD (TVD) - 5600'

**SCHLUMBERGER WELL SURVEYING CORPORATION**  
 DIVISION OF SLOAN

**ELECTRICAL LOG**  
**GAMMA RAY & INDUCTION LOG**

COUNTY **SAN JUAN**  
 FIELD **BLANCO**  
 WELL **ATLANTIC STATE #5**  
 COMPANY **EL PASO NATURAL GAS COMPANY**  
 LOCATION **SEC. 2-30N-10W**  
 COUNTY **SAN JUAN**  
 STATE **NEW MEXICO**

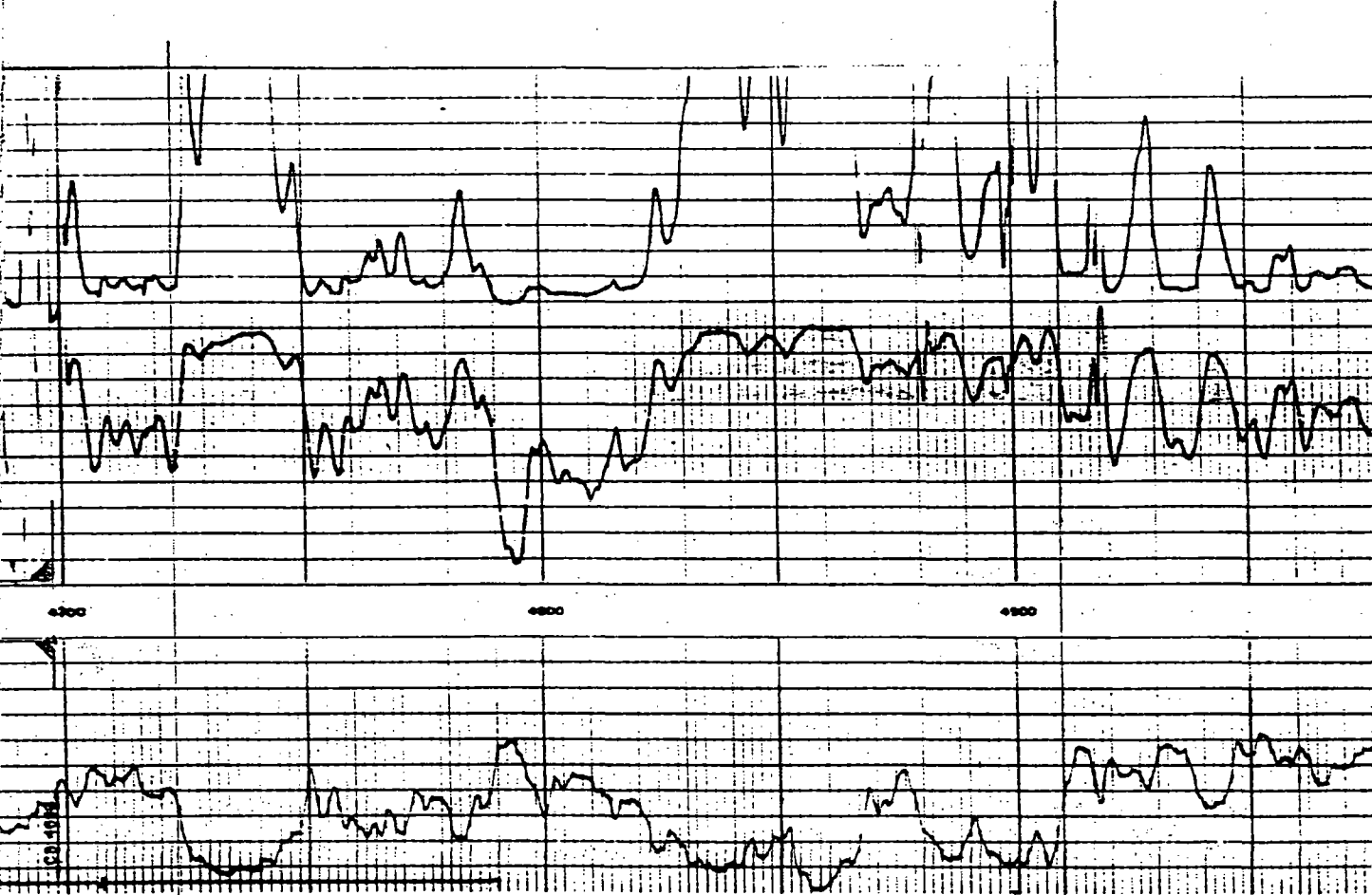
Location of  
 1650' FF S.  
 1650' FF N.  
 SEC. 2-30N-10W

ES-GRL-11  
 (ML-MS-2T)

Elevation D.F.A.  
 F.A.  
 or G.L.

