

UNION GEOTHERMAL COMPANY OF NEW MEXICO
WELL COMPLETION RECORD**R.O. ENGEBREISEN**
JAN 11 1982

WELL NO.: Baca 22 AFE NO.: 413705 API NO.: 30-043-90043
 Redrill 3

FIELD: Valles Caldera-Redondo Creek LEASE: BACA

OPERATOR: Union Geothermal Company of New Mexico

COUNTY: Sandoval STATE: New Mexico

LOCATION: New Mexico State Plane Co-ordinates:

1,781,851'N; 403,519'E
Projected Location: 770'fnl, 1300'fwl;
 Sec. 12, T19N, R3E

ELEVATION: 9270 G.L. 9294 K.B.

REASON FOR DRILLING: Exploratory to test potential of Paleozoic Limestone and
pre-Cambrian Granite

SPUD DATE: October 18, 1981 COMPLETION DATE: December 18, 1981

TOTAL DEPTH: 8846'

BHL: 39'S, 89'W, 8822'VD

DRILLING COMPANY: Brinkerhoff-Signal Rig 78

GEOLOGISTS: Denton, Bodell, Rohrs

ENGINEERS: Blackwell, Hamblin

RIG TESTS: None

DISPOSITION OF WELL: Suspended.
Fish in hole 5844'-6534' (Logging tool, drill pipe)

DRILLING FLUID USED: Fresh water gel mud 2551'-8846'

CSTDOE

UNION GEOTHERMAL COMPANY OF NEW MEXICO
WELL COMPLETION RECORD

LITHOLOGIC DATA

<u>FORMATION</u>	<u>INTERVAL</u>			
	This well (MD/VSS)	Baca 17RD(VSS)	Baca 11(VSS)	Baca 12(VSS)
Redondo Creek Rhyolite	0-260'/9270'-9035'	9361'-8982'	absent	absent
Caldera Fill	260'-620'/9035'-8675'	8982'-8402'	9065'-8765'	8427'-8290'
Bandelier Tuff	620'-5397'/8675'-3911'	8402'-3949'	8765'-3803'	8290'-1997'
Paliza Canyon Fm (andesite)	5397'-6760'/3911'-2549'	3949'-3266'TD	3803'-2563'	1997'-1080'
Santa Fe Gp (SS, tuffs)	6760'-7650'/2549'-1662'*	not penetrated	2563'-2205'TD	1080'-885'**
Abo Fm (red beds)	7650'-8620'/1662'-697'	not penetrated	not penetrated	885' to -758'
Magdalena Gp (limestone, shale)	8620'-8846'TD/697'-472'	not penetrated	not penetrated	-758' to -1721'
Granite pre-Cambrian	not penetrated	not penetrated	not penetrated	-1721' to -2105'TD

*includes Abiquiu Tuff? 6760'-7000' (2549'-2310' VSS)

*Abiquiu Tuff

CASING

<u>SIZE</u>	<u>INTERVAL-KB</u>
30"	Conductor 58'-surface, cemented
20"	467'-surface, cemented
13-3/8"	1535'-surface, cemented
9-5/8" Liner	2512'-1352', cemented
9-5/8" Tie-back	1352'-surface, cemented
7" Production Liner in Redrill 2 pulled prior to Redrill 3 commencing	

LOST CIRCULATION

<u>DEPTH</u>	<u>REMARKS</u>
4240'	Lost complete returns. Regained partial returns (400 bbl/hr loss) while circulating. Set cement plug.
4764'-4950'	Lost 150 bbl/hr while drilling. Pumped LCM while drilling.
4950'-4955'	Loss increased to 250 bbl/hr while drilling. Set 2 cement plugs.
5668'	Lost all returns. Twisted off Monel D.C. Recovered fish. Set 2 cement plugs.
5668'-5900'	Lost 50 bbl/hr while drilling.
5900'	Lost complete returns. Regained returns while drilling.
6009'	Loss rate 195 bbl/hr.
6040'	Loss rate 173 bbl/hr. Drilled to 6071'. Set cement plug 5718'-6071'. Loss rate 120 bbl/hr. Set cement plug 5588'-5718'. Loss rate 55 bbl/hr while drilling cement 5588'-6017'. Twisted off at 6017'. Fluid loss, after recovering fish, 45 bbl/hr 6017'-6071'.
6353'	Loss rate 137 bbl/hr.
6384'	Loss rate 112 bbl/hr.
6602'	Loss rate 155 bbl/hr.
6748'	Lost all returns. Drilled to 6765' without returns. Set 16 cement plugs.
6946'	Loss rate 590 bbl/hr. Set 2 cement plugs.
7026'-8190'	Loss rate varied between approximately 40 and 180 bbl/hr.
8190'-8237'	Loss rate increased to 240 bbl/hr. Set 2 cement plugs.
8237'-8752'	Loss rate 50-70 bbl/hr.

UNION GEOTHERMAL COMPANY OF NEW MEXICO
WELL COMPLETION RECORD

LOGGING

<u>DATE</u>	<u>TYPE</u>	<u>TD</u>	<u>INTERVAL-KE</u>	<u>MAX TEMP</u>	<u>TIME SINCE CIRC</u>	<u>REMARKS</u>
12-11-81	DLL-GR*	8846'	2512'-6535'	NA	NA	Stuck logging tool at 6535' while logging going into the hole. Unable to recover tool. Well suspended with logging tool and 21 jts. drill pipe in hole.

* LOG TYPES (All logs by Schlumberger)

GR - Gamma Ray
DLL - Dual Laterolog

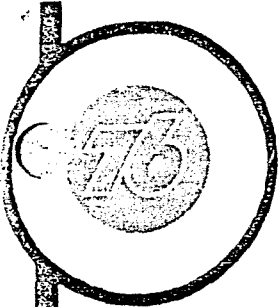
R.O. ENGBRETSSEN

DEC 02 1980

Run # 1

Union Geothermal Co. of New Mexico

SUBSURFACE TEMPERATURE AND PRESSURE SURVEY

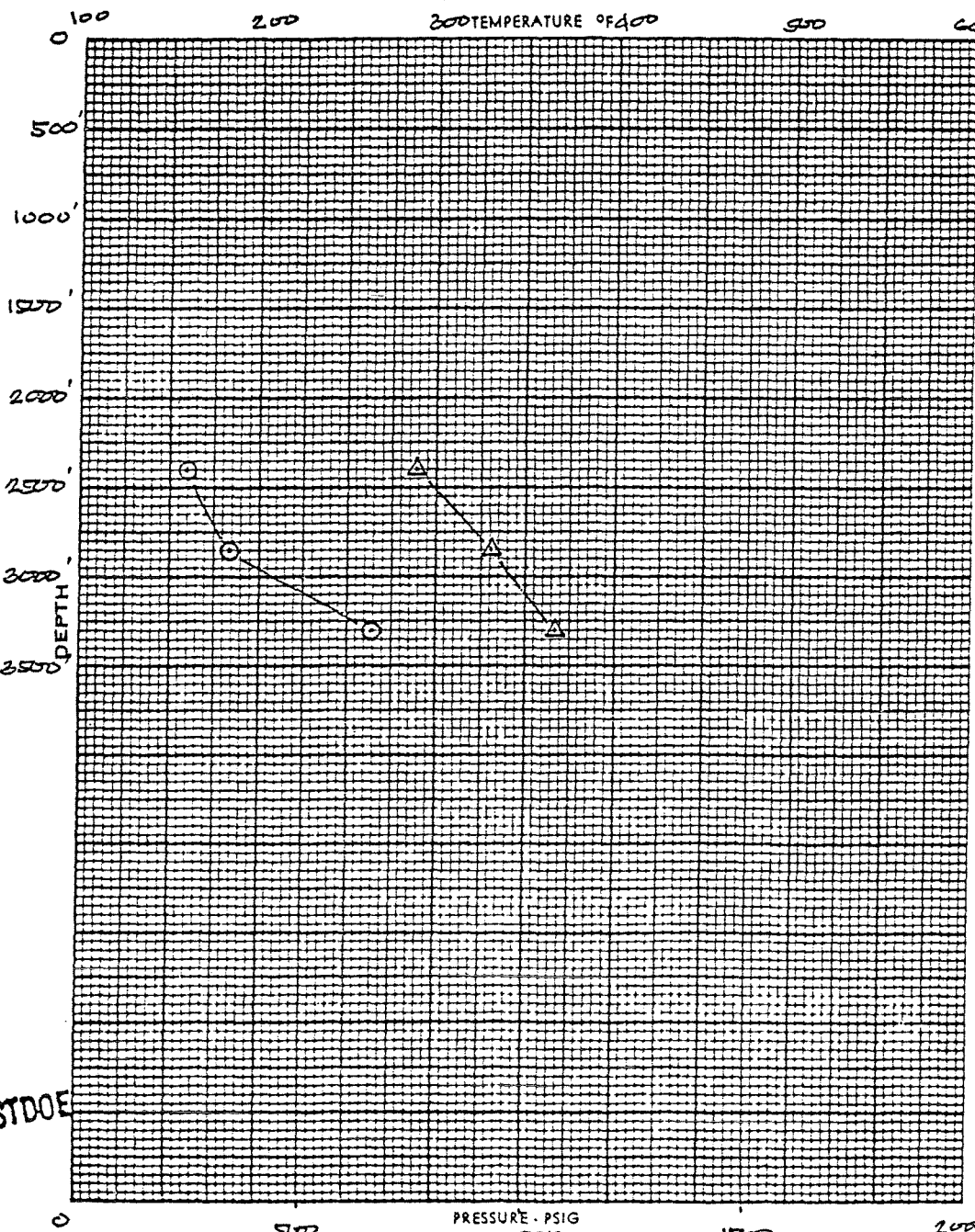


OWNER UNION GEOTHERMAL CO. OF N.M. FIELD REDONDO CREEK WELL NAME BACA NO 22
 CASING OPEN HOLE ELEV. _____ DATE: 12-01-80
 LINER DESCRIPTION: _____ ZERO POINT _____
 _____ DEPTH 3300 FT.

