

Log # 28482
 Form Approved
 Budget Bureau No.
 Basin 10

Form: USGS 9-1960

UNITED STATES DEPARTMENT OF THE INTERIOR
 GEOLOGICAL SURVEY, CONSERVATION DIVISION

GEOHERMAL WELL COMPLETION REPORT

The U.S. Geological Survey requires this form or other Supervisor approved form to be prepared and filed in duplicate with requisite attachments with the Supervisor within 30 days after completion of permitted operations.

1a. WELL TYPE: PRODUCTION () INJECTION () DISPOSAL () WATER SUPPLY () OBSERVATION ()
 COLD () HEAT EXCHANGE () OTHER (X) **Temperature gradient**

1b. COMPLETION: NEW (X) WORKOVER () DEEPENED () PLUGBACK () REDRILL ()
 RECOMPLETED () DRILLED & ABANDONED () OTHER ()

2. NAME OF LESSEE/OPERATOR
Union Oil Company of California - Geothermal Division

3. ADDRESS OF LESSEE/OPERATOR
P.O. Box 6854 Santa Rosa, CA 95406

18. LOCATION OF WELL **733.65' S & 6241.87' W of NE corner of Sec. 8**
 At Surface: **T17N, R30E.**
 At Top of Production Zone: **N/A**
 At Total Depth: **same as above**

19. TOTAL DEPTH
 Measured: **2892'** True Vertical: **2892'**

20. PLUGBACK TOTAL DEPTH
 Measured: **None** True Vertical:

21. ELEVATION: ESTIMATED () FINAL (X) **3915'**
 REFERENCE DATUM: GR (X) MAT () DF () KB () RT () CASINGHEAD FLANGE () OTHER ()

22. DRILLING MEDIA: AIR () WATER () MUD (X) FOAM () OTHER ()
 List Characteristics:
Gel - Water

4. LEASE SERIAL NO.
N 12547

5. SURFACE MANAGER: BLM () FS ()
 Other (X) **U.S.G.S.**

6. UNIT AGREEMENT NAME
Carson Federal

7. WELL NO.
72-7

8. PERMIT NO.
GS 313-N12547

9. FIELD OR AREA
Carson Lake

10. SEC. T., R., B. & M.
Sec. 7, T17N, R30E

11. COUNTY
Churchill

12. STATE
Nevada

13. SP/D DATE DATE T.D. REACHED
8-6-81 8-19-81

14. COMPLETION DATE (Ready to produce)
N/A

15. DIRECTIONALLY DRILLED INTERVALS
N/A

16. SURVEYED INTERVALS
N/A

17. CORE SIZE AND INTERVALS
N/A

23. LOG TYPE & INTERVALS
2880' to 701' - DIL/Gamma Ray 789' to 39' - FDC-CNL
2872' to 701' - Sonic Log 2886' to 701' - Dipmeter

CASING RECORD

Size	Weight	Grade	Collars & Threads	Depths Set		Hole Size	Cementing Record (slurry volume)
				Top	Shoe		
13-3/8"	61#/ft	K-55	buttress	Surf.	38.50	17-1/2"	61 cu. ft.
9-5/8"	40#/ft	K-55	buttress	Surf.	236'	12-1/4"	130 cu. ft.
7"	26#/ft	K-55	LT&C & 8-rd	Surf.	701'	8-3/4"	176 cu. ft.

LINER RECORD

Size	Weight	Grade	Collars & Threads	Top	Bottom	Perforated Intervals	Cementing Record (slurry volume)

26. TUBING RECORD

Size	Weight	Grade	Depth Set	Packer Depth
2-7/8"	6.5	J-55 EUE	2878'	None

27. CEMENT SQUEEZE, ACID, FRACTURE, ETC. (detail type, amount, intervals)
Uncemented tubing string.
Open hole below 7" casing.

PERFORATION RECORD

Type	Total No.	Density (No./ft)	Size	Intervals
N/A				

29. ATTACHMENTS & PREVIOUS SUBMITTALS: List all reports, surveys, tests and logs, not listed in item 23, which have resulted from drilling and completion operations. List relevant previously furnished data with date of submittal referenced.

