

OIL CONSERVATION DIVISION

P. O. BOX 2088

SANTA FE, NEW MEXICO 87501

Form C-103
Revised 10-1-

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

3a. Indicate Type of Lease	
State <input checked="" type="checkbox"/>	Fee <input type="checkbox"/>
3. State Oil & Gas Lease No.	
B 2071	

SUNDRY NOTICES AND REPORTS ON WELLS

(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)

1. OIL WELL <input type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER Gas Injection	RECEIVED BY	7. Unit Agreement Name
2. Name of Operator ARCO Oil and Gas Company	JUN - 5 1987	8. Farm or Lease Name Empire Abo Unit "D"
3. Address of Operator P.O. Box 1610, Midland, Texas 79702	Q. C. D.	9. Well No. 35
4. Location of Well UNIT LETTER 0 330 FEET FROM THE South LINE AND 1980 FEET FROM THE East LINE. SECTION 27 TOWNSHIP 17S RANGE 28E NMPM.	ARTESIA, OFFICE 1980	10. Field and Pool, or Wildcat Empire Abo
15. Elevation (Show whether DF, RT, GR, etc.) 3672 GR	12. County Eddy	

Check Appropriate Box To Indicate Nature of Notice, Report or Other Data
NOTICE OF INTENTION TO:

PERFORM REMEDIAL WORK	<input type="checkbox"/>
TEMPORARILY ABANDON	<input type="checkbox"/>
PULL OR ALTER CASING	<input type="checkbox"/>
OTHER	<input type="checkbox"/>

PLUG AND ABANDON	<input checked="" type="checkbox"/>
CHANGE PLANS	<input type="checkbox"/>
OTHER	<input type="checkbox"/>

SUBSEQUENT REPORT OF:

REMEDIAL WORK	<input type="checkbox"/>
COMMENCE DRILLING OPER.	<input type="checkbox"/>
CASING TEST AND CEMENT JOB	<input type="checkbox"/>
OTHER	<input type="checkbox"/>
ALTERING CASING	<input type="checkbox"/>
PLUG AND ABANDONMENT	<input type="checkbox"/>

17. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work) SEE RULE 1103.

Propose to P&A as follows:

Plug	Interval	Cmt	Remarks
*1	5650-6000	30 sx	CIBP at 6000. Spot 30 sx. Abo perfs 6017-6064.
2	1860-2150	25 sx	Spot. Top of San Andres - 2080.
3	1135-1425	25 sx	Spot. Top of Queen - 1345.
4	0-850	75 sx	Spot. Top of Seven Rivers - 840. Surface plug.

Cut off csg. Install dry hole marker. Reclaim location.
* Lead hole w/mud

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

SIGNED Ken W GosnellTITLE Engr. Tech. 915-688-5672DATE 6-3-87APPROVED BY Mike WilliamsTITLE OIL AND GAS INSPECTORDATE JUN 11 1987

CONDITIONS OF APPROVAL, IF ANY:

to sufficient time to discuss

Plugging

RECEIVED BY

WORKOVER PROCEDURE - 5 1987

O. C. D.

DATE: May 22, 1987

WELL NO. & TYPE OF JOB: Empire Abo Unit No. 135 P & A

DRILLED & COMPLETED: June 1960 LAST WO: April 1982

FIELD: Empire Abo COUNTY: Eddy PREPARED BY: J. D. Swanson

TD: 6238' PBD: 6080' DATUM: 3672' GL DIST RKB TO THF:

TUBINGHEAD: MAKE unknown SIZE 11" x 7-1/16" PRESSURE RATING 3000 psi

CASING INFORMATION:	SIZE	WEIGHT	GRADE	SET @	SX CMT	TOC
SURFACE:	8-5/8"	24#	J-55	732'	400	surface
INTERMEDIATE:						
PRODUCTION:	4-1/2"	9.5&11.6#	J-55	6238'	1390	surface

LINER: SIZE WEIGHT GRADE TOP BOTTOM TOC

PRESENT PERFORATIONS & FORMATION:

Abo Perforations @ 6017'-6030' and 6051'-6064' @ 1SPF

TUBING DATA: SIZE 2-3/8" WT. 4.7# GRADE J-55 THD. EUE-8rd BTMD @ 5980'
NO. OF JTS. 197 MISC. see attached wellbore diagram

PACKER & MISC.: Baker LOK-SET packer set at 5950' with 8000# tension

WELL HISTORY

The subject well was drilled and completed in June of 1960 by Samedan Oil Corporation as the Walker State #1. In March of 1976, this well was converted to an Abo gas injection well by ARCO Oil and Gas Company. In December of 1985, the well was shut-in because both the 8-5/8" x 4-1/2" annulus and 4-1/2" x 2-3/8" annulus had communication with the tubing as each annulus showed the same pressure as the tubing (approximately 760 psi). Due to the high expected cost to repair the wellbore integrity, the well was approved for abandonment by ARCO management in July of 1986 (approved abandonment request attached). Please note the attached procedure was discussed with the NMOCC and the recommended plugging program is in accordance with this agency's abandonment guidelines.