HOLE DESCRIPTION: _____

 _____ KPG 14101 INSTRUMENT 03 - 613 °F FAHR.
 _____ 0-4700 PSI SERIAL NO. KTB 10222

PURPOSE TEMP/PRESS GRADIENT SURVEY TO 3300 FT. MAX. TEMP. 263 °F @ 3300'
 REMARKS: _____



STABILIZATION PERIOD

PRESSURES	GAUGE	BOMB
CASING, PSI		

DEPTH	TEMP.	PRESS.	GRAD.
2400'	157	755	
2850	183	921	.364
3300	263	1066	.32

○ TEMPERATURE
 △ PRESSURE

ESTDOE

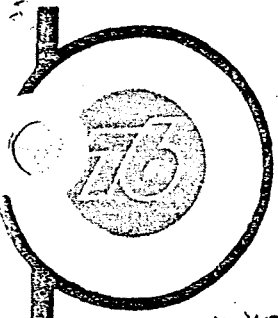
BY: _____

RUN # 2

Union Geothermal Co. of New Mexico R.O. ENGBRETSEN

SUBSURFACE TEMPERATURE AND PRESSURE SURVEY

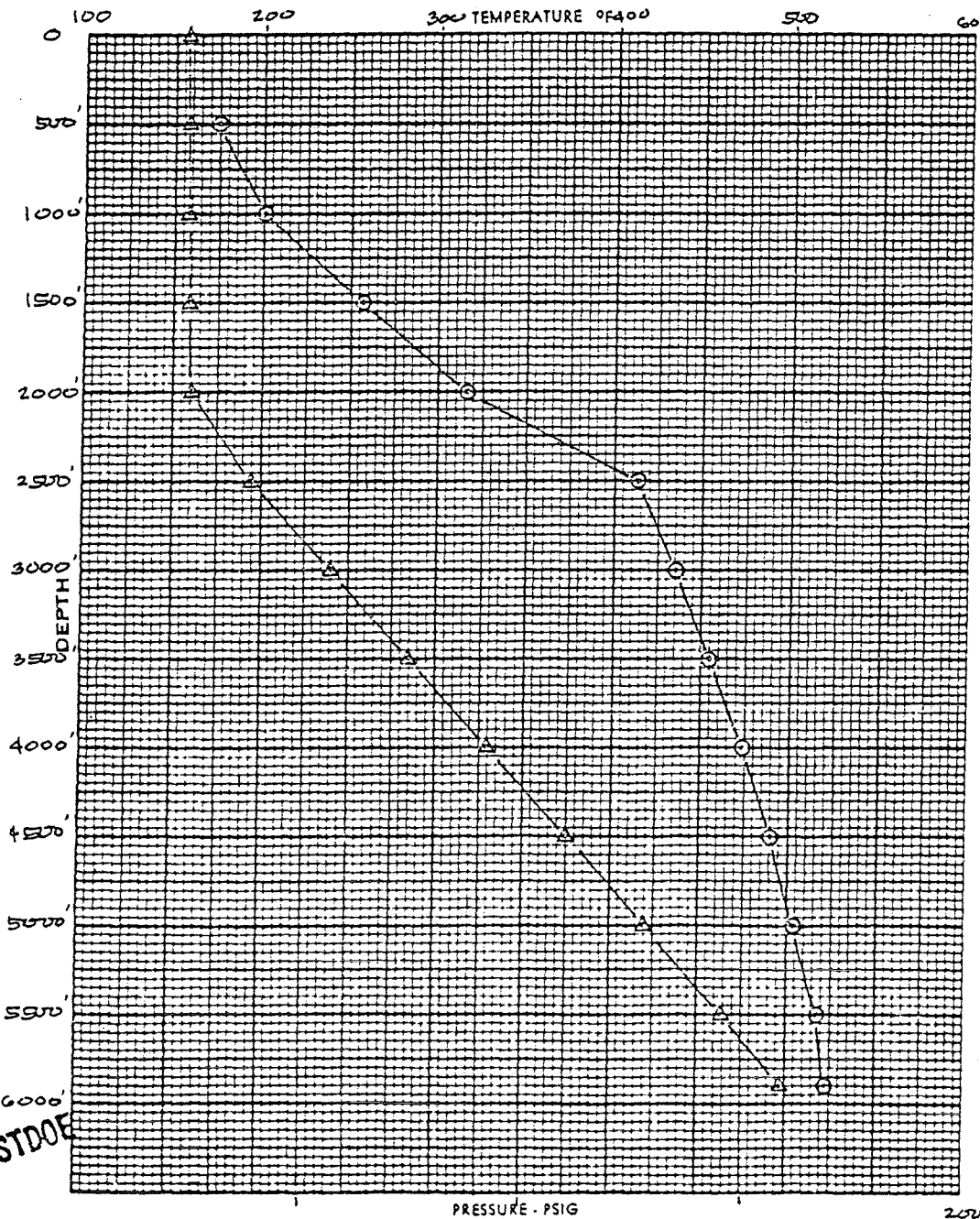
JAN 21 1981



OWNER UNION GEOTHERMAL Co. OF N.M. FIELD REDWOOD CREEK WELL NAME BACA #2 22
 CASING 20" @ 461' - SURFACE ELEV. 7270' G.L. DATE: 01-22-81
 LINER DESCRIPTION: 1 3/8" @ 1535' - SURFACE ; 7/8" LINER @ 2512' - 1352' ZERO POINT BOTTOM MASTER VALVE
1" LINER @ 5980' - 2361 " TIE-BACK 1352' - SURFACE DEPTH 6000'

HOLE DESCRIPTION: REDRILL # 2 KPG 14101 INSTRUMENT 93F - 618°F FAHR.
0-4700 PSI SERIAL NO. KTB 10222

PURPOSE PRESS/TEMP GRADIENT SURVEY TO 5900' PRIOR TO MAX. TEMP. 522 °F @ 5900'
 REMARKS: FLOWTEST # 3 WITH SEPARATOR.



PRESSURES	GAUGE	BOMB
CASING, PSI	221	231

DEPTH FT.	TEMP. °F	PRESS. PSIG	GRAD.
0	-	231	-
500	149	234	.
1000	201	234	-
1500	257	239	-
2000	316	241	0.024
2500	413	279	0.276
3000	435	560	0.362
3500	454	738	0.356
4000	473	919	0.362
4500	490	1097	0.356
5000	503	1277	0.362
5500	517	1455	0.351
5900	522	1591	0.34

○ TEMPERATURE
 ▲ PRESSURE

BY:

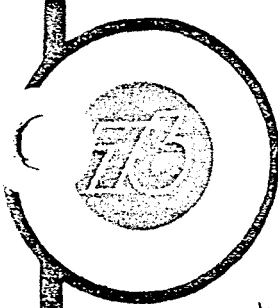
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Union Geothermal Co. of New Mexico

R.O. ENGBREITSEN

SUBSURFACE TEMPERATURE AND PRESSURE SURVEY

FEB 02 1981



OWNER UNION GEOTHERMAL Co. of N.M. FIELD REDONDO CREEK
 CASING 20" @ 467' - SURFACE ELEV. 9270' C.L.
 LINER DESCRIPTION: 13 1/8" @ 1935' - SURFACE; 9 5/8" LINER @ 2512' - 1352'
9 5/8" TIC-BACK 1352' - SURFACE
7" LINER @ 5980' - 2361'