FLUNG No.

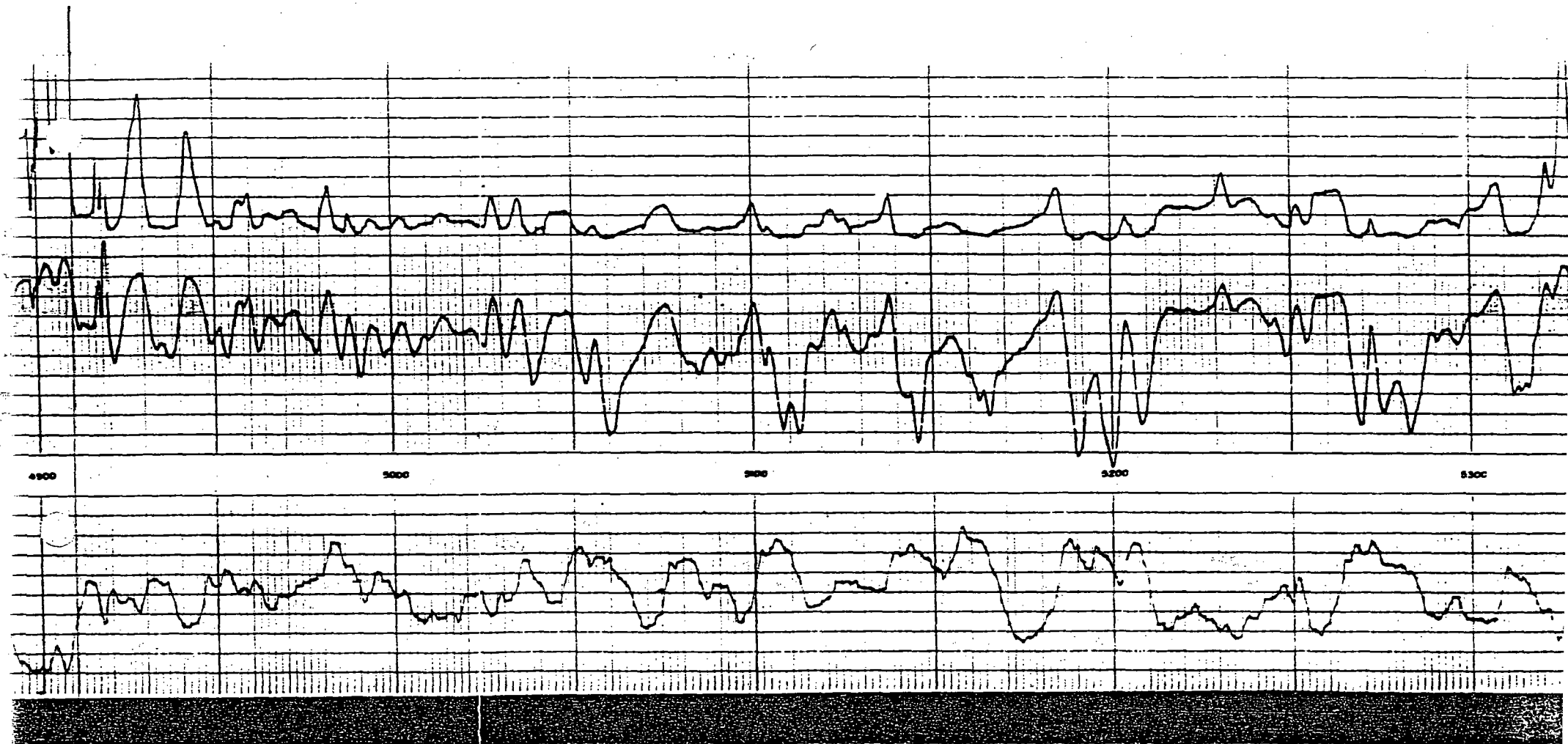
RUN No.	ONE-ES	ONE-GRL	ONE-IND
Date	11-29-54	11-29-54	11-29-54
First Reading	4699	5487	5486
Last Reading	166	4500	4698
Feet Measured	4532	987	788
Csg. Schum.	166	4698	4698
Csg. Driller	165	4629	4629
Depth Reached	4699	5490	5490
Bottom Driller	4695	5485	5485
Depth Datum	KS	KS	KS
Wind Dir.	SE	DRY-GAS	DRILLED
Drill. Viscosity	84		
Resist.	2.0 75		
Res. BH	1.2 124		
ph	7.7		
Wtr. Loss	12.3		
Temp	124	166	166
Dr. Size	8 3/4"	6 1/4" TO 4995'	4995' TO D.
SPGRS. AM	16	SPGRS. 10.50000 21"	
AM	64	T.C. 2 TO 4995' TO 100'	
AD	18.2"		
Csg. Reg. Temp	1 MS.	2 MS.	2 MS.
Trans. No.	1735F	1714F	1714F
Recorded By	MORRIS	KEET	COVEY
Witness By	PRITCHARD	PRITCHARD	PRITCHARD