PROCEDURE

... NOTIFY NMOCC (Artesia, New Mexico (505) 748-1283) at least 24 hours prior to beginning plugging operations.

1. RU slickline truck and lubricator. Test lubricator to 1000 psi. Set 1.81" blanking plug in ER receptacle. Bleed off tubing pressure. Bleed off 8-5/8" x 4-1/2" annulus and 4-1/2" x 2-3/8" annulus. Fill tubing with 10 ppg brine water and test tubing to 1000 psi.
2. MI & RU CU. ND injection line and tree. NU BOPE. Retrieve plug.

Empire Abo Unit #D-35
P & A Procedure
page 2

3. Release packer assembly and circulate the hole with 10 ppg BW. Insure well will not flow. TOH with 2-3/8" tubing and packer.
4. RU WL Company and RIH and set CIBP at $\pm 6000'$. RD WL Company.
5. Monitor 8-5/8" x 4-1/2" annulus and 4-1/2" casing overnight to ensure communication does not exist with potentially charged formations up-hole.
6. Spot balanced plugs in the 4-1/2" production casing through 2-3/8" tubing as follows (see Attached proposed plugging schematic):

PLUG #1 - 5650'-6000' (spotted above CIBP)
30 sxs Class "H" cement mixed at 16.4 ppg
(Cover the Abo formation - Top of Abo @ $\pm 5720'$)

NOTE Circulate the hole with 10.0 ppg mud prior to setting the plug above the CIBP.

PLUG #2 - 1860'-2150'
25 sxs Class "H" cement mixed at 16.4 ppg
(Cover the San Andres formation - Top of San Andres @ 2080')

PLUG #3 - 1135'-1425'
25 sxs Class "H" cement mixed at 16.4 ppg
(Cover the Queen formation - Top of Queen @ 1345')

PLUG #4 - 0-850'
75 sxs Class "H" cement with 2% CaCl_2 mixed at 16.4 ppg (Cover the Seven Rivers - Top of Seven Rivers @ 840' and provide surface plug)

7. ND BOPE. Cut casing $\pm 3'$ below ground level. RD & MO CU.
8. Install well marker. Clean and reclaim location.

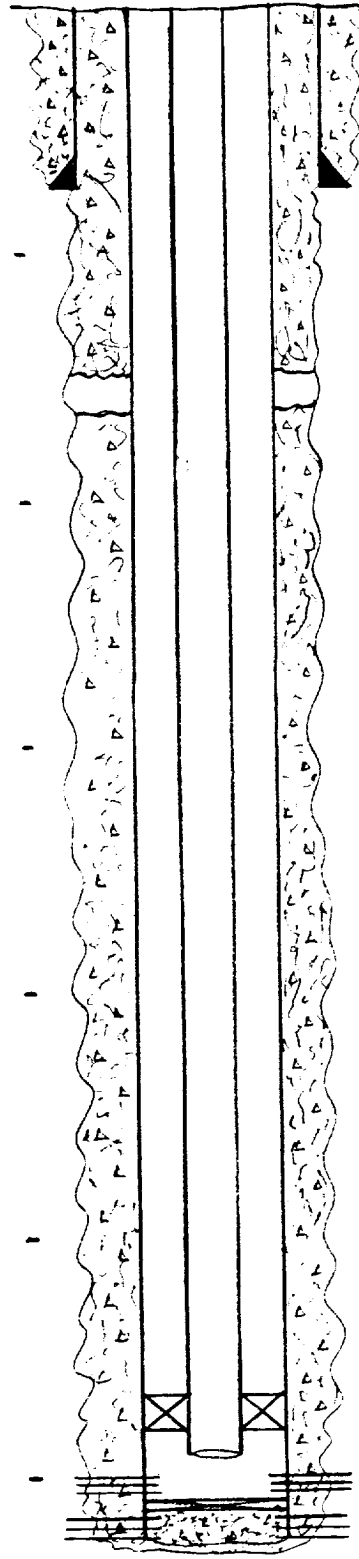
KDL

General Purpose Worksheet

Subject	Empire Abo Unit D-35	Current Wellbore Status	Page No.	Of
File			By	Date
			J. D. Swanson	5/19/87

RECEIVED BY
JUN - 5 1987
O. C. D.
ARTESIA OFFICE

Location: 330' FSL & 1980' FEL
Section 27-T17S-R28E
Eddy County, New Mexico
GL Elevation: 3672'



8-5/8", 24 lb/ft, J-55, STC surface casing set at 732'
Cemented to surface with 400 sxs cement

In March 1976, prior to converting the well to a gas injector, the 4-1/2" casing was perforated (1449'-1450' @ 4 spf), a cmt retainer was set at 1390', and 490 sxs of cement were circulated up the 8-5/8" x 4-1/2" annulus (approximately 75 sxs of cmt were circ to surface). The csg was then tested to 1500 psi.