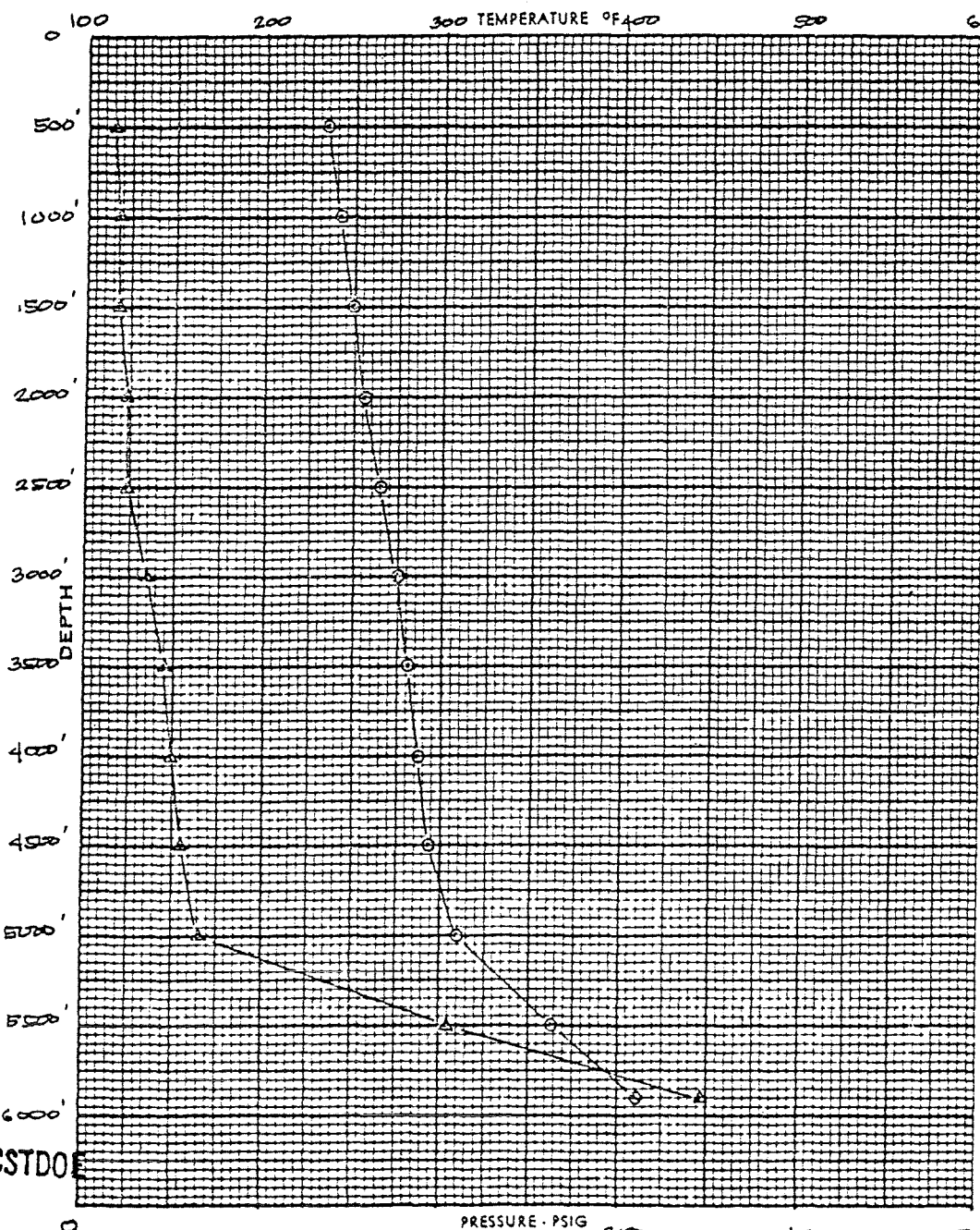
WELL NAME BACA No. 22
 DATE: 01-31-81
 ZERO POINT BOTTOM MASTER VALVE
 DEPTH 6006'

HOLE DESCRIPTION: REDRILL # 2 KPG 14101
0-4700 PSI

INSTRUMENT 73 - 618°F FAHR.
 SERIAL NO. KTB 10222

PURPOSE PRESS/TEMP FLOWING GRADIENT SURVEY TO 5900' MAX. TEMP. 410 °F @ 5900'
 REMARKS:

STABILIZATION PERIOD



DEPTH FT.	TEMP. °F	PRESS. PSI	GRAD.
500	234	15	
1000	242	18	
1500	249	18	
2000	256	23	
2500	265	23	
3000	274	25	
3500	281	45	
4000	287	50	
4500	293	55	
5000	309	65	
5500	363	204	0.271
5900	410	347	0.357

○ TEMPERATURE
 △ PRESSURE

BY:

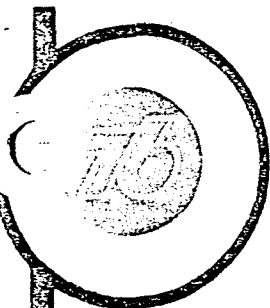
CSTDO

R.O. ENGBREITSEN

FEB 02 1981

Union Geothermal Co. of New Mexico

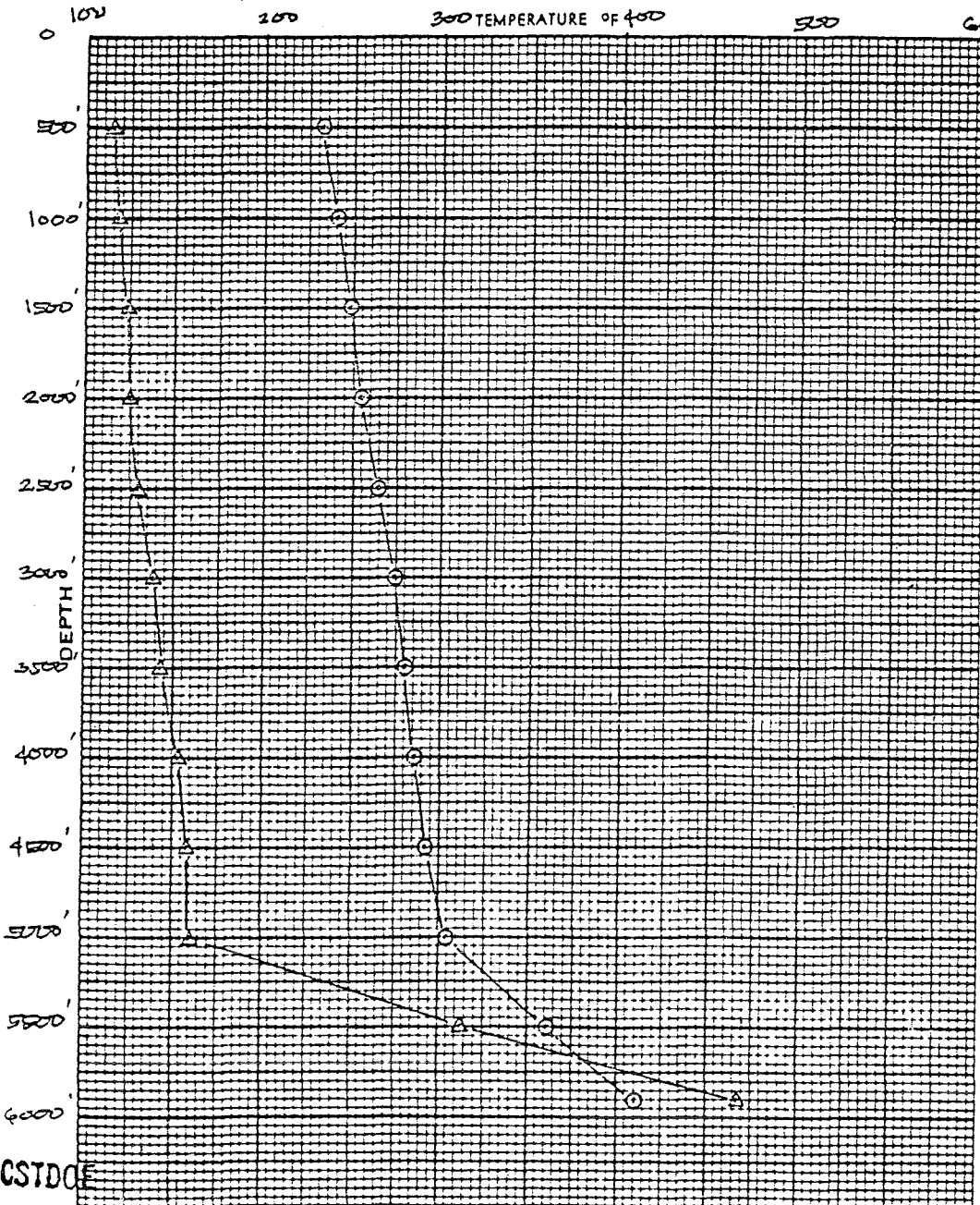
SUBSURFACE TEMPERATURE AND PRESSURE SURVEY



OWNER UNION GEOTHERMAL CO. OF N.M. FIELD REDONDO CREEK WELL NAME BACA W 22
 CASING 20" @ 467' - SURFACE ELEV. 9270' G.L. DATE: 02-02-81
 LINER DESCRIPTION: 13 3/8" @ 1535' - SURFACE ZERO POINT BOTTOM MASTER WALL
7 5/8" LINER @ 2512' - 1352' ; 7" LINER @ 5900' - 2361' DEPTH 6006'
 " NE BACK 1352' - SURFACE

HOLE DESCRIPTION: REDRILL # 2 INSTRUMENT KPG 14101 03-618°F FAHR.
0-4700 PSI SERIAL NO. KTS 10222

PURPOSE PRESS/TEMP FLOWING GRADIENT SURVEY TO 5900' MAX. TEMP. 410 °F @ 5900'
 REMARKS:



STABILIZATION PERIOD			
PRESSURES	GAUGE	BOMB	
CASING, PSI			
DEPTH	TEMP.	PRESS.	GRAD.
FT.	°F	PSI	
500	232	15	
1000	240	17	
1500	248	23	
2000	254	25	
2500	264	30	
3000	273	38	
3500	280	43	
4000	286.5	53	
4500	292	58	
5000	304	60	
5500	361	213	0.3%
5900	410	367	0.3%

○ TEMPERATURE
 △ PRESSURE

BY:

rec'd 10/26/81

BACA-22 REMEDIAL

Encl. 4

10/18/81

(89,490)

0 Dys

Moved in and rigged up Brinkerhoff-Signal rig #78. Rig on day rate at 1800 hours, 10/18/81. Mixed mud. Drilled rat hole.

