



UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
Conservation Division, MS 92
345 Middlefield Road
Menlo Park, CA 94025

→ Dennis N

OCT 16 1980

Memorandum

To: Interested Parties

From: Acting Deputy Conservation Manager, Geothermal

Subject: Plan of Operation, Getty Oil Company, Federal Lease N-13321,
Colado KGRA, Pershing County, Nevada
Ref: 2403-01 N-13321 (POO for EA 167-80)

Getty Oil Company has submitted a Plan of Operation, in accordance with 30 CFR 270.34 to drill one (1) 8000' geothermal test well on Federal Lease N-13321 in the Colado KGRA, Pershing County, Nevada.

An Environmental Assessment (EA 167-80) will be prepared by the Office of the Deputy Conservation Manager for Geothermal for the proposed activities.

You are invited to participate in a field inspection to be led by Mr. Bernie Moroz, Reno District Geothermal Supervisor, USGS, on November 3, 1980. Participants are asked to meet at the Windmill Cafe in Lovelock, Nevada at 10:00 a.m.

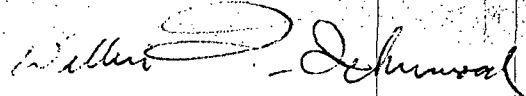
We urge you to send written comments and will appreciate hearing from you even if you are of the opinion that the existing regulations, lease terms, and operational orders provide adequate environmental protection.

All comments concerning the proposed actions should be received no later than November 13, 1980, by:

Deputy Conservation Manager, Geothermal
U.S. Geological Survey, Conservation Division
345 Middlefield Road, MS-92
Menlo Park, CA 94025
Tel: (415) 323-8111, ext. 2848 (FTS: 467-2848)

All comments will be given serious consideration in the preparation of the Environmental Assessment and any subsequent conditions of approval.

The Office of the Deputy Conservation Manager for Geothermal will routinely distribute copies of the completed final EA to the surface managing agency, the lessee, the Geothermal Environmental Advisory Panel (GEAP) and the U.S. Fish and Wildlife Service. Other Interested Parties may receive a copy of the final EA upon request. Copies of EA's will also be available for inspection during normal business hours at the Office of the Deputy Conservation Manager for Geothermal, the District Geothermal Supervisor's Office, Reno, Nevada, and the BLM, Winnemucca, Nevada District Manager's Office.



William F. Isherwood

Enclosures

INTERESTED PARTIES EA #167-80

Getty Oil Company
One 8000' Well

N-13321
Colorado KGRA

* * * * *

District Geothermal Supervisor
USGS, Conservation Division
Kietzke Plaza, Bldg. D, Suite 137
4600 Kietzke
Reno, Nevada 89502
*FTS: 470-5676 Comm: 704-784-5676

Conservation Manager, Western Region
U.S.G.S. Conservation Division
-MS 80
345 Middlefield Rd., MS 80
Menlo Park, California 94025
*FTS: 467-2093 Comm: 415-323-8111

Dr. G. D. Robinson, Chairman
Geothermal Environmental Advisory
Panel
345 Middlefield Road, MS 19
Menlo Park, California 94025
*FTS 467-2871 415-323-8111 X2871

Mr. Theodore W. Holland
U.S. Bureau of Land Management
550 W. Fort St., Box 042
Ratser, Idaho 83724

Nevada State Director
Bureau of Land Management
Federal Building, Room 3008
300 Booth Street
Reno, Nevada 89509
*FTS 470-5451 Comm: 702-784-5451

Winnemucca District Manager
Bureau of Land Management
P.O. Box 71
Winnemucca, Nevada 89445
*FTS: 470-5423 Comm: 702-623-3676

U.S. Bureau of Reclamation
ATTN: Lloyd Osbourne
Post Office Box 640
Carson City, Nevada 89701
*Tel: (702) 882-3436

Area Manager
U.S. Fish & Wildlife Service
4620 Overland Road, Room 238
Boise, Idaho 83705
*FTS 554-1960 Comm (208)384-1960

Richard T. Forester
U.S. Fish and Wildlife Service
Ecological Services/Energy Unos
18th & C Streets, NW
Washington, D.C. 20240

U.S. Fish & Wildlife Service
ATTN: Mr. Don Sada
4600 Kietzke Lane, Bldg C
Reno, Nevada 89502
*FTS 470-5227 Comm (702)784-5227

U.S. Environmental Protection Agency
Radiation Program
ATTN: Michael O'Connell
P.O. Box 18416
Las Vegas, Nevada 89114
*FTS: 595-2969 Comm: 702-736-2969

Department of Energy, Geothermal
ATTN: Bennie Dibona --- MS 3122C
20 Massachusetts Avenue, NW
Washington, D.C. 20545
*FTS 376-1690 Comm: 202-376-1690

U.S. Department of Energy, Nevada
Operations Office
ATTN: J. N. Fiore
Post Office Box 14100
Las Vegas, Nevada 89114
*FTS: 598-3424 Comm: 702-734-3424

Ms. Mary Rusco, Archaeologist
Nevada State Museum
600 N. Carson Street
Carson City, Nevada 89701
*Tel: (702) 885-4810