30. WELL STATUS: PRODUCING () SHUT-IN (X) SUSPENDED () INJECTION () DISPOSAL () HEAT EXCHANGE () ABANDONED () WATER SUPPLY () OTHER ()
Temperature gradient hole.

31. DO YOU CONSIDER THE WELL TO BE COMMERCIAL? EXPLAIN:
N/A

32. I hereby certify the information on this report and the attached information is complete and accurate according to the best of my knowledge.
 SIGNED: *Don J. Ash* TITLE **District Drilling Supt.** DATE **9-10-81**

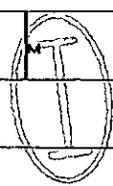
This report is required by law (30 U.S.C. 1023); regulations: 30 CFR 270.37, 30 CFR 270.73; Federal Geothermal Lease Terms and Stipulations and other regulatory requirements. Failure to report in a timely prescribed manner can result in shutting down operations, suspension and or recommendation of cancellation of lease (30 U.S.C. 1011, 30 CFR 270.80, 43 CFR 3244.3). The United States Criminal Code (18 U.S.C. 1001) makes it a criminal offense to make a willfully false statement or representation to any Department or Agency of the United States as to any matter within its jurisdiction.

Well History
Union Oil Company of California

Log # 28482



COMPANY		TYPE WELL	
Union Oil Co. of California		Temp. gradient	
LEASE	WELL NO.	SEC	T
Carson Federal	72-7	7	17N
LOCATION		R	
733.65' S and 6241.87' W of the NE corner		30E	
of Section 8, T 17N, R 30E, Churchill County, NV		COUNTY	
		Churchill	
AREA		Nevada	
ELEVATION	SPUD	COMP.	ABAND.
3915'	8-6-81	8-20-81	
TOTAL DEPTH		PLUG	
2892'			
HOLE DEVIATION		RECOMP.	
B.H.L.			



CASING RECORD				WELL DATA	
SIZE	CEM. LBS.	DEPTH	SAX	W.S.O. - PERFS. - REMARKS	ELEC. LOG
13-3/8"		38.50		Tubing - uncemented	DIPMETER
9-5/8"		236.00			CORE RECORD
7"		701.00			HISTORY
2-7/8"		2878.00			CORE ANALYSIS
					PALEO. LETTER

MARKERS - HORIZONS

DATE	DEPTH	PROGRESS HISTORY
8-6-81		Completed rig-up. Drilled 17-1/2" hole from 0' to 40'. Spudded at 1100 hours, 8-6-81. Circulated. Ran 1 joint 13-3/8" 61# K-55 butt casing (38.50'). Landed at 38'. Cemented casing with 61 cu. ft. Ready-Mix cement. No fall back in annulus.
8-7-81		Drilled 12-1/4" hole from 40' to 243'. Ran 6 joints 9-5/8" 40# K-55 butt casing with B&W float shoe at 236'.
8-8-81		Cemented casing with 126 cu. ft. neat cement. Displaced with 99 cu. ft. mud. Had good returns. Landed 9-5/8" casing. Installed 8"-900 by 9-5/8" SOW casing head. Cement fell back in annulus to 12' below G.L. Did 4 sack top cement job. Nippled up BOPE. Tested drill pipe and CSO rams to 500 psi. Test witnessed by B. Moroz, USGS. Cleaned out cement from 230' to shoe at 236'. Cleaned out cement and shoe to 243'.
8-9-81		Drilled 8-3/4" hole from 243' to 725'.
8-10-81		Ran 17 joints 7" 26# K-55 8-round LT&C casing with HOWCO float shoe. Landed casing at 701'. Circulated mud. Cemented casing with 158 cu. ft. "A" cement. Displaced with 150 cu. ft. mud. Lost partial returns while displacing. Did not get cement to surface. CIP at 0930. WOC. Did 40 linear cement job through 1" pipe with 15 sacks "A" cement. Installed 7" x 8"-900 casing head. Nippled up BOPs.