BACA-22 REMEDIAL

30" C. @ 58'

20" C. @ 467'

13-3/8" C. @ 1535'

9-5/8" L. @ 1352' - 2512'

7" L. @ 2361' - 5980'

9-5/8" Tie-back @ 0' - 1356'

10/19/81

(105,255)

1 day, 5980' ETD, 0' Drld.

Installed BOE's. Tested OK. Made up drilling assembly. RIH to top of 7" liner with 8-3/4" bit at 2361'.

BACA-22 REMEDIAL

30" C. @ 58'

20" C. @ 467'

13-3/8" C. @ 1535'

9-5/8" L. @ 1352' - 2512'

7" L. @ 2361' - 5980'

9-5/8" Tie-back @ 0' - 1356'

10/20/81

(129,621)

2 Dys, 5980' ETD, 0' Drld.

RIH with 7" casing spear, jars, bumper sub and drill collars. Engaged liner at 2361'. Pulled liner loose with 260,000#. POH with liner to 391'. Spear released. Liner fell 20' and set. Retrieved liner and laid down all casing. RIH with OEDP to 2800'. Circulated.

BACA-22 REMEDIAL

30" C. @ 58'
20" C. @ 467'
13-3/8" C. @ 1535'
9-5/8" L. @ 1352' - 2512'
7" L. @ 2361' - 5980'
9-5/8" Tie-back @ 0' - 1356'

10/21/81

(144,543)

3 Dys, 2800' PBTB, 0' Drld.

HOWCO mixed and pumped plug #1: 185 cu. ft. "H" cement with 1-1 Perlite, 40% SSA-1, 3% Gel, 0.5% CFR-2 and 0.4% HR-7. Displaced with 200 cu. ft. water. CIP at 0030 hours. POH. WOC 5 hours. RIH with OEDP to 2900'. No cement from previous plug. HOWCO pumped plug #2: 167 cu. ft. "H" cement with 2-1 Perlite, 40% SSA-1, 3% Gel, 0.5% CFR-2 and 0.2% HR-7. Displaced with 200 cu. ft. water. CIP at 0800 hours. POH. WOC. RIH with OEDP to cement at 3100'. Hung with OEDP at 2900'. Pumped plug #3: 125 cu. ft. "H" cement with 1-1 Perlite, 40% SSA-1, 3% Gel, 0.5% CFR-2 and 0.2% HR-7. Displaced with 200 cu. ft. water. CIP at 1500 hours. WOC. Located cement at 2800'. Hung OEDP at 2790'. Pumped plug #4: 153 cu. ft. "H" cement with 40% SSA-1, 0.75% CFR-2 and 0.2% HR-7. Displaced with 190 cu. ft. water. CIP at 2145 hours. POH. WOC. [Had full circulation after plug #3.]

BACA-22 REMEDIAL

30" C. @ 58'
20" C. @ 467'
13-3/8" C. @ 1535'
9-5/8" L. @ 1352' - 2512'
7" L. @ 2361' - 5980'
9-5/8" Tie-back @ 0' - 1356'

10/22/81

(170,453)

4 Dys, 2551' PBTD, 0' Drld., Mud 67, Vis. 32

RIH with 8-3/4" bit #1. Located cement at 2525'. Conditioned mud. WOC. Polished off hard cement plug to 2551'. POH. RIH with Navi-Drill.

BACA-22 REMEDIAL

Encl. 9

30" C. @ 58'
20" C. @ 467'
13-3/8" C. @ 1535'
9-5/8" L. @ 1352' - 2512'
7" L. @ 2361' - 5980'
9-5/8" Tie-back @ 0' - 1356'

10/23/81

(196,598)

5 Dys, 2663', 112' Drld., Mud 67, Vis. 32, Form Cement

Time drilled 8-3/4" hole from 2551' to 2612'. RIH with locked drilling assembly. Reamed Navi-Drill run from 2551' to 2612'. Drilled 8-3/4" hole from 2612' to 2663'. POH. RIH with Navi-Drill and bit #4.

Surveys 2581' 3° 15' S 65 E / 2616' 2° 45' S 41 E / 2648' 2°
30' S 47 E

10/24/81

(212,680)

6 Dys, 2686' 23' Drld., Mud 67, Vis. 32

RIH. Oriented tool. Time drilled 8-3/4" hole from 2663' to 2686'. POH. Changed bits. RIH and oriented tool.

Surveys 2640' 2° S 40° E / 2653' 3° 15' S 40° E

10/25/81

(232,938)

7 dys, 2764', 78' Drld., Mud 68, Vis 32, Form B. Tuff

Navi-Drilled 8-3/4" hole from 2686' to 2721'. POH. RIH with 8-3/4" bit, 3 pt, twelve 6-1/2" drill collars. Reamed from 2658' to 2721'. Drilled 8-3/4" hole from 2721' to 2764'.

Surveys 2713' 1° 15' S 27° E / 2758' 1° S 17° W

BACA-22 REMEDIAL

30" C. @ 58'
20" C. @ 467'
13-3/8" C. @ 1535'
9-5/8" L. @ 1352' - 2512'
7" L. @ 2361' - 5980'
9-5/8" Tie-back @ 0' - 1356'

10/26/81

(250,764)

6 Dys, 2917', 153' Drld., Mud 68, Vis. 31, Form B. Tuff

Drilled 8-3/4" hole from 2764' to 2814'. POH. Changed drilling assembly. RIH. Drilled 8-3/4" hole from 2814' to 2917'.

Surveys 2857' 1° 15' S 19 W/ 2951' 1° 45' S 56 W

BACA-22 DEEPENING

30" C. @ 58'
20" C. @ 467'
13-3/8" C. @ 1535'
9-5/8" L. @ 1352' - 2512'
9-5/8" Tie-back @ 0' - 1356'

10/27/81

(277,099)

7 Dys, 3262', 345' Drlid., Mud 64, Vis. 33, Form B. Tuff

Drilled 8-3/4" hole from 2917' to 2998'. POH. Changed bit and tools. RIH with bit #6 to 2988'. Reamed from 2988' to 2998'.
Drilled 8-3/4" hole from 2998' to 3262'.

Surveys 3046' 1° 15' S 87 W/ 3171' 2° 30' N 60 W/ 3326' 2°
45' N 22 W

BACA-22 DEEPENING

30" C. @ 58'

20" C. @ 467'

13-3/8" C. @ 1535'

9-5/8" L. @ 1352' - 2512'

9-5/8" Tie-back @ 0' - 1356'

10/28/81

(300,969)

8 Dys, 3621', 359' Drld., Mud 64, Vis. 33, Form B. Tuff

Drilled 8-3/4" hole from 3262' to 3621'. POH. RIH with
Dyna-Drill.

Surveys 3449' 3° N 57° W/ 3607' 4° 15' N 60° W

BACA-22 DEEPENING

30" C. @ 58'

20" C. @ 467'

13-3/8" C. @ 1535'

9-5/8" L. @ 1352' - 2512'

9-5/8" Tie-back @ 0' - 1356'

10/29/81

(331,674)

9 Dys, 3779', 158' Drld., Mud 64, Vis. 34, Form B. Tuff

RIH with Dyna-Drill to 3621'. Dyne-Drilled 8-3/4" hole from 3621' to 3779'. Dyna-Drill failed. POH. RIH with locked drilling assembly to 2500'. Repaired mud line.

BACA-22 DEEPENING

rec 11/10/81 M
Encl. 6

30" C. @ 58'
20" C. @ 467'
13-3/8" C. @ 1535'
9-5/8" L. @ 1352' - 2512'
9-5/8" Tie-back @ 0' - 1356'

10/30/81

(354,664)

12 Dys, 3929', 150' Drld., Mud 64, Vis. 34, Form B.
Tuff

Repaired mud line. RIH to 3532'. Reamed to 3779'.
POH to 2500'. Repaired mud line. RIH to 3779'. Drilled
8-3/4" hole from 3779' to 3929'. POH. RIH with Stratapax
bit on Dynadrill at 2400 hours.

10/31/81

(411,024)

13 Dys, 4022', 93' Drld., Mud 64, Vis. 34, Form B. Tuff

RIH to 3858'. Reamed to 3929'. Dynadrilled 8-3/4"
hole from 3929' to 3932' with Stratapax bit. POH Changed
bit. RIH to 3932'. Dynadrilled 8-3/4" hole from 3932'
to 4022'. POH. RIH with bit #11 on locked BHA to 3873'.
Reamed to 3979' at 2400 hours.

11/01/81

(444,334)

14 Dys, 4229', 207' Drld., Mud 64, Vis. 36, Form B.
Tuff

Reamed 8-3/4" hole from 3979' to 4022'. Drilled 8-3/4"
hole from 4022' to 4229'. POH. Changed bit and tools.
RIH to 4139'.