Nevada Bureau of Mines and Geology
ATTN: Larry Garside - Geoth. Spec
University of Nevada
Reno, Nevada 89507
*Comm: 702-784-6691

INTERESTED PARTIES for EA #167-80

State Of Nevada
Department of Energy
400 West King - Room 106
Carson City, Nevada 89701
*Tel: (702) 885-5157

Regional Manager, Region I
Nevada Dept. of Fish and Game
ATTN: Mr. Ray Corlett
380 West B Street
Fallon, Nevada 89406
*Tel: (702) 423-3171

State of Nevada, Div of Historic
Preservation and Archaeology
ATTN: Mimi Rodden
201 South Fall St. Capitol Complex
Carson City, Nevada 89710
*Tel: (702) 885-5138

State of Nevada, Div of State Lands
ATTN: Jac Shaw, Jim Hansen
201 S. Fall Street
Capitol Complex, Rm. 339
Carson City, Nevada 89710
*Tel: (702) 885-4363

State of Nevada
Division of Water Resources
C/O State Engineer
201 South Fall Street
Carson City, Nevada 89710
*Tel: (702) 885-4380

State of Nevada
Department of Transportation
Attn: Mel Woodgate
Capitol Complex
Carson City, Nevada 89710
*(702) 885-5610

Lawrence Livermore Laboratory
Box 5507, Mail Code L-523
Livermore, California 94550
*FTS 532-1100 Comm: 415-422-1100

Amax Exploration, Incorporated
ATTN: Ms. Wendy E. Merrill -
Suvy, Land Records & Permits
7100 West 44th Avenue
Wheatridge, Colorado 80033
*FTS 234-3131 (303-420-8100)

State of Nevada, Environ Protection
Agency Svcs, Dept of Cons & Res
ATTN: Wendell McCurry, Vern Ross
201 Fall Street, Capitol Complex
Carson City, Nevada 89710
*Tel: (702) 885-4670

State of Nevada
Department of Fish and Game
ATTN: Mr. Dale V. Lockhard
Post Office Box 10678
Reno, Nevada 89510
*Tel: (702) 784-6214

State of Nevada
Department of Human Resources
Attn: James Edmundson
Capitol Complex
1209 Johnson Street
Carson City, Nevada 89710

State of Nevada, Planning Coordinator
ATTN: Bob Hill
1050 E. Williams, Suite 402
Capitol Plaza
Carson City, Nevada 89701
*Tel: (702) 885-4865

State of Nevada, Pershing County
ATTN: E.L. Spencer
Pershing County Planning Director
Route 1, Box 71-0
Lovelock, Nevada 89419
*Tel: (702) 273-2636

Earth Science Laboratory
Univ of Utah Research Institute
ATTN: Phillip M. Wright
420 Chipeta Way, Suite 120
Salt Lake City, Utah 84108
*tel (801) 581-5283

Mrs. Margaret Williams
Director, Northern Nevada Native
Plant Society
P.O. Box 8965
Reno, Nevada 89507

Aminoil USA, Incorporated
ATTN: Gerry Vaughan
Post Office Box 11279
Santa Rosa, California 95406
*FTS Upe: 556-9000 707-527-5333/2

INTERESTED PARTIES for EA #167-80

Anadarko Production Company
ATTN: P.A. Smith
16855 Northchase Drive
Houston, Texas 77001
*DIRECT: 8-713-820-1101

Chevron USA, Inc.
ATTN: J.G. Turner
Post Office Box 3722
San Francisco, California 94119
*Tel: (415) 894-2726

Magcobar Division
Dresser Industries, Incorporated
ATTN: Don Walters
10960 Wilshire Blvd., Suite 1422
Los Angeles, California 90024

H. C. Bemis
Fluid Energy Corporation
Hampden East Building, Suite 315
8000 East Girard Avenue
Denver, Colorado 80231

GeothermEx, Inc
Attn: James B. Koenig
901 Mendocino Avenue
Berkeley, California 94707
*Comm: 415-524-9242

Geothermal Power Corporation
ATTN: Mr. Frank Metcalfe
1127 Grant Avenue, Suite 6
P.O. Box 1186
Novato, California 94947
*Comm: 415-897-7833

Geothermal Resources Council
Attn: Mr. David Anderson
P.O. Box 98
Davis, CA 95616
*Comm: 916-758-2360

Geothermal Resources International
ATTN: Mr. Dominic J. Falcone
4676 Admiralty Way, Suite 1020
Marina Del Rey, California 90291
*8-213-821-8802 DIRECT

Getty Oil Company
ATTN: Ms. Betty J. Reneau
Post Office Box 5237
Bakersfield, California 93388
*FTS: 984-1011 (805)399-2961

Gulf Mineral Resources Company
Exploration Department
ATTN: Mr. Glen Campbell
1720 South Belaire Street
Denver, Colorado 80222
*FTS Ope: 327-0111 303-758-1700

Hunt Energy Corporation
Geothermal Department
ATTN: Roger Bowers
2500 First National Building
Dallas, Texas 75202
*FTS 729-4011 (214)748-1300

Hunt Oil Company
Minerals Division
ATTN: James H. Nienabar
717 Seventeenth Street - Suite 2820
Denver, Colorado 80202
*FTS 234-3131 (303)534-1010

