



STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION

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

May 3, 1996

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

Administrative Order DD-142

Dear Mr. Hawkins:

Reference is made to Amoco Production Company's application dated April 10, 1996 for authorization to recomplete the existing Yager "LS" Well No. 1 (API No. 30-045-10052) 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 322.90-acre non-standard gas spacing and proration unit ("GPU") comprising Lots 3 and 4, the E/2 SW/4, and the SE/4 (S/2 equivalent) of Section 31, Township 31 North, Range 11 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 Yager "LS" Well No. 1, located at a standard gas well location 990 feet from the South and West lines (Lot 4/Unit M) of said Section 31, was originally drilled and completed in 1953 as an initial Blanco-Mesaverde gas well, and was assigned the above-described 322.90-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 Thurston Com "A" Well No. 1-E (API No. 30-045-24700), located at a standard infill gas well location 1840 feet from the South line and 1100 feet from the East line (Unit I) of said Section 31;
- (5) A high angle slant hole drilled off of the existing vertical wellbore in the Yager "LS" Well No. 1 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 3,200 feet by milling a window in the existing production casing, drill in an easterly direction, build to an angle of approximately 20 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 400 feet;
- (7) The applicable drilling window or "producing area" for said wellbore should include that area within the SW/4 equivalent of said Section 31 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 Yager "LS" Well No. 1 (API No. 30-045-10052), located at a standard gas well location 990 feet from the South and West lines (Lot 4/Unit M) of Section 31, Township 31 North, Range 11 West, NMPM, San Juan County, New Mexico, by milling a window in the existing production casing at a depth of approximately 3,200 feet, kick-off from vertical in an easterly direction, build to an angle of approximately 20 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 400 feet) within a drilling window or "producing area" comprising the SW/4 equivalent of said Section 31 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.

(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 Thurston Com "A" Well No. 1-E (API No. 30-045-24700), located at a standard infill gas well location 1840 feet from the South line and 1100 feet from the East line (Unit I) of said Section 31, and Yager "LS" Well No. 1, as described above, shall be attributed to the existing 322.90-acre non-standard gas spacing and proration unit ("GPU") comprising Lots 3 and 4, the E/2 SW/4, and the SE/4 (S/2 equivalent) of said Section 31.

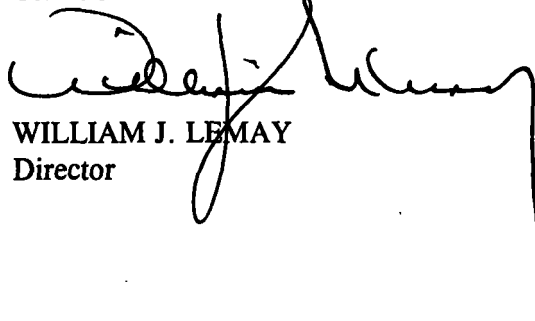
(4) The operator shall comply with all requirements and conditions set forth in Division General Rule 111.E(2) and any applicable requirements in 111.D and F and Order No. R-8170, as amended.

(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.12

April 28, 1996

Rec. 4/12/96
Susp. 5/2/96
Revised 5/2/96

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

Attention: J. W. Hawkins

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Administrative Order DD-*****

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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

*Administrative Order DD-*****

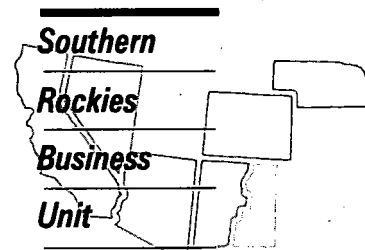
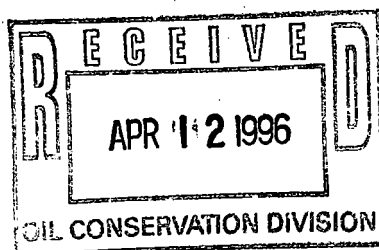
Amoco Production Company

April 28, 1996

Page No. 4

WJL/MES/kv

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



April 10, 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
Rule 111 as Amended by Order No. R-10388
Yager LS #1 Well
990' FSL, 990' FWL, Section 31-T31N-R11W
Blanco Mesaverde Pool
San Juan County, New Mexico

