

EXPLORATION
EVALUATION

ROBERT G. COX
CERTIFIED PROFESSIONAL GEOLOGIST
Petroleum Consultant

4230 ~~XXXXXXXXXXXXXXXXXXXX~~ LBJ Freeway #409
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DALLAS, TEXAS ~~75206~~ 75234

PRODUCTION
APPRAISALS

September 17, 1975

RECEIVED

SEP 25 1975

U.S.G.S.
Department of the Interior
P. O. Drawer U
Artesia, New Mexico 88210

O. C. C.
ARTESIA, OFFICE

Re: Robert G. Cox
Re-Entry #1 Federal "EA"
Sec. 12, T-18-S, R-27-E
Eddy County, New Mexico

Attn: Mr. James Knauf
Mr. R. L. Beekman

Dear Sirs:

Please excuse the delay in getting back in touch with you since your phone call last week concerning the above captioned well.

As I did not have a copy of the Commission Order, it having been destroyed or lost during our office fire last January, I had to contact a representative in Santa Fe to go to the Commission and obtain one. It was Thursday afternoon before I could contact him and he told me we'd have to wait until Monday as all State Offices were closed Friday for the opening of the State Fair. He advised me yesterday how the Order read.

In the interim, I contacted Eastman Whipstock to inquire as to the basic differences between a continuous multi-shot survey and the single shot which their representative ran in the bore hole while drilling.

They said a continuous multi-shot survey is conducted by lowering the instrument inside the drill pipe or casing and by a film they can make a continuous directional survey of the well-bore by stopping and taking a picture or photo at any desired depth.

The single shot survey is run while drilling and at specific intervals they take a photo recorded on a film disc to simultaneously record the inclination (drift angle) and the magnetic direction of the bore hole. A survey of this type is necessary

for the controlled directional drilling of bore holes and for calculating the bottom hole position of the bore in relation to the surface location.

It was their opinion that the single shot survey would be as accurate as a continuous multi-shot survey run every 100'-200', in that the surveyor took photos of drift or direction 32 times in our present bore hole, whereby the other method (continuous multi-shot) they'd only take pictures between 6200'-3800' (whipstock point) 12 times on 200 foot intervals or 24 times on 100 foot spacing.

They took all the data obtained from the continuous multiple survey they ran in 1963 and the data obtained in the single shot surveys run while drilling and arrived (thru the radius of curvature method, which is the method they generally use to compute this multiple shot) at a bottom hole location 268.56 N and 320.59 W of our surface location. This was in contrast to the computed method (tangential) used by the surveyor on location of 274.06 N and 324.24 W of the surface location.

I am submitting a re-test as a supplement to the previous filed test, as last week we finally were able to get a 24 hour pump test and GOR test, after numerous rod breaks and pumping 100% water for 5 days. As the water production hasn't decreased since the show of oil, it is the opinion of some people familiar with the low wells producing abundant water that we may have trouble establishing an oil cut as we're experiencing now. Hopefully, the water production will abate, but it is too early to tell due to the short period we have had it on continuous production.

Per our discussions of August 29th, we will keep you periodically notified as to the well's performance.

Very truly yours,



ROBERT G. COX

RGC:pm

Enc: Eastman Radius of Curvature Directional Survey
Form 9-330

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN DUPLICATE*

(See other in-
structions on
reverse side)Form approved.
Budget Bureau No. 42-R355.5.

5. LEASE DESIGNATION AND SERIAL NO.

NM 6852

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME

Federal "EA"

9. WELL NO.

#1

10. FIELD AND POOL, OR WILDCAT

Empire Abo

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

Sec. 12, T-18-S

R-27-E

12. COUNTY OR
PARISH

Eddy

13. STATE

New Mexico

18. ELEVATIONS (DF, REB, RT, GR, ETC.)*

3609' GL - 3620' KB

3612

15. DATE SPUDDED

7-8-75

16. DATE T.D. REACHED

7-31-75

17. DATE COMPL. (Ready to prod.)

8-29-75

20. TOTAL DEPTH, MD & TVD

6220' MD/6189' TVD

21. PLUG, BACK T.D., MD & TVD

6219'

22. IF MULTIPLE COMPL.,
HOW MANY*

Single

23. INTERVALS
DRILLED BY

6220'

ROTARY TOOLS

CABLE TOOLS

24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)*

6212'-16' (6181'-85') Abo Formation

25. WAS DIRECTIONAL
SURVEY MADE

Yes

26. TYPE ELECTRIC AND OTHER LOGS RUN

IES, Compensated Density & Gamma Ray/Neutron

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
8 5/8"		1492'	12 3/4"	850 SXS	None
5 1/2"	15.5	6219'	7 7/8"	150 SXS	None

29. LINER RECORD

SIZE	TOP (MD)	BOTTOM (MD)	SACKS CEMENT*	SCREEN (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)
					2 3/8"	6216'	

31. PERFORATION RECORD (Interval, size and number)

6208'-18' w/2 jet shots/ft. (plugged
off)

6162'-70' w/2 jet shots/ft.

6120'-30' w/2 jet shots/ft.

6212'-16' w/2 jet shots/ft.

32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.

DEPTH INTERVAL (MD)	AMOUNT AND KIND OF MATERIAL USED
6208'-18'	3000 gal. Dow 15% BDA
6162'-70'	10,000 " " " Reg.
6120'-30'	2000 " " " "
6212'-16'	2000 " " " "

33. PRODUCTION

DATE FIRST PRODUCTION		PRODUCTION METHOD (Flowing, gas lift, pumping—size and type of pump)				WELL STATUS (Producing or shut-in)	
8-11-75		Pumping - HF 2"x 1½"x 16' Metal to Metal				Potential Testing	
DATE OF TEST	HOURS TESTED	CHOKE SIZE	PROD'N. FOR TEST PERIOD	OIL—BBL.	GAS—MCF.	WATER—BBL.	OIL GRAVITY-API (CORR.)
9-15-75	24	-	→	34	30	110	882 (Meas.)
FLOW, TUBING PRESS.	CASING PRESSURE	CALCULATED 24-HOUR RATE	OIL—BBL.	GAS—MCF.	WATER—BBL.	OIL GRAVITY-API (CORR.)	
-	20	→	34	30	110	43	

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

Vented

TEST WITNESSED BY

John Gray

35. LIST OF ATTACHMENTS

2 copies Eastman Radius of Curvature Directional Survey

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

SIGNED

Robert G. Cox

TITLE

Operator

DATE

9-17-75

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