Magma Power Company
ATTN: Mr. Richard Foss
631 S. Witmer Street
Los Angeles, California 90017
*Tel: (213) 483-2285

Magma Electric Company
ATTN: Tom Hinrichs
Post Office Box 2082
Escondido, CA 92025
*Tel: (714) 743-7008

W. F. Bates
Mc Culloch Geothermal Corporation
10880 Wilshire Blvd.
Los Angeles, California 90024

Occidental Geothermal, Inc.
ATTN: Jeane Rossetto
5000 Stockdale Highway
Bakersfield, California 93309
*Tel (805) 395-8000

INTERESTED PARTIES for EA #167-80

Pacific Gas & Electric Co
ATTN: Dan Hoyer
77 Beale Street, Room 2362
San Francisco, CA 94106
*Tel: 415-781-4211, Ext 3340

Phillips Petroleum Company
ATTN: R.T. Forest
Energy Minerals Division
Post Office Box 6256
Reno, Nevada 89513
*Tel: (702) 786-2273

Phillips Petroleum Company
Geothermal Operations
ATTN: Bob Wright
Post Office Box 239
Salt Lake City, Utah 84110
*Comm: 801-364-2083

Republic Geothermal, Incorporated
ATTN: Mr. Dwight Carey,
and Ms. Tawna Nicholas
Post Office Box 3388
Santa Fe Springs, California 90670
*Tel: (213) 945-3661

Republic Geothermal, Incorporated
Northern California Office
ATTN: J. L. Sheidenberger
1011 Colleen Avenue, Suite 220
Santa Rosa, California 95404
*Comm: 707-527-7755

San Diego Gas and Electric Company
ATTN: Larry Grogan/J.M. Nugent
P.O. Box 1831
San Diego, California 92112
*(714-232-4252, Ext. 1715/1903

SAYWRIGHT Corporation
ATTN: Mr. Wayne L. Sayer
Post Office Box 229
Fairfield, California 94533
*Tel: 707-429-5777

Shell Oil Company
ATTN: Mr. F.W. Nantker
Post Office Box 92047
Worldway Center
Los Angeles, California 90009
*Tel: (805) 648-2751

Hamilton Hess
California Geothermal Coordinator
Sierra Club
255 Ursuline Road
Santa Rosa, California 95401

Sunoco Energy Development Company
ATTN: Mr. John Williams
Suite 1500 -- Box 9
12700 Park Central Place
Dallas, Texas 75251
*FTS 729-4011 214-385-5000

Southland Royalty Company
Natural Resources District
ATTN: Jere Denton
Post Office Box 17009
Fort Worth, Texas 76102
*FTS Dpr: 334-3001 (817)390-9200

Supron Energy Corporation
ATTN: Robert J. Sperandio
Bldg V, Fifth Floor
10300 North Central Expressway
Dallas, Texas 75231
*FTS 729-4011 Comm (214)691-9141

Thermal Power Company
ATTN: Mr. Richard Miller
601 California Street, Suite 1302
San Francisco, California 94108
*415-981-5700

Union Oil Company
ATTN: Don Ash and Henry T. Snow
Post Office Box 6854
Santa Rosa, California 95406

Union Oil Company of California
Geothermal Division
ATTN: Neil Stefanides
Union Oil Center, PU Box 7600
Los Angeles, California 90051
*213-486-7740

Mr. James E. Benedict
Suite 1200 Standard Plaza
1100 S.W. Sixth Avenue
Portland, Oregon 97204

INTERESTED PARTIES for EA #167-80

Mr. G. Martin Booth, III
4275 Hackamore Drive
Reno, Nevada 89502
*FTS 470-5911 (702-747-3463)

Mr. Jack McNamara
10850 Wilshire Blvd, Suite 790
Los Angeles, California 90024
*Tel: (213) 475-4933

Mr. Jerry H. Clay
618 Fair Foundation Building
Tyler, Texas 75702

Mr. Clyde E. Kuhn
Calif Cultural Heritage Foundation
Post Office box 69
Davis, California 95616

Mr. Warren M. Woodward
125 Drew Drive
Reno, Nevada 89511
*FTS 470-5911 702-825-3079

BM 4081

BM

S.P Land Co.

USL 4235

S.P Land Co.

2	1	4	3	2	1	4	3	2	1	4
22.31	22.44	22.55	22.65	22.75	22.85	22.94	22.94	22.96	22.99	22.12

4

409 AC.
(N-13321)
(61.07-F)

3

410.8 AC.

Prospects

411.83 AC. 421
(N-13321)
(61.07-F)

BM

USL 4104 S.P Land Co. 4313

4987 USL

(N-13321)
(61.07-F)

9

640 AC.

10

641.40 AC.

11

637.13 AC.

5388

S.P Land Co.

USL

4800 S.P Land Co.

4160

52

Reservoir

4400

4800

16

T.27N. - R.32E.

15

14

1200 AC.
(N-15769)
(61.07-G)

5418

USL

S.P Land Co.