Amoco Production Company hereby requests administrative approval to enter the existing wellbore in the Yager LS #1 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. 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 S/2 Section 31, T31N-R11W 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

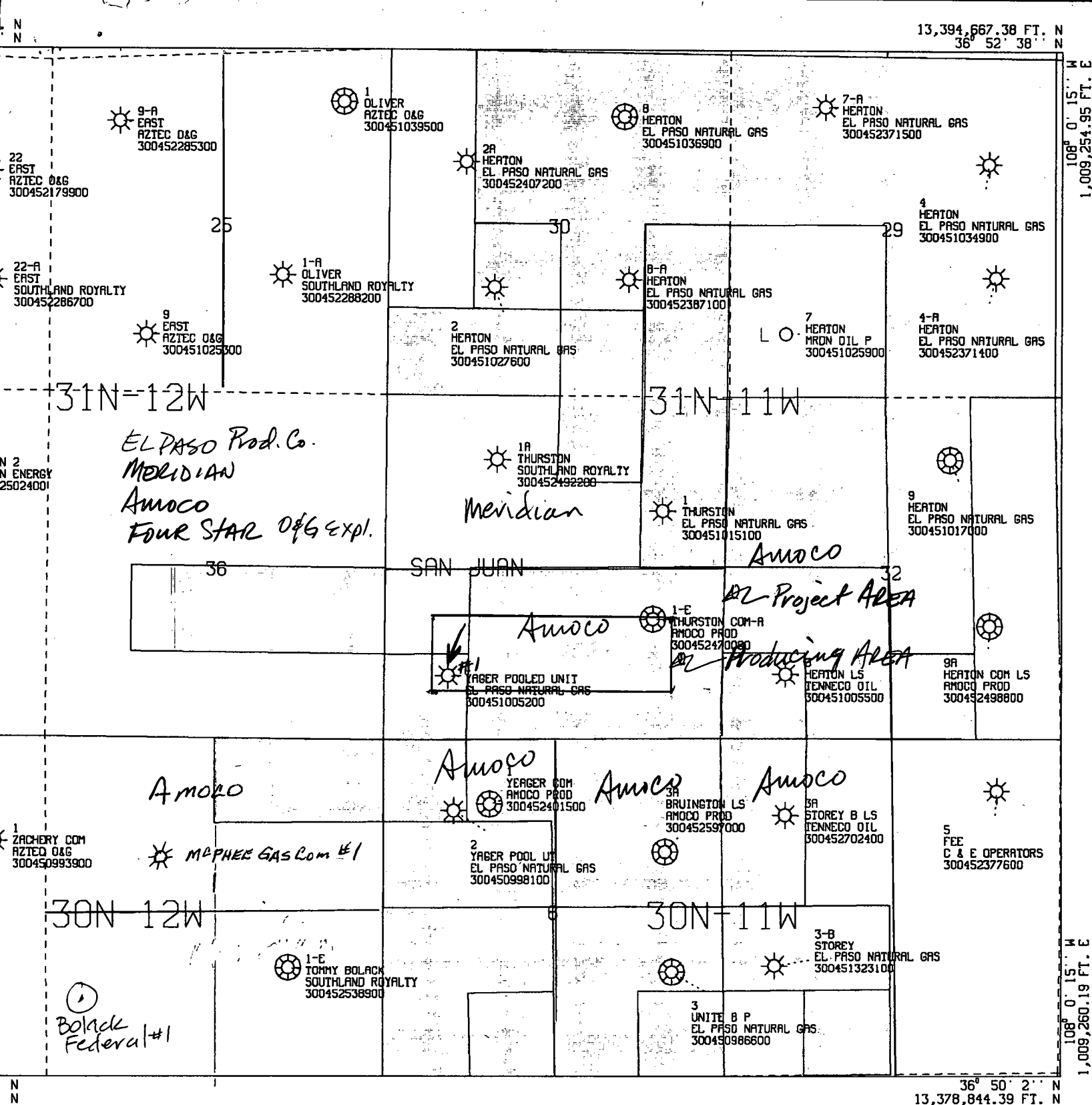
cc: Mike Kutas
Patty Haefele
Well File
Proration File (986.511)

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

OFFSET OWNERS

El Paso Production Co.
Meridian Oil Inc.
Attn: Alan Alexander
PO Box 4289
Farmington NM 87499

Four Star Oil and Gas Exploration
PO Box 2100
Denver CO 80201



and geophysical data, including the interpretation
g on this map is the private and confidential property
ion Company. The publication or reproduction thereof
n permission of said Company is strictly prohibited.

