



GEO-TECH PETROLEUM MANAGEMENT CORPORATION

4230 LBJ FREEWAY, DALLAS, TEXAS 75234, 214/ 387-3385

July 6, 1975

Mr. Robert V. Ratts
1209 Birch
Hurst, Texas

BEFORE EXAMINER STAMETS
OIL CONSERVATION COMMISSION

EXHIBIT NO. ~~10~~ 11

CASE NO. 5571

Submitted by Cox

Hearing Date 11-19-75

Re: Federal "EA" #1 Re-entry
NW $\frac{1}{4}$, NW $\frac{1}{4}$, Sec. 12-T-17-S-R-28E
Eddy County, New Mexico

Dear Bob:

I received the Plat from Bo Coates with Eastman, concerning the approximate target which was suggested, when we briefly met a few weeks ago.

After getting a copy of the deviation surveys run in the #1 and #2 wells, it appears that normal migration is dominant to the west from surface down to top of Abo (approximately 5200') where it changes to NW. (See attached Plat)

In discussing this with some engineers who have been involved in directional drilling, they suggest we attempt to go off in a northerly or northeasterly direction (red line). The dip will catch us and the radius will go to the NW anyway, as indicated by the curved blue line, when we encounter the top of the Abo at 5200'.

The #1 was given a fairly large stimulation and frac job at 6162'-6180'. The #2 was given a My-T-acid job in basically the same interval, calculated to extend any fractures out to 400'-600', although the results didn't suggest that or we would have communicated with the J-1 to the west, if the zone extends down to or near our lease.

Suggestions are that we should take off at a high enough angle to make sure we clear the stub, then drop angle. In checking the production offsetting us, the J-1 is cutting considerable water and there are rumors that its' oil production is not as high as reported. We know the F-3 and F-12 are producing 400-450 Bbls/day water free, so the north central quadrant of our lease looks more prospective.

I tried to reach you yesterday at the motel, but you had checked out. Cactus should be on location sometime this week. If you need to contact me I'll be in Hamilton, call the Spotted Horse Motel and leave a message.

Good luck.

Very truly yours,

Robert G. Cox

Robert G. Cox

RGC/lrc

Attached: Deviation Survey Plat

Federal EA Lease
NM 8852

PROSPECTIVE AREA

AREA OF STIMULATION INFLUENCE

FEDERAL EA "2"

AREA OF STIMULATION INFLUENCE

FEDERAL EA "1"

West Lease Line 3

330'

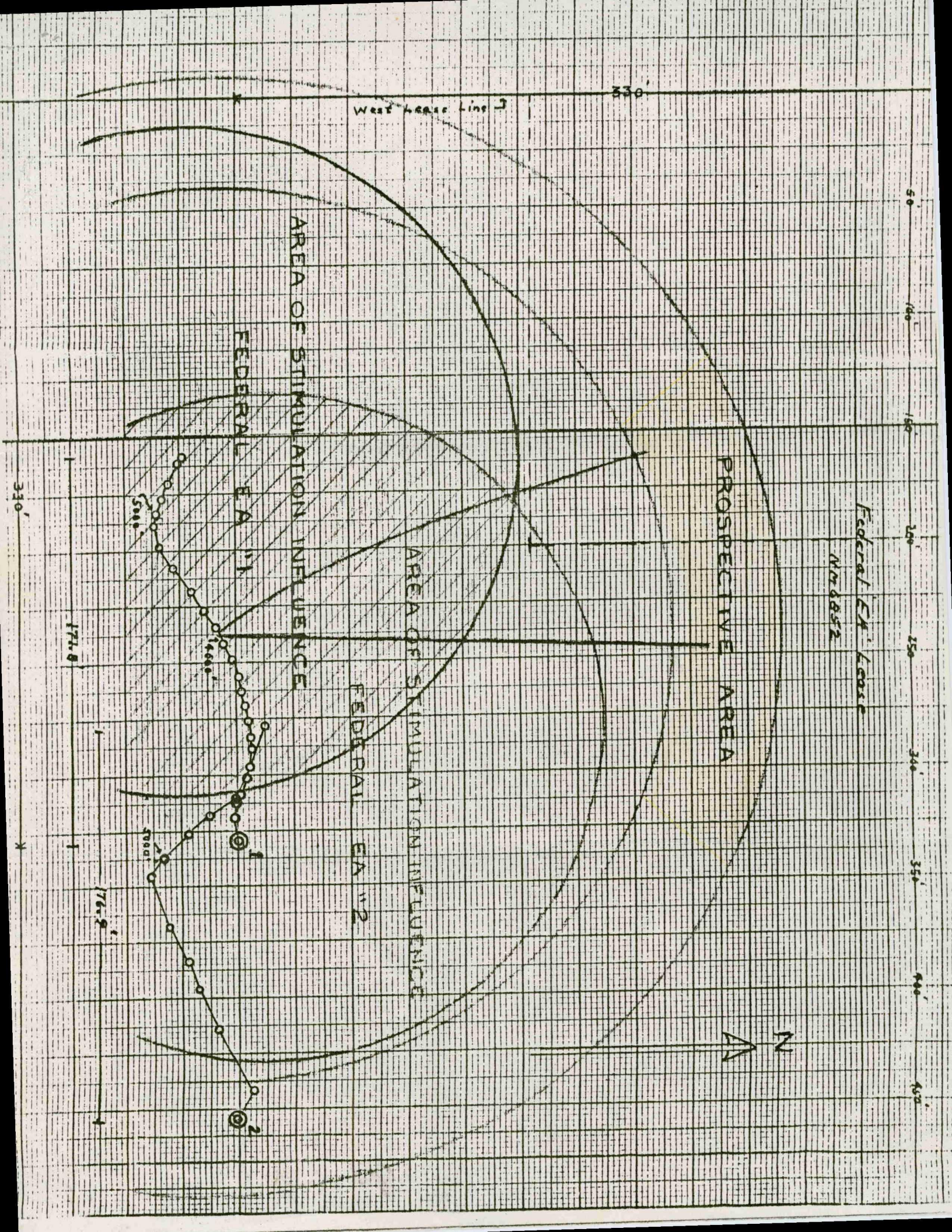
174.8'