USL

21

0097

22

5200

5400

Getty Oil Company

EXPLORATION DEPARTMENT

WESTERN E&P DIVISION

AREA COLADO

COUNTY PERSHING, NEVADA

DESCRIPTION: EXHIBIT "A"

▲ Proposed Well Location

← Main Drainage

DATE BY

SCALE 1" = 2000' INTERVAL

I. INTRODUCTION

Getty Oil Company proposes to drill an +8000' geothermal test well on Federal Geothermal Resources Lease N-13321 in the Colada KGRA, Pershing County, Nevada. In accordance with 30 CFR 270.71, 270.34 and GRO 2, 3 and 4, this Application, Plan of Operation and attached Exhibits are submitted for consideration and approval for the proposed work schedule. The pertinent data is shown on the attachment listed as Exhibit "A".

Exhibit "A" is a USGS Lovelock quadrangle map expanded to a scale of 1" = 2000', and shows proposed well locations, drainage, existing and proposed roads.

The well is to be drilled as a straight (vertical) hole with only minor deviations to projected depths of +8000'. The approximate well location in feet and directions from the nearest known and established section corner marker is 2100' south and 2275' east of northwest corner Section 10, T27N/R32E. General access to the drill site will be from Lovelock, Nevada, northeast along State Highway 40, then via Coal Canyon Road.

II. DETAILS OF WORK

As of the date of this application, a rig with the following specifications has not been secured, but negotiations will begin soon to contract for equipment sufficient to meet all requirements for drilling, testing and completion of a test well with complete safety for personnel and equipment. An addendum will be sent to the USGS as soon as possible.



Getty Oil Company | P. O. Box 5237, Bakersfield, California 93388 • Telephone: (805) 399-2961

Western Exploration and Production Division

April 22, 1980

University of Utah, Research Institute
Earth Science Laboratory
420 Chipeta Way, Suite 120
Salt Lake City, Utah 84108

Attention: Howard P. Ross

Re: Transmittal of Data from the Getty Oil
Company USL-1GH#1 in Section 26, T 28 N,
R. 32 E, Colado, Pershing County, Nevada
DOE-DGE Funded Program ET 78 R-08-0003.

Gentlemen:

The following list of data is being sent to you in triplicate as per instructions from the Contracting Officer DOE-DGE, Las Vegas, Nevada. A single set of the same data is being sent to the Contracting Officer in Las Vegas.

- ✓ 1. Dual Induction Log - Scale 1" = 50'; Scale 5" = 100'
One Brownline Sepia & 2 Blue-line Prints
- ✓ 2. Formation - Density Log - Scale 5" = 100'
One Brownline Sepia & 2 Blue-line Prints
3. Sonic Log with Gamma Ray-Caliper - No Good
One Blue-line Print
4. USGS Well Completion Notice, Form 9-330
One Brownline Sepia & 2 Blue-line Prints
5. Well History
Three Copies

Sincerely,

GETTY OIL COMPANY


N. J. Kappeler
Division Exploration Manager

NJK:WAS:sm
Encls.

cc: Contracting Officer, L.V.
J. Fiore, L.V.

DATA RECEIVED THIS 25th DAY
OF April, 19 80
BY Howard P. Ross



Getty Oil Company | P. O. Box 5237, Bakersfield, California 93388 • Telephone: (805) 399-2961

Western Exploration and Production Division

April 22, 1980

Contracting Officer
U. S. Department of Energy
P. O. Box 14100
Los Vegas, Nevada 89114

Re: Transmittal of Data from the Getty Oil
Company USL-1GH#1 in Section 26, T. 28 N,
R. 32 E, Colado, Pershing County, Nevada.
DOE-DGE Industry Funded Program ET 78-R-
08-0003.

Dear Sir:

Enclosed is the following list of data being transmitted to you as listed
below.

1. Dual Induction Latero log - Scale 1" = 50', Scale 5" = 100'
One blueline print
2. Formation - Density Log - Scale 5" = 100'
One blueline print
3. Sonic Log with Gamma Ray-Caliper - Scale 1" = 50'; Scale 5" = 100'
One blueline print - No Good
4. USGS Well Completion Notice; Form 9-330
One brownline sepia
5. Well History
One Copy

A triplicate set of the above listed data has been sent to the U.U.R.I. at
Salt Lake City, Utah.

Sincerely,

GETTY OIL COMPANY

O/S N. J. KAPPELER

N. J. Kappeler
Division Exploration Manager

DATA RECEIVED THIS 25th DAY

OF April, 19 80

BY Howard P. Ross

NJK:WAS:sm
Encls.

cc: U.U.R.I. - SLC
Joe Fiore - L.V.



Getty Oil Company | P. O. Box 5237, Bakersfield, California 93388 • Telephone: (805) 399-2961

Western Exploration and Production Division

August 5, 1980

Contracting Officer
DEPARTMENT OF ENERGY
P. O. Box 1400
Las Vegas, Nevada 89114

Attention: Engineering and Energy Application Division

RE: Contract DE-AC08-79ET-27008
Colado Area Nevada
Period 7-1-80 to 8-1-80
Report #17

Gentlemen:

A location has been selected for the 7500 foot exploratory well. The well will be located approximately 2110' south and 2275' east of the northwest corner of Section 10, T. 27 N., R. 32 E., Pensling County, Nevada.