BACA-22 DEEPENING

30" C. @ 58'

20" C. @ 467'

13-3/8" C. @ 1535'

9-5/8" L. @ 1352' - 2512'

9-5/8" Tie-back @ 0' - 1356'

11/02/81

(472,674)

15 Dys, 4232', 3' Drld., Mud 64, Vis. 34, Form B. Tuff

Reamed from 4139' to 4165'. Spun off lead collar, reamer and bit. Fished same with full recovery. Magna-Glo'd tools. RIH with bit #13 to 4159'. Reamed to 4229'. Drilled 8-3/4" hole from 4229' to 4232'.

BACA-22 DEEPENING

30" C. @ 58'
20" C. @ 467'
13-3/8" C. @ 1535'
9-5/8" L. @ 1352' - 2512'
9-5/8" Tie-back @ 0' - 1356'

11/03/81

(499,144)

16 Dys, 4250', 18' Drld., Mud 64, Vis. 33, Form B. Tuff

Drilled 8-3/4" hole from 4232' to 4240'. Lost all returns.
Drilled withy no returns from 4240' to 4250'. Regained partial
returns. Circulated, losing 400 bbls/hr. POH. RIH with OEDP
to 2500'. Rigged up HOWCO HOWCO pumped plug #5, 123 cu. ft.
"H" cement with 1-1 Perlite, 40% SSA-1, 3% Gel, 0.5% CFR-2.
Displaced with 280 cu. ft. water. CIP at 0945 hours. POH to
2500'. WOC. RIH to 4006'. Circulated. POH. RIH with 8-3/4"
drilling assembly to 4006'. Cleaned out cement to 4234'.

BACA-22 DEEPENING

30" C. @ 58'
20" C. @ 467'
13-3/8" C. @ 1535'
9-5/8" L. @ 1352' - 2512'
9-5/8" Tie-back @ 0' - 1356'

11/04/81

(527,357)

17 Dys, 4658', 408' Drld., Mud 64, Vis. 34, Form B. Tuff

Cleaned out cement to 4250'. Drilled 8-3/4" hole from 4250' to 4658' with occasional partial loss of fluid. POH.

BACA-22 DEEPENING

30" C. @ 58'

20" C. @ 467'

13-3/8" C. @ 1535'

9-5/8" L. @ 1352' - 2512'

9-5/8" Tie-back @ 0' - 1356'

11/05/81

(547,467)

18 Dys, 4955', 297' Drld., Mud 64, Vis. 34, Form B. Tuff

RIH with drilling assembly. Reamed from 4568' to 4658'.
Drilled 8-3/4" hole from 4658' to 4955'. Hole began taking
fluid at 4764' at 150 bbls/hr. Mixed LCM and drilled to
4955'. Hole loss rate at 245 bbls/hour. POH. RIH with OEDP
to 4955'. HOWCO pumped plug #6: 167 cu. ft. "H" cement with
1-1 Perlite, 40% SSA-1, 3% Gel and 0.2% CFR-2. Displaced with
359 cu. ft. mud. CIP at 1830 hours. POH. WOC.

BACA-22 DEEPENING

Rec ~ 11/14/81 M
C. Tenn

30" C. @ 58'
20" C. @ 467'
13-3/8" C. @ 1535'
9-5/8" L. @ 1352' - 2512'
9-5/8" Tie-back @ 0' - 1356'

11/06/81

(577,480)

19 Dys, 4955', 0' Drld., Mud 67, Vis. 38.

RIH with OEDP and tagged cement at 4745' (190 lin. ft. cement to formation). Circulated, losing 186 bbls/hr. HOWCO mixed and pumped plug #7: 125 cu. ft. "H" cement with 1-1 Perlite, 40% SSA-1, 3% Gel, 0.2% CFR-2 and 0.2% HR-7. Displaced with 348 cu. ft. mud. CIP at 0300 hours. POH. WOC. RIH with OEDP to top of cement at 4607'. Hole taking 55 bbls/hr. POH. RIH with bit #15 on locked BHA to 4607'. Cleaned out cement from 4607' to 4955'. Pumped total of 128 bbls LCM pills while cleaning out cement. Had full returns at 4955'.

11/07/81

(602,080)

20 Dys, 5462', 507' Drld., Mud 68, Vis 35, Form B. Tuff

Drilled 8-3/4" hole from 4955' to 5462' with zero to 30 bbls/hour mud loss. POH to 4250'. Spotted LCM pill. POH.

Surveys 5040' 3° 45' S 4 W/ 5227' 1° S 5 E/ 5422' 0° 30' S 20
W

11/08/81

(635,796)

21 Dys, 5668', 206' Drld., Mud 65, Vis. 35, Form Andesite

Changed bit. RIH with bit #16 to 3152'. Reamed from 3152' to 5462'. Drilled 8-3/4" hole from 5462' to 5668'. Lost complete returns. Twisted off top of monel. Left 8-3/4" bit, 3 pt. reamer, lead collar, stabilizer and monel in hole, with top at 5616'. RIH with 6-1/2" overshot.

BACA-22 DEEPENING

30" C. @ 58'
20" C. @ 467'
13-3/8" C. @ 1535'
9-5/8" L. @ 1352' - 2512'
9-5/8" Tie-back @ 0' - 1356'

11/09/81

(656,167)

22 Dys, 5668', 0' Drld., Mud 65, Vis. 35.

RIH with fishing tools. Worked over fish. Circulated. POH. No recovery. RIH with overshot with new slips. Worked over monel collar. POH. Laid down total fish. Hole taking 154 bbls of fluid per hour. RIH with OEDP to 5668'. HOWCO pumped plug #8: 125 cu. ft. "H" cement with 0.5% CFR-2 and displaced with 420 cu. ft. mud. CIP at 2245 hours. POH to 4607'. Pumped plug #9: 83 cu. ft. "H" cement with 0.5% CFR-2 and displaced with 367 cu. ft. mud. CIP at 2330 hours. POH to 4229'. Pumped plug #10: 83 cu. ft. "H" cement with 0.5% CFR-2 and displaced with 320 cu. ft. mud. CIP at 2400 hours.

BACA-22 DEEPENING

30" C. @ 58'
20" C. @ 467'
13-3/8" C. @ 1535'
9-5/8" L. @ 1352' - 2512'
9-5/8" Tie-back @ 0' - 1356'

11/10/81

(687,867)

23 Dys, 5668', 0' Drld., Mud 66, Vis. 37, Form Cement

POH with OEDP to 3578'. Squeezed away 51 cu. ft. fluid. POH.
WOC. RIH with drilling assembly. Tagged top of cement at
4220'. Drilled cement from 4220' to 4818', RIH to 4907'.
Drilled cement to 5108'. RIH to 5186'. Drilled cement from
5186' to 5482'.

BACA-22 DEEPENING

30" C. @ 58'
20" C. @ 467'
13-3/8" C. @ 1535'
9-5/8" L. @ 1352' - 2512'
9-5/8" Tie-back @ 0' - 1356'

11/11/81

(708,890)

24 Dys, 6071', 403' Drld., Mud 68, Vis. 41, Form Andesite

Drilled 8-3/4" hole from 5668' to 5900'. Lost circulation.
Regained same. Drilled to 6071'. Hole taking 195 bbls/hr.
POH. RIH with OEDP to 6071'. Pumped 50 cu. ft. water, 167 cu.
ft. "H" cement with 1-1 Perlite, 40% SSA-1, 3% Gel, 0.2% HR-7
and 0.5% CFR-2 (plug #11.) Displaced with 452 cu. ft. mud.
CIP at 2130 hours. POH. WOC.

Surveys 5699' 0° 45' N 37° W/ 5908' 1° 15' N 37° W

BACA-22 DEEPENING

30" C. @ 58'
20" C. @ 467'
13-3/8" C. @ 1535'
9-5/8" L. @ 1352' - 2512'
9-5/8" Tie-back @ 0' - 1356'

11/12/81

(753,250)

25 Dys, 6071', 0' Drld., Mud 66, Vis. 40, Form Cement

RIH with OEDP to 5718' to cement. Circulated. Hole taking 120 bbls/hr. HOWCO mixed and pumped plug #12, 84 cu. ft. "H" cement with 1-1 Perlite, 40% SSA-1, 3% Gel, 0.5% CFR-2 and 0.2% HR-7. Displaced with 440 cu. ft. mud. CIP at 0645 hours. POH to 2500'. WOC 6 hours. Filled hole. Circulated with full returns. POH. RIH with bit #18 to cement at 5588'. Drilled cement from 5588' to 5912', losing 50 bbls/hr. Cleaned out cement from 5912' to 67017', losing 55 bbls/hr. Twisted off drill collar. POH. Left bit, 3 pt., LDC, stab, monel, stab, 6-1/2" drill collar in hole.

Drld 11/23/81
55

BACA-22 DEEPENING

30" C. @ 58'
20" C. @ 467'
13-3/8" C. @ 1535'
9-5/8" L. @ 1352' - 2512'
9-5/8" Tie-back @ 0' - 1356'

11/13/81

(779,460)

26 Dys, 6071', 0' Drld., Mud 66, Vis. 44, Form Cement

Cleaned out cement from 5912' to 6017', losing 55 bbls/hr fluid. Twisted off. POH. Left bit, 3 pt. reamer, lead collar, stab, monel, stab and one 6-1/2" drill collar with box twisted off of top. Fish at 5931'. RIH with skirted mill. Dressed top of fish. POH. RIH with fishing tools and eighteen 6-1/2" drill collars to 5931'. Jarred on fish with no success. Released overshot. POH. Magna-Glo'd drill collars while waiting on back-off unit and additional fishing tools.