AMOCO PRODUCTION COMPANY
PLAT MAP

YAGER LS 1 Sec. 31-T31N-R11W
Surrounding Mesaverde Wells

SCALE 1 IN. = 2,000 FT. MAR 27, 1996

MERIDIAN - 108° 2' 9" W LON

HORIZONTAL DATUM NAD27

Amoco Production Co.

Structure : Yager LS #1

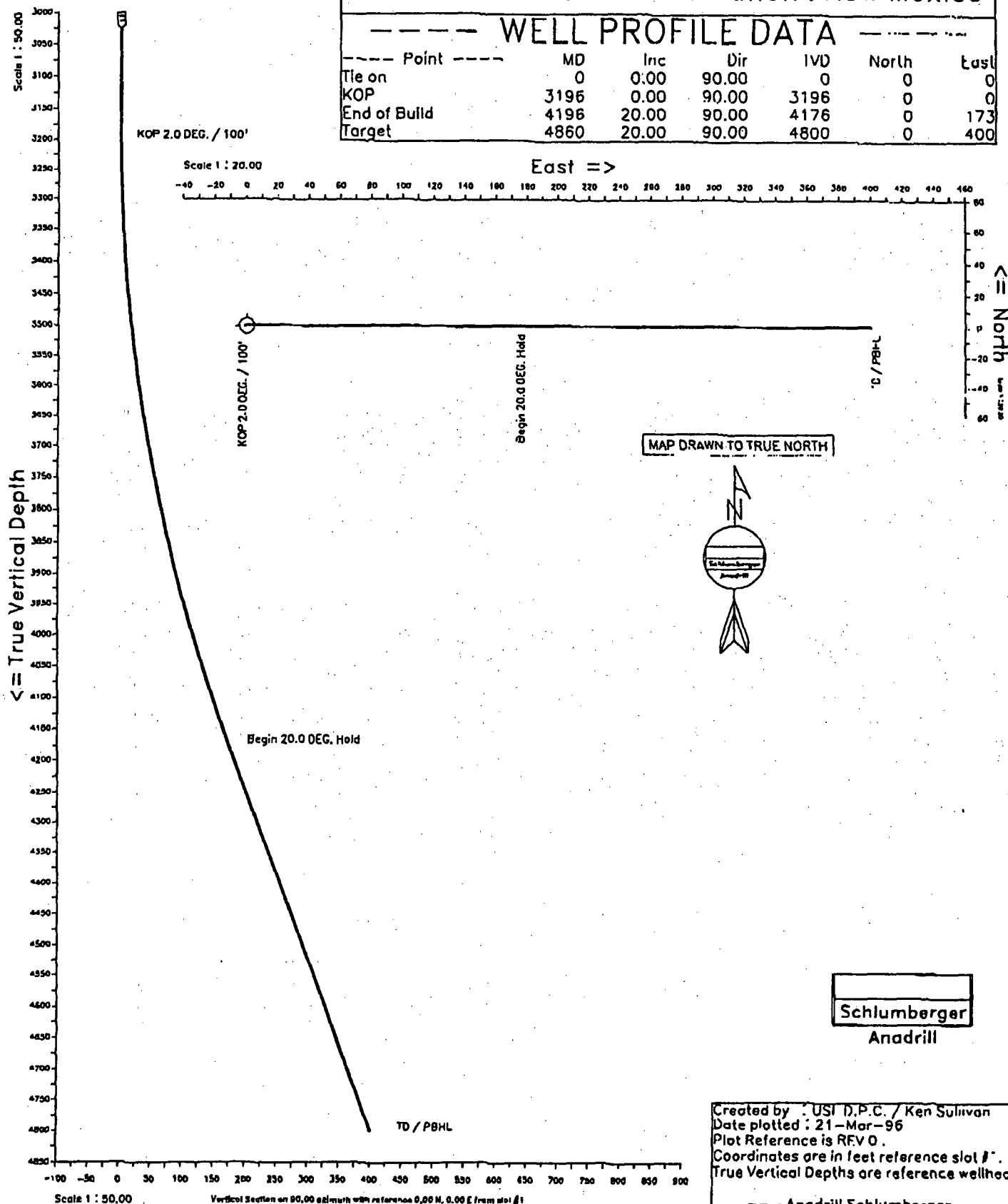
Well : #1

Field : San Juan

Location : New Mexico

WELL PROFILE DATA

Point	MD	Inc	Dir	IVD	North	East
Tie on	0	0.00	90.00	0	0	0
KOP	3196	0.00	90.00	3196	0	0
End of Build	4196	20.00	90.00	4176	0	173
Target	4860	20.00	90.00	4800	0	400



Amoco Production Co.
Yager LS #1, #1
San Juan, New Mexico

PROPOSAL LISTING Page 1
Your ref : REV 0
Last revised : 21-Mar-96

Measured Depth	Inclin. Degrees	Azimuth Degrees	True Vert. Depth	R E C T A N G U L A R C O O R D I N A T E S		Dogleg Deg/100Ft	Vert Sect
0.00	0.00	90.00	0.00	0.00 N	0.00 E	0.00	0.00
500.00	0.00	90.00	500.00	0.00 N	0.00 E	0.00	0.00
1000.00	0.00	90.00	1000.00	0.00 N	0.00 E	0.00	0.00
1500.00	0.00	90.00	1500.00	0.00 N	0.00 E	0.00	0.00
2000.00	0.00	90.00	2000.00	0.00 N	0.00 E	0.00	0.00
2500.00	0.00	90.00	2500.00	0.00 N	0.00 E	0.00	0.00
3000.00	0.00	90.00	3000.00	0.00 N	0.00 E	0.00	0.00
3195.87	0.00	90.00	3195.87	0.00 N	0.00 E	0.00	0.00
3295.87	2.00	90.00	3295.85	0.00 N	1.75 E	2.00	1.75
3395.87	4.00	90.00	3395.71	0.00 N	6.98 E	2.00	6.98