Permits are being prepared and we are contacting potential drill contractors.

Very truly yours,

GETTY OIL COMPANY

ORIGINAL SIGNED BY
N. J. KAPPELER

N. J. KAPPELER
Division Exploration Manager

NJK:WAS:s

✓ cc: Dr. H. P. Ross
Earth Science Laboratory
University of Utah Research
420 Chipeta Way, Suite 120
Salt Lake City, Utah 84108

CONTRACT MANAGEMENT SUMMARY REPORT

1. Contract Identification Northern Basic & Geothermal Reservoir Assessment- Range	2. Reporting Period _____ through _____	3. Contract Number DE-AC08-79ET-27008
4. Contractor (Name and Address) Getty Oil Company P.O. Box 5237 Bakersfield, CA 93308 (1980) (Colado)	5. Contract Start Date 10/1/78	
		6. Contract Completion Date 9/30/80

7. Months	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	8. FY
-----------	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	-------

9. Cost Status													g. Cost Plan Date 1979			
a.	900												h. Planned Costs Prior FYs 0			
	Prior Costs												i. Actual Costs Prior FYs 0			
	\$93M 720												j. Total Estimated Costs for Contract 859,330			
	480												k. Total Contract Value 859,330			
	240												l. Unfilled Orders Outstanding 0			
	0												m. Estimate for Subsequent Reporting Period 0			
b. B&R Numbers AE-10-02-02																
Accrued Costs		c. Planned	0	0	45	0	0	0	0	0	0	0	682	53		
		d. Actual	0	0	45	0	0	0	0							
		e. Variance														
		f. Cum. Variance														

11. Major Milestone Status												
a.	Permits											
b.	Drill Second 1500' Hole	<input type="checkbox"/>										
c.	Drill 8000' Expl. Hole	<input type="checkbox"/>										
d.	Flow Test	<input type="checkbox"/>										
e.												
f.												
g.												
h.												
i.												

12. Remarks

13. Signature of Contractor's Project Manager and Date	14. Signature of Government Technical Representative and Date
--	---

UNIVERSITY OF UTAH RESEARCH INSTITUTE

UURI

EARTH SCIENCE LABORATORY
420 CHIPETA WAY, SUITE 120
SALT LAKE CITY, UTAH 84108
TELEPHONE 801-581-5283

April 11, 1980

Mr. Vic C. Dunn, Geologist
Bureau of Land Management
Winnemucca District Office
705 East 4th Street
Winnemucca, Nevada 89445

Dear Mr. Dunn:

Enclosed is a fully executed copy of the "Notice of Intent to Conduct Geothermal Resource Exploration Operations".

We do appreciate the assistance and consideration you have given to us. Your ability to expedite this notice has allowed us to conduct our research in a very timely manner.

Sincerely yours,



W. L. Forsberg
Associate Director/
Administration

WLF:gm

Enclosures

cc: JCW, Inc.

✓ H. R. Ross
W. O. Ursenbach
S. H. Ward
P. M. Wright

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

Notice Number

NOTICE OF INTENT TO CONDUCT GEOTHERMAL RESOURCE
EXPLORATION OPERATIONS

Applicant(s) University of Utah Research Institute	Address (include zip code) 420 Chipeta Way, Suite 100 Salt Lake City, Utah 84108
Operator Earth Science Laboratory Division	Address (include zip code) 420 Chipeta Way, Suite 120 Salt Lake City, Utah 84108
Contractor(s) JCW, Inc.	Address (include zip code) 1973 West North Temple Salt Lake City, Utah 84116

hereby apply for authorization to conduct exploration operations pursuant to the provisions of 43 CFR 3209 now or hereafter in force across and upon the following-described lands (give description of lands by township, attach map or maps showing lands to be entered or affected)

See Attachment No. 1

Type of operations to be conducted (give brief description)

Research for geothermal resources (see Attachment No. 2)

Exploration operations will be conducted during the period (date) from March 31, 1980 to March 30, 1981

Attached \$ Surety bond Rider to Nationwide bond Rider to Statewide bond Bond to be furnished

Upon completion of exploration operations the undersigned agrees to notify the Authorized Officer that authorized exploration operations have been completed in conformance with the general and special terms and stipulations of the notice.

The undersigned hereby agrees (1) that he will not enter upon the described land until he has been informed in writing whether there are special stipulations applicable to his Notice of Intent, as to either time or method of operation or otherwise, and, if there are such stipulations, what those stipulations are, (2) that he will comply with those special stipulations, if any; and (3) that he will not enter upon the described lands until his entry has been approved by the Authorized Officer.

The undersigned agrees to be bound by the terms and conditions of this notice to conduct exploration operations when approved by the Authorized Officer.

The undersigned agrees that the filing of this Notice under the regulations (43 CFR Subpart 3209) does not vest or confer any preference right to a geothermal resources lease.