CH

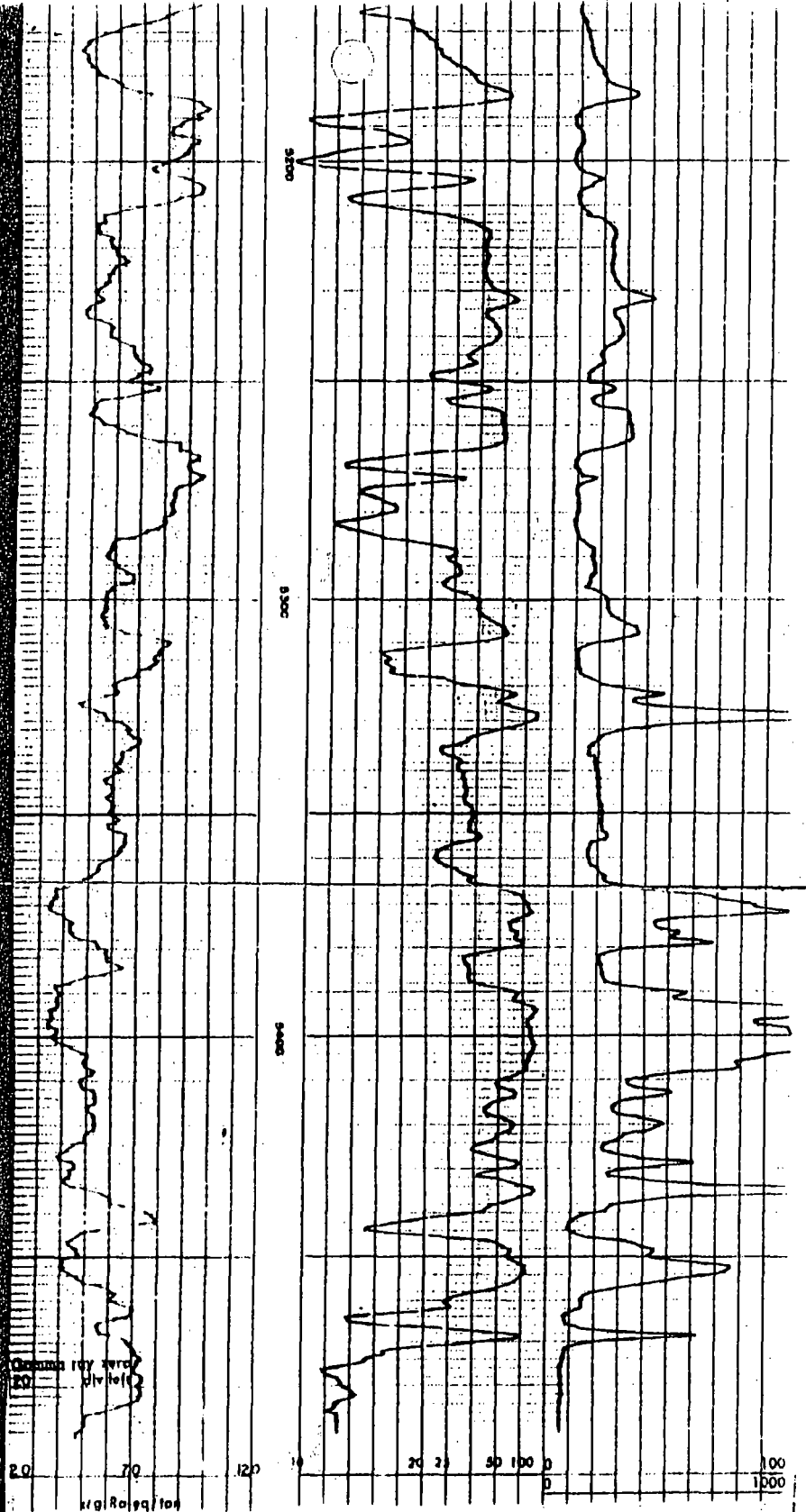
ME-NEFER





MF 10/2/20

30



GAMMA RAY LOG  
 FIRST READING 5487'  
 TOTAL DEPTH REACHED 5490'

INDUCTION LOG  
 FIRST READING 5486'  
 TOTAL DEPTH REACHED 5490'

EL PASO NATURAL GAS COMPANY  
 ATLANTIC STATE #5  
 SEC. 2-30N-10W  
 SAN JUAN, NEW MEXICO  
 ELEV. 6421' O.L.

CMD :  
OG5SELECT

ONGARD  
INQUIRE LAND BY SECTION

03/26/96 11:08:36  
OGOMES -EMFB  
PAGE NO: 1

Sec : 02 Twp : 30N Rng : 10W Section Type : NORMAL

4 40.27 CS E02724 5 06/59 AMOCO PROD CO & C C	3 40.33 CS B11124 29 03/54 EL PASO NAT GAS & C A	2 40.39 CS E05316 3 06/61 EL PASO PRODUCTIO C	1 40.45 CS E00060 82 01/55 MERIDIAN OIL PROD C
E 40.00 CS E02724 5 06/59 AMOCO PROD CO & C C	F 40.00 CS B10400 3 06/53 VASTAR RESOURCES, C A	G 40.00 CS B10400 3 06/53 VASTAR RESOURCES, C A	H 40.00 CS E00453 23 07/55 MERIDIAN OIL PROD C A