3495.87	6.00	90.00	3495.32	0.00 N	15.69 E	2.00	15.69
3595.87	8.00	90.00	3594.57	0.00 N	27.88 E	2.00	27.88
3695.87	10.00	90.00	3693.33	0.00 N	43.52 E	2.00	43.52
3795.87	12.00	90.00	3791.49	0.00 N	62.60 E	2.00	62.60
3895.87	14.00	90.00	3888.92	0.00 N	85.10 E	2.00	85.10
3995.87	16.00	90.00	3985.51	0.00 N	110.98 E	2.00	110.98
4095.87	18.00	90.00	4081.14	0.00 N	140.21 E	2.00	140.21
4195.87	20.00	90.00	4175.68	0.00 N	172.77 E	2.00	172.77
4500.00	20.00	90.00	4461.47	0.00 N	276.79 E	0.00	276.79
4860.25	20.00	90.00	4800.00	0.00 N	400.00 E	0.00	400.00

KOP 2.0 DEG. / 100'

Begin 20.0 DEG. Hold

TD / PBHL

All data is in feet unless otherwise stated.
Coordinates are from slot #1 and TVDs are from wellhead.
Vertical section is from wellhead on azimuth 90.00 degrees.
Calculation uses the minimum curvature method.

SCHLUNBERGER WELL SURVEYING CORPORATION

HOUSTON, TEXAS



ELECTRICAL LOG
GAMMA RAY & INDUCTION LOG

COUNTY SAN JUAN FIELD of LOCATION LA PLATA N.C. WELL YAGER POOL UNIT #1 COMPANY EL PASO NATURAL GAS COMPANY	COMPANY	EL PASO NATURAL GAS COMPANY	Location of Well	990' FR S/L 990' FR N/L SEC. 31-31N-11W
	WELL	YAGER POOL UNIT #1		
	FIELD	LA PLATA N.C.		
	LOCATION	SEC. 31-31N-11W		
	COUNTY	SAN JUAN		
	STATE	NEW MEXICO	Elevation: D.F.: 5857 K.B.: or G.L.: 5847	FILING No.