The undersigned agrees further that all exploration operations shall be conducted pursuant to the following terms and conditions:

1. Exploration operations shall be conducted in compliance with all Federal, State, and local laws, ordinances, or regulations which are applicable to the area of operations including, but not limited to, those pertaining to fire, sanitation, conservation, water pollution, fish, and game. All operations hereunder shall be conducted in a prudent manner.
2. Due care shall be exercised in protecting the described lands from damage. All necessary precautions shall be taken to avoid any damage other than normal wear and tear to improvements on the land including, but not limited to, gates, bridges, roads, culverts, cattle guards, fences, dams, dikes, vegetative cover, improvements, stock watering, and other facilities.
3. All drill holes shall be capped when not in use and appropriate procedures shall be taken to protect against

hazards in order to protect the lives, safety, or property of other persons or of wildlife and livestock.

4. All vehicles shall be operated at a reasonable rate of speed and, in the operation of vehicles, due care shall be taken to safeguard livestock and wildlife in the vicinity of operations. Existing roads and trails shall be used wherever possible. If new roads and trails are to be constructed, the Authorized Officer must be consulted prior to construction as to location and specifications. Reclamation and/or reseeding of new roads and trails shall be made as requested by the Authorized Officer.
5. Upon expiration, conclusion, or abandonment of operations conducted pursuant to this Notice, all equipment shall be removed from the land, and the land shall be restored as nearly as practicable to its original condition by such measures as the Authorized Officer may specify. All geophysical holes shall be safely plugged. The Authorized Officer shall be furnished a Notice of Completion of Geothermal Resource Exploration Operations (Form 3200-3) immediately upon cessation of all such operations and shall be further informed of the completion of reclamation work as soon as possible.
6. Location and depth of water sands encountered shall be disclosed to the Authorized Officer.

(Continued on reverse)

Form 3200-9 (December 1973)

7. Operator shall contact the Authorized Officer, prior to actual entry upon the land in order to be appraised of practices which shall be followed or avoided in the conduct of exploration operations pursuant to the terms of this Notice and applicable regulations. Operator will conduct no operations on the land unless the attached bond is in good standing.
8. Due care shall be exercised to avoid scarring or removal of ground vegetative cover.
9. All operations shall be conducted in such a manner to avoid (a) blockage of any drainage systems; (b) changing the character, or causing the pollution or siltation of rivers, streams, lakes, ponds, waterholes, seeps, and marshes; and (c) damaging fish and wildlife resources or habitat. Cuts or fills causing any of the above-mentioned problems will be repaired immediately in accordance with specifications of the Authorized Officer.
10. Vegetation shall not be disturbed within 300 feet of waters designated by the Authorized Officer, except at approved stream crossings.
11. Surface damage which induces soil movement and/or water pollution shall be subject to corrective action as required by the Authorized Officer.
12. Trails and campsites shall be kept clean. All garbage and foreign debris shall be eliminated as required by the Authorized Officer.
13. Operator shall protect all survey monuments, witness corners, reference monuments, and bearing trees against destruction, obliteration, or damage. He shall, at his expense reestablish damaged, destroyed, or obliterated monuments and corners, using a licensed surveyor, in accordance with Federal survey procedures. A record of the reestablishment shall be submitted to the Authorized Officer.
14. Operator shall make every reasonable effort to prevent, control, or suppress any fires started by the operator, and

to report, as soon as possible, to the Authorized Officer location and size of fires, and assistance needed to suppress such fires. Operator shall inform the Authorized Officer as soon as possible of all fires, regardless of location, noted, or suppressed by independent action.

15. No work shall be done within one-half mile of a developed recreation site without specific written authority from the Authorized Officer. Any travel within one-half mile of a recreation site shall be over existing roads or trails.
16. Use of explosives within one-half mile of designated waters is prohibited unless approved, in writing, by the Authorized Officer.
17. If operations conducted under the provisions of this Notice causes any damage to the surface of the national resource lands, such as, but not limited to, soil erosion, pollution of water, injury or destruction of live-stock or wildlife, or littering, operator shall, within 48 hours, file with the Authorized Officer a map showing exact location of such damage and a written report containing operator's plans for correcting or minimizing damage, if possible.
18. Violation of, or failure to comply with any of these terms and conditions shall result in immediate shutdown of field operations until deficiency is corrected. Failure to correct deficiency within the time period allowed by the Authorized Officer shall result in forfeiture of bond.
19. The Bureau of Land Management reserves the right to close any area to operators in periods of fire danger or when irreparable damage to natural resources is imminent.
20. Contractor shall be liable for assuring compliance with all terms and conditions of this Notice and all actions of his designated operator, agents, and employees.
21. Where continuation of the operation will result in irreparable damage to the land and other natural resources this Notice will be immediately cancelled by the Authorized Officer.

22. Special Stipulations:

W. Partridge
 (Signature of Applicant)

(Date)

W. L. Forsley
 (Signature of Operator)

3-26-80
 (Date)

We hereby agree to the special stipulations added and made a part of this Notice to conduct exploration operations.

Wayne W. Newbark 4/10/80
 (Signature of Holder of Notice) (Date)

W. L. Forsley 4/10/80
 (Signature of Operator) (Date)

I hereby approve this Notice to conduct exploration operations.