Current Completion Assembly

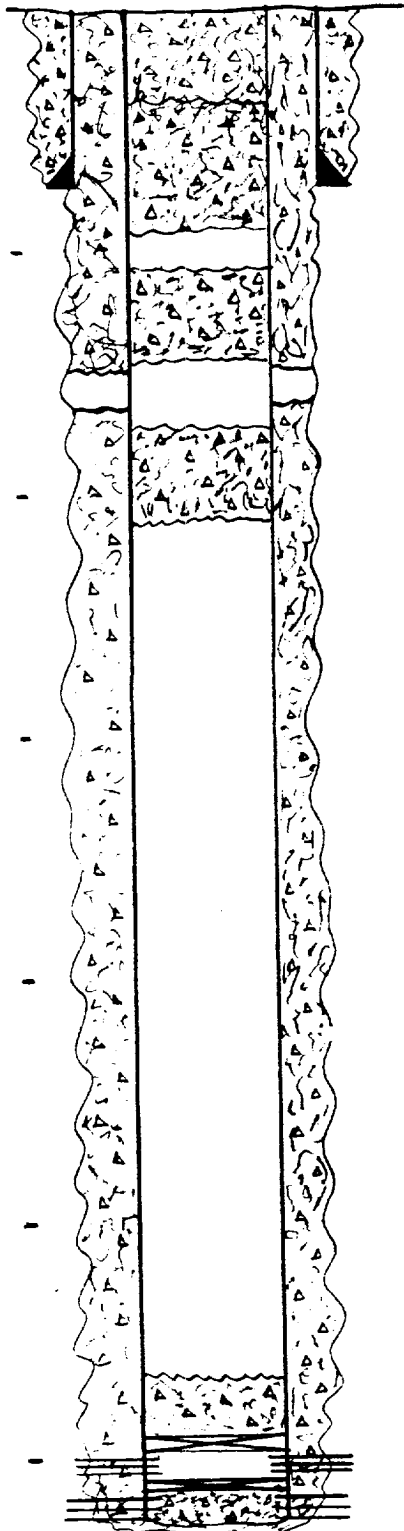
196 jts 2-3/8", 4.7#, J-55, EUE-8rd PL Tubing
Baker ER Receptacle with 1.81 profile
2-3/8" Baker Lok-set packer set at 5950' with 8000# compression
1 jt 2-3/8", 4.7#, J-55, EUE-8rd PL Tubing

4-1/2" Production Casing Properties

	9.5#, J-55, LTC	11.6#, J-55, LTC
Depth	495'-6238'	0-495'
I.D. (in)	4.090	4.000
Drift (in)	3.965	3.875
Burst (psi)	4380	5350
Collapse (psi)	3310	4960
Capacity (bbls/ft)	0.0163	0.0155

Abo perforations 6017'-6030' and 6051'-6064' @ 1 spf
Cement retainer @ 6080' w/175 sxs cmt squeezed below
Abo perforations 6114'-6138' @ 4 spf
4-1/2", 9.5 and 11.6#, J-55, Production csg set @ 6238'.
Cemented with 800 sxs 50-50 Poz followed by 100 sxs neat cmt.
TOC from CBL (dated 3/19/76) at 1674'.

Subject	Empire Abo Unit D-35 - Proposed Plugging Program		Page No.	01
File			By	Date
			J. D. Swanson	5/21/87



Plug #4 - 0 - 850'
75 sxs Class "H" cement with 2% CaCl₂

8-5/8", 24 lb/cf, J-55, STC surface casing set @ 732'.
Cemented to surface with 400 sxs cement

Plug #3 - 1135' - 1425'
25 sxs Class "H" cement

Plug #2 - 1860'-2150'
25 sxs Class "H" cement

Plug #1 - 30 sxs Class "H" cement spotted above CIBP
(5650' - 6000')
CIBP @ 6000'
Abo perforations 6017'-6030' and 6051'-6064' @ 1 spf
Cement retainer @ 6080' w/175 sxs cmt squeezed below.
Abo perforations 6114'-6138' @ 4 spf
4-1/2", 9.5 and 11.6#, J-55, production casing set @ 6328'
Cemented to 1674' with 900 sxs cement.
Cemented from 1450' to surface with 490 sxs of cement
in 1976 (see attached well bore design).