RUN No.	ONE-ES	ONE-GRL	ONE-IND
Date	3-13-53	3-17-53	3-17-53
First Reading	4170	4850	4248
Last Reading	250	3800	4170
Feet Measured	3920	1050	578
Csg. Schium.	---	4170	4170
Csg. Driller	170	4165	4165
Depth Reached	4170	4852	4852
Bottom Driller	4165	4850	4850
Depth Datum	RDB	RDB	RDB
Mud Nat.	ADGA-GEL	DRY GAS	DRY GAS DRILLED
Density	9.4		
Viscosity	42		
Resist.	5.0m 48 F	(a)	F
Res. BHT	2.3m 114 F	(a)	F
pH	m F	(a)	F

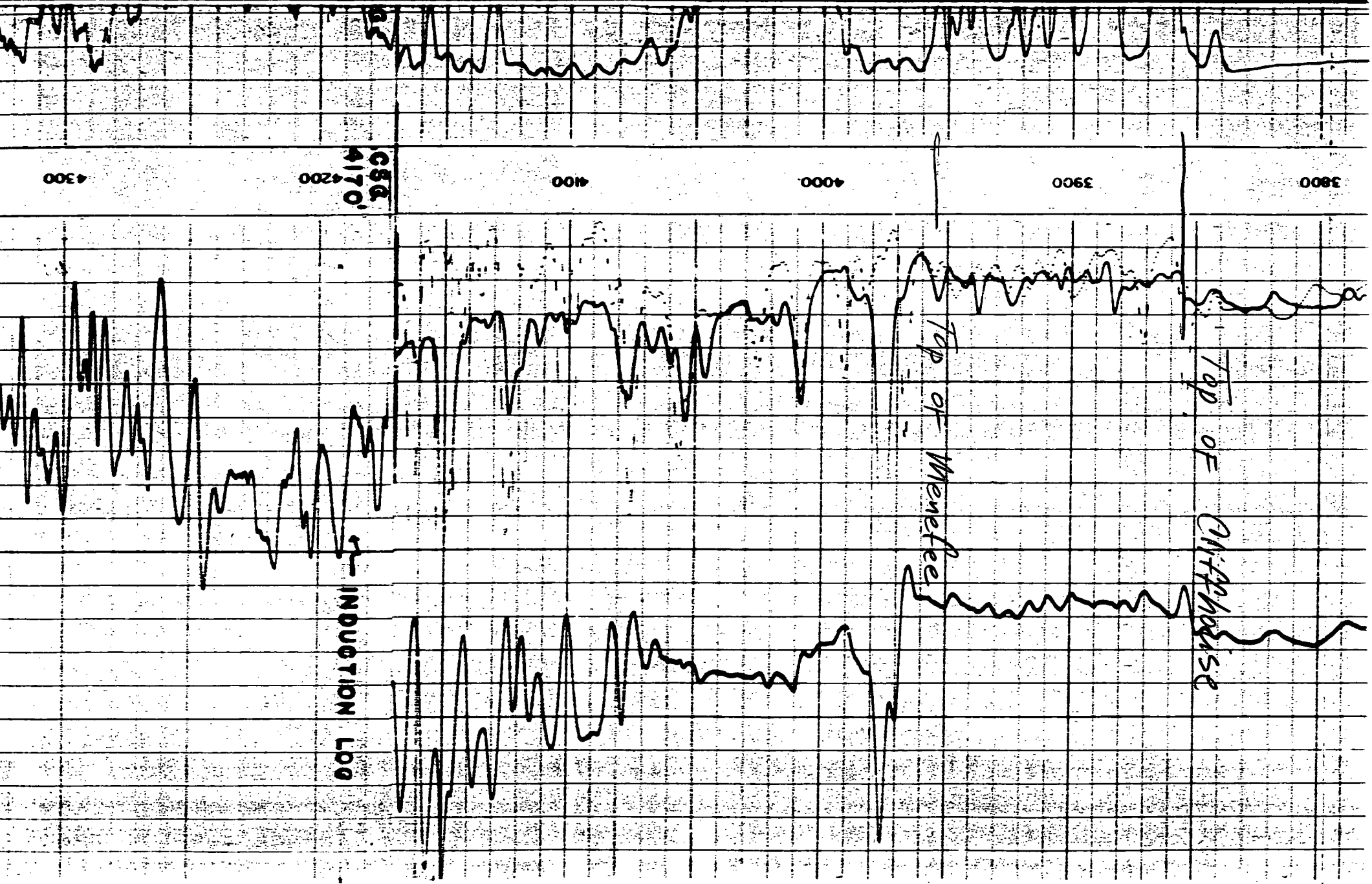
FOLD HERE

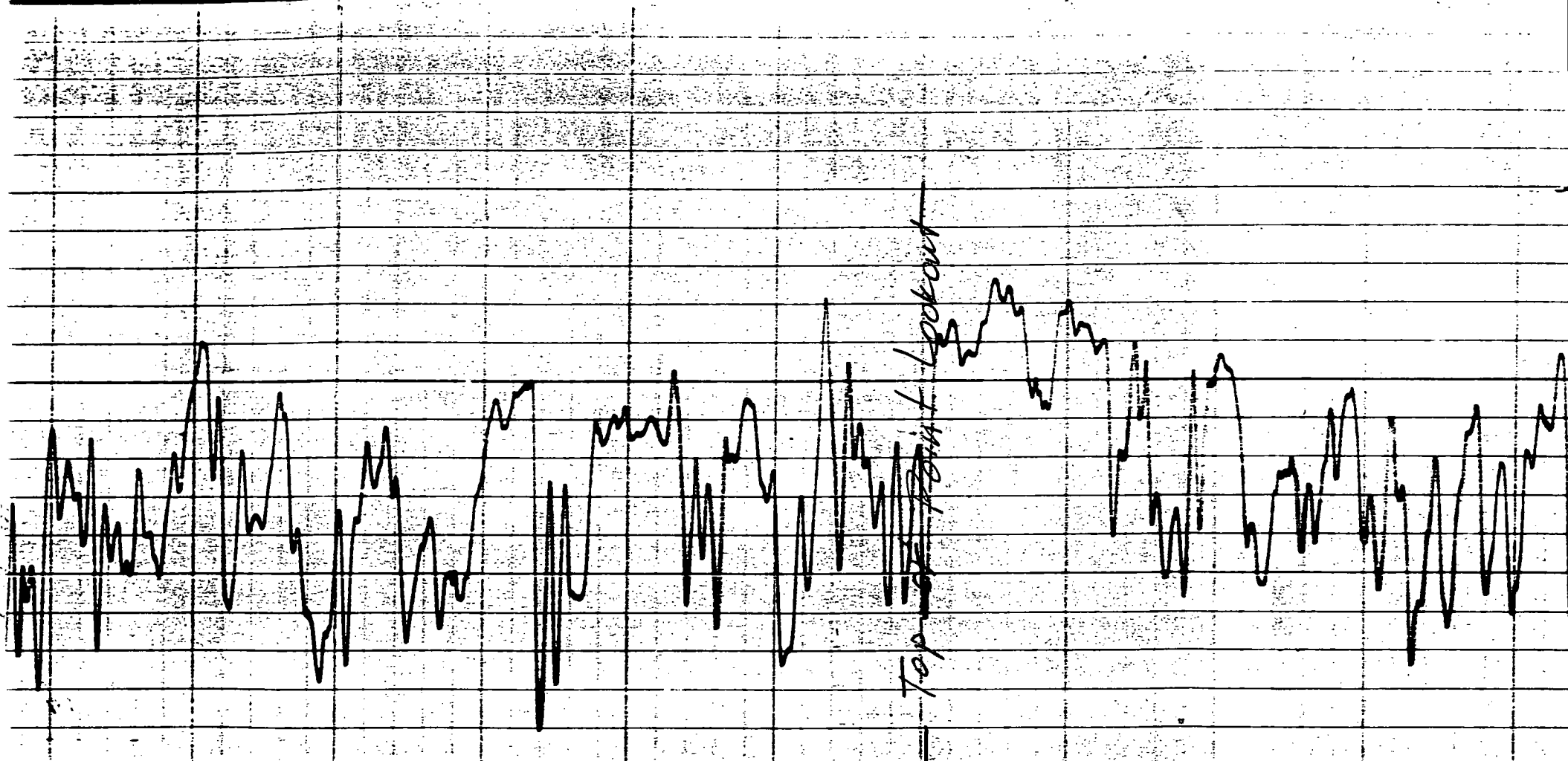
ONE MUD FROM FLOW LINE

FLUID LEVEL AT 250'