Robert Carroll
 (Signature of Authorized Officer)

Acting District Mgr
 (Title)

4/4/80
 (Date)

Attachment No. 1

Geographic Area

T27N, R31E, Sec. 1,2,3,10,11,12,13,14,15

T27N, R32E, Sec. 1 through 24

T27N, R33E, Sec. 5,6,8,9,16,17,18

T28N, R31E, Sec. 1,2,3,10,11,12,13,14,15,22,23,24,25,26,27,34,35,36

T28N, R32E, Sec. 1 through 36

T28N, R33E, Sec. 4,5,6,7,8,9,16,17,18,19,20,21,28,29,30,31,32,33

Attachment No. 2

Survey Requirement

The research will be a dipole-dipole resistivity survey requiring the use of electrical wire along the ground and connected to stakes along the survey lines. The wire will be deployed by slow-moving four wheel drive vehicles. Wire and stakes will be retrieved at the conclusion of the current and potential measurements. The following stipulations will be followed during the survey:

- 1) Restrict vehicular activity to existing roads or trails whenever survey requirements permit.
- 2) Allow free and unrestricted access on the roads for other traffic.
- 3) Report to the BLM office all archaeological sites and refrain from pilfering such sites.
- 4) Remove all survey materials, litter and waste from sites.
- 5) All reasonable effort will be given to protect the environment.



Getty Oil Company | P. O. Box 5237, Bakersfield, California 93388 • Telephone: (805) 399-2961

Western Exploration and Production Division

January 16, 1980

University of Utah
Research Institute
391 Chipeta Way
Salt Lake City, Utah 84108

Attention: Dr. Howard P. Ross

Re: USL IGH #2 Intermediate Gradient Hole
Colado Area, Pershing County, Nevada

Gentlemen:

Enclosed with this letter of transmittal are triplicate copies of the following data listed below. This data is sent to you per instructions from the Department of Energy Office in Las Vegas, Nevada. A single set of this data has been sent to the Contracting Officer of that Department.

3 - Copies of Well Completion or Recompletion Report
Form 9-330

3 - Copies of Well History covering USL IGH #2 Intermediate
Gradient Hole

Upon receipt of the above listed data, please acknowledge by signing and returning the enclosed duplicate of this letter.

Very truly yours,

GETTY OIL COMPANY

By *N. J. Kappeler*
N. J. Kappeler
Division Exploration Manager

NJK:WAS:br
Encls.

cc: Department of Energy
Nevada Operations Office
Attn: Mr. J. B. Cotter

DATA RECEIVED THIS 21st DAY
OF January, 1980.
By *Howard P. Ross*



Getty Oil Company | P. O. Box 5237, Bakersfield, California 93388 • Telephone: (805) 399-2961

Western Exploration and Production Division

December 4, 1979

University of Utah Research Institute
Earth Science Lab
420 Chipeta Way
Salt Lake City, Utah 84108

Attn: Dr. H. P. Ross

Re: Transmittal of Well Data from
Getty Oil Company's IGH #2
Gradient Temperature Well at
Colado, Nevada, Contract No.
DE-AC08-79ET-27008

Gentlemen:

The following data as listed below is being transmitted to you in triplicate. An exact duplicate copy is being sent to the Contracting Officer, Engineering & Energy Application Division, DOE, Las Vegas, Nevada.

- (3) Schlumberger Dual Induction Laterologs - Scale 2" = 100'
- (3) Schlumberger Dual Induction Laterologs - Scale 5" = 100'
- (3) Schlumberger Formation Density-Neutron Logs -
Scale 2"&5" = 100'
- (3) Schlumberger Neutron-Gamma Ray-Caliper Log -
Scale 2"&5" = 100'
- (3) Schlumberger Borehole Compensated Sonic Logs -
Scale 2"&5" = 100'
- (3) R. F. Smith Lithologic Logs - Scale 2" = 100'

A Schlumberger Temperature Log was also run, but malfunctioned and could not be recorded. No temperature log will be available until a wireline log is run later on. A reproducible sepia print will be sent when the originals are received.

Very truly yours,

GETTY OIL COMPANY

N. J. Kappeler
N. J. Kappeler
Division Exploration Manager

NJK:WAS:ges
cc: Contracting Officer
Department of Energy
P. O. Box 14100
Las Vegas, Nevada 89114

DATA RECEIVED THIS 7th DAY OF
December, 1979
BY Howard P. Ross
UURI - ESC

(1) Joe Fiore



Getty Oil Company | P. O. Box 5237, Bakersfield, California 93388 • Telephone: (805) 399-2961

Western Exploration and Production Division

September 13, 1979

Contracting Officer
Attention: Engineering & Energy
Applications Division
Department of Energy
P.O. Box 14100
Las Vegas, Nevada 89114

Re: Contract DE-AC08-79ET-27008
Colado Area, Nevada
Period 8-1-79 to 9-1-79
Report #8

Gentlemen:

Permit applications for two (2) 1500 foot gradient holes have been issued by the District Geothermal Office of the U.S. Geological Survey in Reno, Nevada.

Contract modifications were completed and the official documents signed by the Department of Energy and Getty Oil Company to cover the cost of drilling an additional (1) 1500 foot hole at Colado, Nevada. The locations have now been graded, and sumps prepared at each site. We are awaiting bids from Rathole Diggers for the purpose of installing conductor pipe at each drill pad.