11/14/81

(808,600)

27 Dys, 6071', 0' Drld., Mud 65, Vis. 37

Magna-Glo'd drill collars. RIH with overshot and nine 6-1/2" drill collars to fish at 5931'. Unable to engage fish. POH. Found grapple control broken. Re-dressed overshot. Repaired BOP's. RIH with overshot to 5931'. Engaged fish. Jarred with no success. RIH with Free-Point. Found fish free to top of monel at 5966'. RIH with back-off shot. Overshot released. Unable to re-engage fish. POH.

11/15/81

(844,510)

28 Dys, 6071', 0' Drld., Mud 65, Vis. 37

RIH with new HOWCO/Bowen overshot to 5931'. Engaged fish. RIH with back-off shot to 5966'. Fired shot with no success. Repeated shot with no success. Dropped 4 drill collar slip dies and 3 retaining pins in hole. Ran Free-Point. Found top of monel stuck. Ran junk shot and backed off at 5966'. Charge cut wire line at rope socket, leaving rope socket in monel collar. POH. Recovered one 6-1/2" drill collar and 1 stab. Top of fish at 5966'. RIH with 1 joint 8-1/8" washover pipe with 8-3/4" washover shoe. Washed from 5966' to 5979'.

BACA-22 DEEPENING

30" C. @ 58'
20" C. @ 467'
13-3/8" C. @ 1535'
9-5/8" L. @ 1352' - 2512'
9-5/8" Tie-back @ 0' - 1356'

11/16/81

(868,550)

29 Dys, 6071', 0' Drld., Mud 65, Vis. 35

Washed over 6-1/2" monel collar to stabilizer above lead collar. POH. RIH with screw-in sub on bumper sub jars and drill collars. Jarred on fish. POH with fish. Laid down fish and wire line tools left in monel. RIH with rerun bit #1 to 5972'. Reamed to 6071'. Cleaned out cement to 6071'. No junk indicated. Lost 45 bbls/hr while cleaning out cement. POH.

BACA-22 DEEPENING

30" C. @ 58'
20" C. @ 467'
13-3/8" C. @ 1535'
9-5/8" L. @ 1352' - 2512'
9-5/8" Tie-back @ 0' - 1356'

11/17/81

(911,110)

30 Dys, 6695', 614' Drld., Mud 65, Vis. 36, Form Andesite

RIH with locked drilling assembly to 6020'. Reamed 8-3/4" hole to 6071'. Drilled 8-3/4" hole from 6071' to 6695'. (Loss rate gradually increased from 50 to 110 bbls/hr.)

Surveys 6625' 3° 30' N 56° W

BACA-22 DEEPENING

30" C. @ 58'
20" C. @ 467'
13-3/8" C. @ 1535'
9-5/8" L. @ 1352' - 2512'
9-5/8" Tie-back @ 0' - 1356'

11/18/81

(945,160)

31 Dys, 6765', 70' Drld., Mud 65, Vis. 37, Form Andesite

POH. Laid down galled monel. RIH with bit #20 to 6625'. Filled hole with 275 bbls mud. Reamed to 6695'. Drilled 8-3/4" hole from 6695' to 6745'. Lost all returns at contact with Santa Fe sand. Drilled with no returns from 6745' to 6765'. POH. RIH with OEDP to 6760'. HOWCO pumped plug #13 of 154 cu. ft. "H" cement with 1-1 Perlite, 40% SSA-1, 3% Gel, 0.5% CFR-2 and 0.2% HR-7. Displaced with 459 cu. ft. mud. CIP at 2130 hours. WOC at 2400 hours.

BACA-22 DEEPENING

30" C. @ 58'
20" C. @ 467'
13-3/8" C. @ 1535'
9-5/8" L. @ 1352' - 2512'
9-5/8" Tie-back @ 0' - 1356'

11/19/81

(968,760)

32 Dys, 6765', 0' Drld.

WOC. Laid down 60 joints grade "E" drill pipe. Picked up 60 joints grade "S 135" drill pipe while WOC. RIH with OEDP to 6765'. No fill from plug #13. HOWCO mixed and pumped plug #14, 140 cu. ft. class "H" cement with 1-1 Perlite, 40% SSA-1, 3% Gel, 0.5% CFR-2 and 0.3% HR-7. Displaced with 459 cu. ft. mud. CIP at 0915 hours. POH, WOC. Continued to change out drill pipe while WOC. RIH with OEDP to 6765'. No fill from plug #14. HOWCO mixed and pumped plug #15, 146 cu. ft. class "H" cement with 2-1 Perlite, 40% SSA-1, 3% Gel, 0.5% CFR-2 and 0.2% HR-7. Displaced with 459 cu. ft. water. CIP at 1750 hours. POH. WOC. Completed laying down grade "E" drill pipe and picked up grade "S-135" drill pipe while WOC.

BACA-22 DEEPENING

30" C. @ 58'
20" C. @ 467'
13-3/8" C. @ 1535'
9-5/8" L. @ 1352' - 2512'
9-5/8" Tie-back @ 0' - 1356'

11/20/81

(989,829)

33 Dys, 6765', 0' Drld.

RIH with OEDP to 6765'. No fill from plug #15. HOWCO mixed and pumped plug #16, 182 cu. ft. class "H" cement with 2-1 Perlite, 40% SSA-1, 3% Gel, 0.5% CFR-2 and 0.2% HR-7. displaced with 459 cu. ft. water. CIP at 0315 hours. POH. WOC. RIH. Tagged cement at 6752'. Pumped plug #17 at 6752'. Pumped 56 cu. ft. water, 129 cu. ft. Flo-Chek, 84 cu. ft. water, 157 cu. ft. class "H" cement with 2-1 Perlite, 40% Silica flour, 3% Gel, 0.5% CFR-2. Displaced with 450 cu. ft. water/ CIP at 1340 hours. POH. WOC. RIH to top of cement at 6553'. Hung with OEDP at 6551'. Pumped plug #18, 140 cu. ft. class "H" cement with 2-1 Perlite, 40% Silica flour, 3% Gel, 0.5% CFR-2. Displaced with 459 cu. ft. water. CIP at 2130 hours. WOC.

11/21/81

(1,012,745)

34 Dys, 6765', 0' Drld., Mud 66, Vis. 40

WOC. RIH to top of cement at 6315'. Circulated, filled hole. Hole taking 335 bbls/hr. Hung with OEDP at 6315'. Pumped plug #19: 56 cu. ft. water, 129 cu. ft. Flo-Chek, 84 cu. ft. water, 125 cu. ft. class "H" cement with 1-1 Perlite, 40% Silica flour, 3% Gel, 0.5% CFR-2, and 0.2% HR-7. displaced with 459 cu. ft. gel mud. CIP at 0715 hours. POH. WOC. RIH to top of cement at 6105'. Hole taking 260 BPH. With OEDP at 6105', pumped plug #20, 125 cu. ft. class "H" cement with 0.5% CFR-2, 0.2% HR-7. Displaced with 460 cu. ft. mud. CIP at 1515 hours. POH. WOC. RIH to top of cement at 6036'. Circulated hole. Hole taking 164 bbls/hr. With OEDP at 6036', pumped plug #21: 56 cu. ft. water, 42 cu. ft. class "H" cement, 2-1 Perlite, 40% Silica flour, 3% Gel, 0.5% CFR-2, 0.2% HR-7; 125 cu. ft. class "H" cement with 0.5% CFR-2, 0.2% HR-7. Displaced with 56 cu. ft. water and 398 cu. ft. mud. CIP at 2245 hours. POH. WOC.

BACA-22 Deepening Continued -

11/22/81

(1,042,039)

35 Dys, 6765', 0' Drld., Mud 67, Vis. 40

WOC. Checked fluid loss. Hole taking 105 bbls/hr. RIH to top of cement at 5682'. POH to 4189'. Pumped plug #22 through OEDP at 4189'. Pumped 56 cu. ft. water, followed by 125 cu. ft. class "H" cement with 0.5% CFR-2 and 0.2% HR-7. Displaced with 56 cu. ft. water and 252 cu. ft. mud. CIP at 1045 hours. POH to 3259'. Filled hole. Losing 105 bbls/hr. Squeezed away 123 cu. ft. POH. WOC. Strung 10 lines. Checked fluid loss. Hole taking 35 bbls/hr. Made up BHA.

BACA-22 DEEPENING

30" C. @ 58'

20" C. @ 467'

13-3/8" C. @ 1535'

9-5/8" L. @ 1352' - 2512'

9-5/8" Tie-back @ 0' - 1356'

11/23/81

(1,075,146)

36 Dys, 6765', 0' Drld., Mud 67, Vis. 40

RIH with 8-3/4" drilling assembly to top of cement at 5544'.
Cleaned out medium firm cement from 5544' to 6765' with lost
circulation rates ranging from 70 bbls/hr at 6050' to 112
bbls/hr at 6737' and total loss at 6765'. POH at 2400 hours.