PF01 HELP      PF02      PF03 EXIT      PF04 GoTo      PF05      PF06  
PF07 BKWD      PF08 FWD      PF09 PRINT      PF10 SDIV      PF11      PF12

160.60

320.60

33  
27  
60

CMD :  
OG5SECT

ONGARD  
INQUIRE LAND BY SECTION

03/26/96 11:08:44  
OGOMES -EMFB  
PAGE NO: 2

Sec : 02 Twp : 30N Rng : 10W Section Type : NORMAL

L	K	J	I
40.00	40.00	40.00	40.00
CS	CS	CS	CS
E02724 5 06/59	B10400 3 06/53	E02724 5 06/59	B10400 3 06/53
AMOCO PROD CO & C	VASTAR RESOURCES,	AMOCO PROD CO & C	VASTAR RESOURCES,
C	C	C	C
A	A	A	A
M	N	O	P
40.00	40.00	40.00	40.00
CS	CS	CS	CS
E05316 5 06/61	E05316 5 06/61	B10400 3 06/53	B10400 3 06/53
FOUR STAR OIL & G	FOUR STAR OIL & G	VASTAR RESOURCES,	VASTAR RESOURCES,
C	C	C	C

PF01 HELP	PF02	PF03 EXIT	PF04 GoTo	PF05	PF06
PF07 BKWD	PF08 FWD	PF09 PRINT	PF10 SDIV	PF11	PF12