EMISSION FOR GAMMA RAY IS 3 DIVISIONS TO THE LEFT OF TRACK ONE
FOR GRL-TYPE F IS 2000/HR

POTENTIAL	DEPTH	RESISTIVITY -ohms.m ² /m	RESISTIVITY -ohms.m ² /m
		NORMAL	LONG NORMAL
		100 0	100
		1000 0	1000





4300

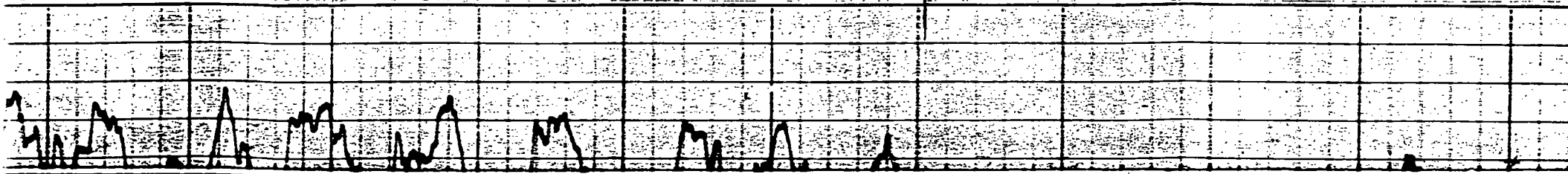
4400

4500

4600

4700

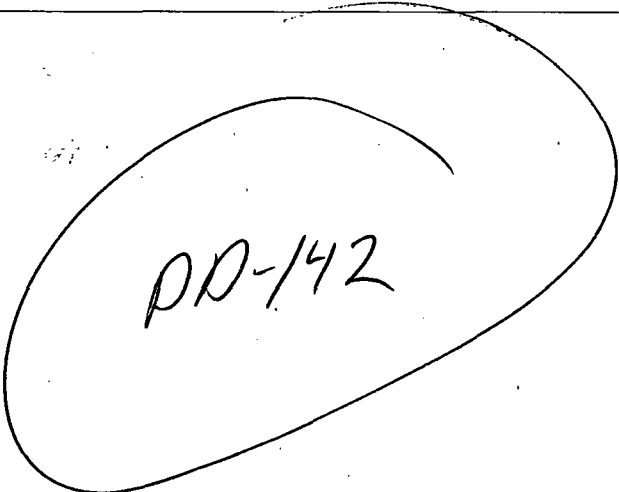
4800



Mike Stogner

From: Ernie Busch
To: Mike Stogner
Subject: AMOCO YAGER LS #1(DD)
Date: Thursday, May 09, 1996 9:34AM
Priority: High

YAGER LS #1
M-31-31N-11W
990' FSL; 990' FWL
RECOMMEND: APPROVAL



PD-142

CMD :
OG5SECT

ONGARD
INQUIRE LAND BY SECTION

04/28/96 15:31:43
OGOMES -EMDN
PAGE NO: 2

Sec : 31 Twp : 31N Rng : 11W Section Type : NORMAL

3 41.38 Federal owned	K 40.00 Federal owned	J 40.00 Federal owned	I 40.00 Federal owned A A
4 41.52 Federal owned A A	N 40.00 Federal owned	O 40.00 Federal owned	P 40.00 Federal owned

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

1
24
82.90

322.90

CMD :
OG5SECT

ONGARD
INQUIRE LAND BY SECTION

04/28/96 15:31:30
OGOMES -EMDN
PAGE NO: 1

Sec : 31 Twp : 31N Rng : 11W Section Type : NORMAL

1 41.08	C 40.00	B 40.00	A 40.00
Federal owned	Federal owned	Fee owned	Fee owned
	A		A A
2 41.22	F 40.00	G 40.00	H 40.00
Federal owned	Federal owned	Federal owned	Fee owned
A			A

PF01 HELP
PF07 BKWD

PF02
PF08 FWD

PF03 EXIT
PF09 PRINT

PF04 GoTo
PF10 SDIV

PF05
PF11

PF06
PF12