BACA-22 DEEPENING

30" C. @ 58'
20" C. @ 467'
13-3/8" C. @ 1535'
9-5/8" L. @ 1352' - 2512'
9-5/8" Tie-back @ 0' - 1356'

11/24/81

(1,096,956)

37 Dys, 6765', 0' Drld.

Continued POH. RIH with OEDP to 6741'. Plug #23: HOWCO pumped 56 cu. ft. water, followed by 167 cu. ft. class "H" cement mixed 1-1 Perlite, 40% SSA-1, 3% Gel, 0.5% CFR-2, and 0.2% HR-7. Displaced with 56 cu. ft. water and 443 cu. ft. mud. CUP at 0445 hours. WOC. Tagged top of cement at 6690'. Measured loss at 288 bbls/hr. Plug #24: HOWCO pumped through OEDP at 6690', 56 cu. ft. water, followed by 167 cu. ft. class "H" cement same mix as plug #23. Displaced with 56 cu. ft. water and 440 cu. ft. mud. CIP 1300 hours. Pulled to 6290'. Plug #25: HOWCO pumped 56 cu. ft. water followed by 167 cu. ft. class "H" cement with 0.5% CFR-2. displaced with 56 cu. ft. water and 370 cu. ft. mud. CIP at 1345 hours. Pulled to 5360'. Filled hole. Closed rams. Squeezed away 62 cu. ft. at 100 psi. POH. WOC. RIH with OEDP to 4000'. Loss measured at 128 bbls/hr. RIH to top of cement at 5982;. Plug #26: pumped 56 cu. ft. water, followed by 168 cu. ft. class "H" cement with 12-1/4 lbs. Gilsonite per sack and 1/2 lb Flo-Cele per sack and 6% Gel. Dropped dart. Displaced with 56 cu. ft. water and 86 cu. ft. mud. Dart hung in restriction in drill pipe at 1500'±. Prep to POH at 2400 hours.

BACA-22 DEEPENING

30" C. @ 58'
20" C. @ 467'
13-3/8" C. @ 1535'
9-5/8" L. @ 1352' - 2512'
9-5/8" Tie-back @ 0' - 1356'

11/25/81

(1,123,013)

38 Dys, 6765', 0' Drld.

POH to 4084'. Retrieved dart. Circulated out under-displaced cement. RIH with OEDP to 2512'. WOC. Filled hole. Loss measured at 68 bbls/hr. RIH to top of cement at 5982'. POH. Mixed mud. RIH with 8-3/4" drilling assembly. Cleaned out cement from 5982' to 6292', losing a maximum of 84 bbls/hr, at 2400 hours.

11/26/81

(1,145,216)

40 Dys, 6765', 451' Cement Drld., Mud 67, Vis. 42, Form Cement

Continued cleaning out cement from 6292' to 6743'. Loss increased from 64 bbls/hr to 446 bbls/hr at 6702'. POH. RIH with OEDP to 6743'. Plug #27: HOWCO pumped 56 cu. ft. water, followed by 269 cu. ft. Flo-Chek, 56 cu. ft. water, 167 cu. ft. class "H" cement with 12-1/4# Gilsonite per sack, 1/2# Flo-Cele, 6% Gel. Displaced with 56 cu. ft. water and 449 cu. ft. mud. CIP 1415 hours. Pulled OEDP to 6234'. Plug #28: HOWCO pumped same as plug #27. CIP 1445 hours. Had partial returns at end of job. Pulled to 5304'. Filled hole. Loss measured at 550 bbls/hr. POH. WOC. RIH to top of cement at 6087'. Loss measured at 205 bbls/hr. POH at 2400 hours.

11/27/81

(1,178,752)

41 Dys, 6946', 181' Drld., Form Andesite

Continued POH. RIH with 8-3/4" drilling assembly. Cleaned out medium firm cement from 6087' to 6765' with a mud loss of 126 bbls/hr. Drilled 8-3/4" hole from 6765' to 6946'. Fluid loss increased steadily from a 126 BPH at 6798' to 590 BPH at 6946'. POH at 2400 hours.

BACA-22 DEEPENING Continued -

11/28/81

(1,206,762)

41 Dys, 6946', 0' Drld., Mud 63, Vis. 36

Continued POH. RIH with OEDP to 6946'. Pulled to 6929'. Plug #29: HOWCO pumped 56 cu. ft. water, followed by 129 cu. ft. Flo-Chek, 56 cu. ft. water, 167 cu. ft. "H" cement with 12-1/4# Gilsonite per sack, 1/2" Flo-Cele, and 6% Gel. Displaced with 56 cu. ft. water and 460 cu. ft. mud. CIP 0615 hours. POH. WOC. RIH to top of cement at 6740'. Circulated with a loss of 218 bbls/hr. Hung OEDP at 6740'. Plug #30: HOWCO pumped 56 cu. ft. water, 129 cu. ft. Flo-Chek, 56 cu. ft. water, 167 cu. ft. "H" cement with 12-1/4# Gilsonite, 0.5#/sack Flo-Cele, and 6% Gel. Displaced with 56 cu. ft. water and 449 cu. ft. mud. CIP 1500 hours. POH to 2500'. WOC. Check fluid loss after 6 hours. Measured at 114 bbls/hr. WOC at 2400 hours.

11/29/81

(1,231,492)

42 Dys, 6946', 0' Drld., Mud 64, Vis. 42, Form Cement

POH. RIH with bit to 2500'. WOC. Mixed mud. RIH to top of cement at 6405'. Filled hole with 180 bbls mud. Cleaned out cement from 6405' to 6945' with maximum loss of 90 bbls/hr. POH, keeping hole full, at 2400 hours.

BACA-22 DEEPENING

30" C. @ 58'
20" C. @ 467'
13-3/8" C. @ 1535'
9-5/8" L. @ 1352' - 2512'
9-5/8" Tie-back @ 0' - 1356'

(1,267,912)

43 Dys, 6985', 39' Drld., Form Volcanic Tuff

Continued trip for BHA. RIH with 8-3/4" BHA to 2500'. Loss increased to 300 bbls/hr during trip. Mixed pit of high-vis and 10% LCM mud. RIH to 6946'. Spotted Gel pill on bottom. Filled hole with 325 bbls. Mixed another pit of mud same as above. Filled hole with 300 bbls mud. Drilled 8-3/4" hole from 6946' to 6985' with a measured loss of 225 bbls/hr.

BACA-22 DEEPENING

30" C. @ 58'

20" C. @ 467'

13-3/8" C. @ 1535'

9-5/8" L. @ 1352' - 2512'

9-5/8" Tie-back @ 0' - 1356'

(1,308,672)

44 Dys, 7339', 354' Drld., Mud 65, Vis 50, Form S.F., Sand

Drilled 8-3/4" hole from 6985' to 7339'. Loss rate decreased to 48 bbls/hr. POH. RIH with new bit and tools.

Surveys 7295' 5° 30' N 56° W

BACA-22 DEEPENING

30" C. @ 58'
20" C. @ 467'
13-3/8" C. @ 1535'
9-5/8" L. @ 1352' - 2512'
9-5/8" Tie-back @ 0' - 1356'

(1,347,242)

45 Dys, 7496', 157' Drld., Mud 66, Vis 40, Form S.F., Sand

RIH to 7234'. POH. Unplugged monel. RIH to 7226'. Reamed to 7339'. Drilled 8-3/4" hole from 7339' to 7496', losing 125 bbls/hr.

BACA-22 DEEPENING

30" C. @ 58'

20" C. @ 467'

13-3/8" C. @ 1535'

9-5/8" L. @ 1352' - 2512'

9-5/8" Tie-back @ 0' - 1356'

(1,377,372)

46 Dys, 7638', 142' Drld., Mud 66, Vis 42, Form S.F., Sand

Drilled 8-3/4" hole from 7496' to 7638'. Twisted off. POH.
Left 8-3/4" bit, 3 pt, LDC, stab, monel, stab, 6-1/2" drill
collar with twisted off box, in hole. Top of fish at 7552'.
Laid down 2 SDC's with cracked boxes. RIH with 8-1/2" mill to
7552'. Dressed off top of fish. POH. RIH with overshot.

BACA-22 DEEPENING

RSC 12/14/81
ENCL. 4

30" C. @ 58'
20" C. @ 467'
13-3/8" C. @ 1535'
9-5/8" L. @ 1352' - 2512'
9-5/8" Tie-back @ 0' - 1356'

12/04/81

(1,413,742)

47 Dys, 7638', 0' Drld., Mud 65, Vis 48

RIH to 7552' with overshot. Unable to engage fish. POH.
Dressed overshot. RIH with overshot to 7552'. Engaged fish.
POH. Recovered entire fish. RIH with bit #24, Magna-Glowing
all tools at 2400 hours.

12/05/81

(1,431,292)

48 Dys, 7638', 0' Drld., Mud 66, Vis. 38

RIH to 7540'. Plugged bit. POH. Unplugged monel and stab.
RIH to 7540'. Attempted to break circulation with fresh
water. Plugged pipe. POH. Float had been left out on
previous trip. Laid down plugged drill collar. Staged into
hole to 7579' with fresh water. Reamed to 7638' at 2400 hours.