176.8'

K

N

50' 100' 150' 200' 250' 300' 350' 400'



44°59' 330' 90°11' 331' 469.3' Federal EA No. 1 Elev. 3605.5



12

DATE CHECKED: October 20, 1975
 WEATHER: Clear, Warm
 P.C.: M. Webb
 CHAIN: B. Attaway
 J. Boling

WITNESS: W. A. Gressett
 District Supervisor
 N.M.O.C.C.
 Artesia, New Mexico

WITNESS: L. C. Hudry
 Senior Operations Engineer
 Atlantic Richfield
 Hobbs, New Mexico

WITNESS: D. Gordon
 Petroleum Engineering Technician
 U.S.G.S.
 Artesia, New Mexico

BEFORE EXAMINER NUTTER

OIL CONSERVATION COMMISSION

Att. Rich EXHIBIT NO. 1

CASE NO. 5571

I HEREBY CERTIFY THAT THIS PLAT WAS
 MADE FROM NOTES TAKEN IN THE FIELD IN
 A BONA FIDE SURVEY AND UNDER MY SUPER-
 VISION, AND THAT THE SAME IS TRUE AND
 CORRECT TO THE BEST OF MY KNOWLEDGE
 AND BELIEF.

676
 JOHN W. WEST
 U.S. NO. 676
 IV. W. WEST RPS NO. 1188

ATLANTIC RICHFIELD COMPANY

Check made on Robert Cox, Federal EA Well No. 1
 located 330 feet from the west line and 331 feet from
 the north line of Section 12, Township 18 South,
 Range 27 East, N.M.P.M., Eddy County, New Mex.

JOHN W. WEST ENGINEERING COMPANY
 CONSULTING ENGINEERS HOBBS, NEW MEXICO

Scale 1"=1000'	Drawn by Beverly
Date October 20, 1975	Sheet 1 of 1 Sheets

EMPIRE ABO POOL

GAS-OIL RATIO AND API OIL GRAVITY COMPARISONS

Cox - "EA" Fed. No. 1 - Compared to the nearest producing wells
in the Empire Abo Unit.

(Unit Production Data from N.M.O.C.C. Form C-115 and "Monthly Statistical
Report - Volume I")

I. Gas-Oil Ratio Comparison

A. Empire Abo Unit Wells, June 1975

(1)		(2)	(3)	(4)
Operator-Well		BOPM Oil Production	MCF/Month Gas Production	Gas-Oil Ratio (Cubic feet gas per bbls. oil) (4)=(3)/(2)x(1000C.F./MCF)
E.A.U.	L-16	12,960	13,900	1,073
E.A.U.	L-17	12,000	9,366	781
E.A.U.	L-18	13,500	10,875	806
E.A.U.	M-16	3,780	3,895	1,030
TOTALS:		42,240	38,036	900

B. Empire Abo Unit Wells, September 1975

(1)		(2)	(3)	(4)
Operator-Well		BOPM Oil Production	MCF/Month Gas Production	Gas-Oil Ratio (Cubic feet gas per bbls. oil) (4)=(3)/(2)x(1000C.F./MCF)
E.A.U.	L-16	12,960	13,864	1,070
E.A.U.	L-17	12,000	9,333	778
E.A.U.	L-18	13,500	10,837	803
E.A.U.	M-16	3,780	3,885	1,028
TOTALS:		42,240	37,919	898

C. Cox, E. A. Fed. No. 1, September 1975

Cox, E.A. Fed. #1	700*	600*	857*
Cox, E.A. Fed. #1	34	30	882 (24-hr test, 9/15/75)

(*20-days' production reported in
September 1975)

BEFORE EXAMINER NUTTER
OIL CONSERVATION COMMISSION
ALL-Right EXHIBIT NO. 3
CASE NO. 5571

II. Oil API Gravity Comparison

A. Empire Abo Unit, nearest batteries to Cox E.A. Fed. No. 1:

	<u>Oil Gravity, °API</u>
Battery M-14	43.5*
Battery K-18	43.8*

(*Representative gravity for
September 1975)

B. Cox, E.A. Fed. No. 1

E.A. Fed. No. 1	43**
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(**Data from USGS, "Well Completion or Recompletion
Report and Log," test date 9/15/75)

EXHIBIT NO. _____