12/06/81

(1,463,028)

49 Dys, 7912', 274' Drld., Mud 67, Vis. 42, Form Red Bed

Drilled 8-3/4" hole from 7638' to 7912'. POH. Changed bit.
RIH with bit #25.

Surveys 7882' 5° 30' N 46° W

BACA-22 DEEPENING

30" C. @ 58'
20" C. @ 467'
13-3/8" C. @ 1535'
9-5/8" L. @ 1352' - 2512'
9-5/8" Tie-back @ 0' - 1356'

12/07/81

(1,499,246)

50 Dys, 8237', 325' Drld., Mud 67, Vis 48, Form Red Bed

Reamed 8-3/4" hole from 7800' to 7912'. Drilled 8-3/4" hole from 7912' to 8237'. Hole taking 60 to 90 bbls/hr at 8106'. Hole took 240 bbls/hour from 8150' to 8237'. POH.

BACA-22 DEEPENING

30" C. @ 58'
20" C. @ 467'
13-3/8" C. @ 1535'
9-5/8" L. @ 1352' - 2512'
9-5/8" Tie-back @ 0' - 1356'

12/08/81

(1,529,530)

51 Dys, 8237', 0' Drld., Mud 67, Vis 47

POH. Mixed mud. RIH with OEDP to 8237'. Pumped plug #31: 56 cu. ft. water, 112 cu. ft. Flo-Chek, 56 cu. ft. water, followed by 125 cu. ft. "H" cement with 12 lbs/sack Gilsonite, 1/2 lb/sack Flo-Seal, and 6% Gel; displaced with 56 cu. ft. water and 633 cu. ft. mud. CIP at 0730 hours. POH. WOC. RIH with OEDP to 8237', no fill. Hole taking 246 bbls/hr. Hung OEDP at 8237'. Pumped plug #32: 56 cu. ft. water, 56 cu. ft. Flo-Chek, 56 cu. ft. water, followed by 167 cu. ft. "H" cement with 12.25 lbs/sack Gilsonite, 1/2 lb/sack Flo-Sealand 6% Gel; displaced with 56 cu. ft. water and 569 cu. ft. mud. CIP at 1630 hours. POH. WOC. RIH. Located top of cement at 8003'. Hung OEDP at 7958'. Conditioned mud. Added LCM. Hole taking 270 bbls/hr fluid.

BACA-22 DEEPENING

30" C. @ 58'
20" C. @ 467'
13-3/8" C. @ 1535'
9-5/8" L. @ 1352' - 2512'
9-5/8" Tie-back @ 0' - 1356'

12/09/81

(1,568,084)

52 Dys, 8341', 104' Drld., Mud 67, Vis 45, Form Red Bed

Conditioned mud. Fluid loss decreased to 105 bbls/hr. POH.
RIH with locked drilling assembly. Staged in hole. Drilled
cement from 8003' to 8237'. Hole taking 76 bbls/hr. Drilled
8-3/4" hole from 8237' to 8341' at 2400 hours.

Surveys 8373' 5° 30' N 50° W

BACA-22 DEEPENING

30" C. @ 58'
20" C. @ 467'
13-3/8" C. @ 1535'
9-5/8" L. @ 1352' - 2512'
9-5/8" Tie-back @ 0' - 1356'

12/10/81

(1,601,536)

53 Dys, 8594', 253' Drld., Mud 67, Vis 49, Form Red Bed

Drilled 8-3/4" hole from 8341' to 8396' with hole taking 64
bbls/hr. POH. cleaned pits. Built volume. RIH. Staged into
8396'. Drilled 8-3/4" hole from 8396' to 8594'. Hole loss
remained the same.

BACA-22 DEEPENING

REC 12/21/81 M
CC: DOE TEAM

30" C. @ 58'
20" C. @ 467'
13-3/8" C. @ 1535'
9-5/8" L. @ 1352' - 2512'
9-5/8" Tie-back @ 0' - 1356'

12/11/81

(1,628,997)

54 Dys, 8846', 252' Drld., Mud 66, Vis 38, Form Red Bed, L.S.

Drilled 8-3/4" hole from 8594' to 8846' with 45 bbls/hr mud loss. Made wiper trip to shoe. Circulated and conditioned mud. POH. Top of limestone @ 8720'.

12/12/81

(1,664,449)

55 Dys, 8846', 0' Drld.

Ran Schlumberger DIL to 6535'. Stuck log at 6535'. Waited on wireline fishing tools. Installed quick coupling on wireline. Stripped in hole over wireline with overshot on drill pipe. Worked wireline out of side of well bore from 5150' to top of fish. Engaged fish at 6535'. POH 30'. Fish free. Pulled wireline out of rope socket. POH with wireline. Unable to move 4-1/2" drill pipe due to differential wall sticking. Unable to circulate due to fish in overshot. Waited on fishing tools and wireline truck. Hole taking 10 bbls/hr mud.

12/13/81

(1,701,617)

56 Dys, 8846', 0' Drld., Mud 67, Vis. 36

Waited on wireline truck and fishing tools. Rigged up HOMCO wireline service. RIH with collar locator. Found obstruction in drill pipe at 5500'. POH. RIH with sinker bars and bumper sub. Worked obstruction from 5500' to 5767'. POH. RIH with Free-Point Indicator. Drill pipe stuck from 3700' to 6535'. POH. RIH with 4 shot perforator. Perforated drill pipe at 5600'. Attempted to circulate through perforations. Hole packed off above perforations. Broke circulation after several attempts. Circulated and conditioned mud through perforations at 5600'.

BACA-22 DEEPENING

30" C. @ 58'
20" C. @ 467'
13-3/8" C. @ 1535'
9-5/8" L. @ 1352' - 2512'
9-5/8" Tie-back @ 0' - 1356'

12/15/81

(1,789,371)

58 Dys, 8846', 0' Drld., Mud 64, Vis 36.

Jarred on fish without success. RIH with wireline sinker bars to obstruction in drill pipe at 5604'. Unable to work through obstruction. RIH with back-off shot. Worked shot past obstruction to 5635'. Bakced off at 5635'. POH. Recovered 1 joint perforated 4-1/2" drill pipe. RIH with circulating sub on OEDP to 5635'. Conditioned mud. Screwed into fish. Unable to run sinker bar below 5794'. POH. RIH with 2-1/2" mill on 1-1/4" tubing.

BACA-22 DEEPENING

30" C. @ 58'
20" C. @ 467'
13-3/8" C. @ 1535'
9-5/8" L. @ 1352' - 2512'
9-5/8" Tie-back @ 0' - 1356'

12/14/81

(1,745,091)

57 Dys, 8846', 0' Drld., Mud 64, Vis 37

RIH with Free Point Indicator. Found drill pipe free to 5604'. POH. Ran back-off shot. Attempted to back off drill pipe without success at 5604'. Circulated. Attempted to back off. had successful back off in 4-1/2" drill pipe at 5604'. POH. Top of fish at 5604'. fish consists of 29 joints 4-1/2", 16.6#/ft, grade 'E' drill pipe, overshot and logging tool. RIH with 8-3/4" bit to 5590'. Circulated and conditioned mud. POH. RIH with screw-in sub, bumper sub and jars to 5604'. Screwed into fish. Jarred on fish without success.

BACA-22 DEEPENING

30" C. @ 58'
20" C. @ 467'
13-3/8" C. @ 1535'
9-5/8" L. @ 1352' - 2512'
9-5/8" Tie-back @ 0' - 1356'

12/16/81

(1,952.411)

59 Dys, 5844' E.T.D., 0' Drld.

Continued running 1-1/4" tubing. Worked obstruction inside 4-1/2" drill pipe to 6460'. Unable to work 2-1/8" mill deeper. POH. Laid down 1-1/4" tubing. Filled hole with 250 bbls mud. Cooled hole. Ran perforating gun to 5885'. Unable to work 2-1/16" gun deeper. POH without firing. RIH with sinker bar. Worked obstruction from 5885' to 5950'. RIH with Free Point to 5885'. Found Free Point at 5844'. Backed off drill pipe at 5844'. POH with 7 additional joints drill pipe. Fish remaining is 21 joints 4-1/2", 16.60#/ft grade 'E' drill pipe, two crossover subs, 5-3/4" HOMCO overshot and one 3-1/4" x 27' Schlumberger DIL logging tool. Top of fish at 5844'. Bottom at 6534'. Preparing to lay down drill pipe.

BACA-22 DEEPENING

30" C. @ 58'
20" C. @ 467'
13-3/8" C. @ 1535'
9-5/8" L. @ 1352' - 2512'
9-5/8" Tie-back @ 0' - 1356'

12/17/81

(1,964,761)

60 Dys, 5844' E.T.D., 0' Drld.

Laid down drill pipe, collars, and tools. Loaded out rental equipment. Removed BOP's.

12/17/81 UNION/DONOVILLE ADVISED DOE-SAN/MOLLOY THAT UNION/LIPPMAN AND HE HAD DECIDED TO STOP DRILLING BACA-22, BECAUSE THE COST CEILING HAD BEEN EXCEEDED. THE RIG WAS RELEASED. THE IMPLICATION IS THAT THE HOLE (BACA-22) AND THE PROJECT (UNION-DOE-PNM) HAVE BOTH BEEN TERMINATED.

Walter U. Molloy
12/21/81