Very truly yours,

GETTY OIL COMPANY

O/S N. J. KAPPELER

N. J. Kappeler
Division Exploration Manager

NJK:WAS:met

Enclosure

cc; (3) Dr. H. P. Ross
Earth Science Laboratory
University of Utah Research
420 Chipeta Way, Suite 120
Salt Lake City, Utah 84108

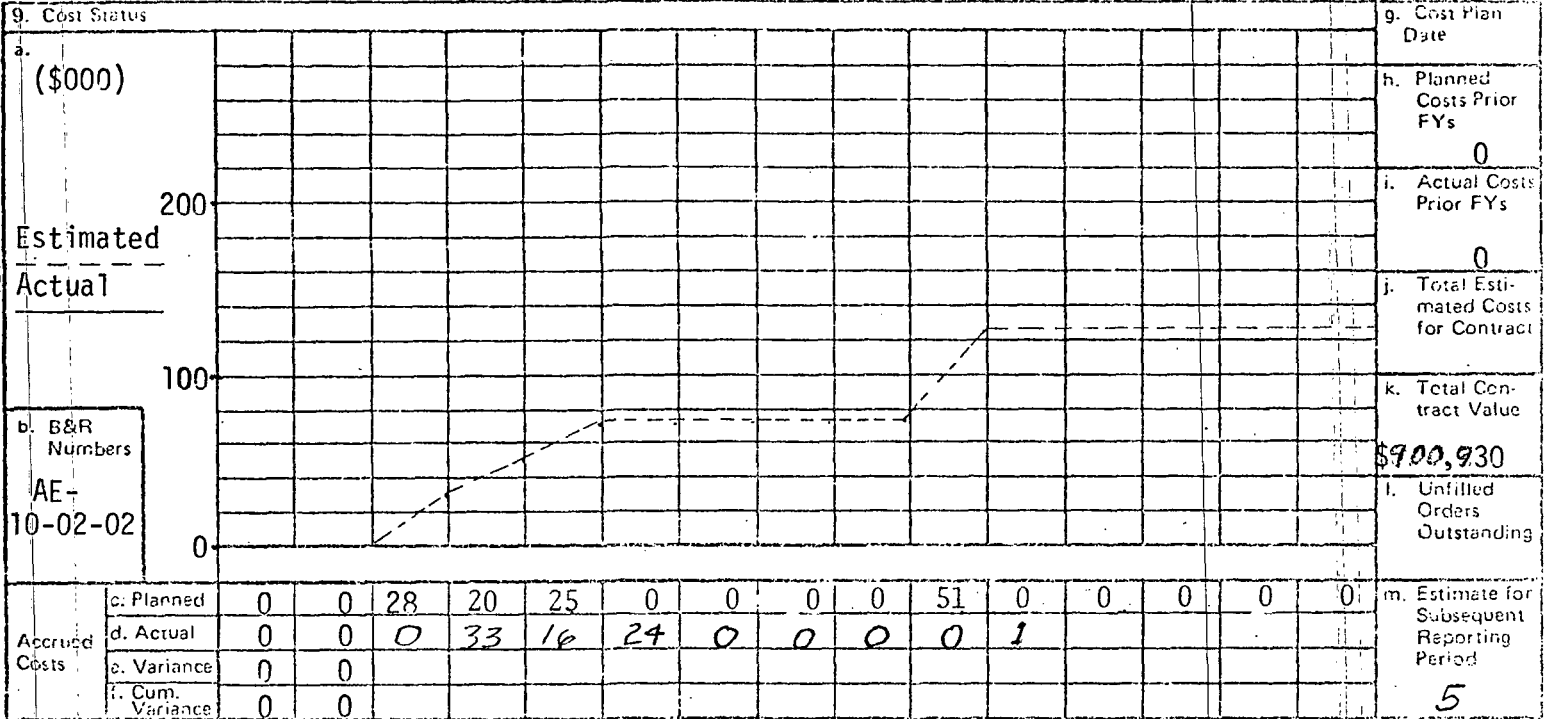
CONTRACT MANAGEMENT SUMMARY REPORT

FORM DOE 536 (1/78)

FORM APPROVED OMB NO. 38R-0190

1. Contract Identification Geothermal Reservoir Assessment Northern Basin & Range		2. Reporting Period _____ through _____	3. Contract Number DE-AC08-79ET-27008
4. Contractor (Name and Address) Getty Oil Co. P. O. Box 5237 Bakersfield, CA 93308		5. Contract Start Date 10/1/78	6. Contract Completion Date 9/30/80

7. Months	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	8. FY 1979
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11. Major Milestone Status	
a. Deliver Exist Data	△
b. Drill 18 500' Holes	[Bar]
c. Permits	[Bar]
d. Drill One 1,500' Hole	[Bar]
e. Permits	[Bar]
f. Drill 8,000' Expl. Hole	Jan-Apr 1980
g. Test	June 1980
h.	
i.	

12. Remarks	
13. Signature of Contractor's Project Manager and Date O/S N. J. KAPPELER 9/14/79	14. Signature of Government Technical Representative and Date

COLORADO ENCL

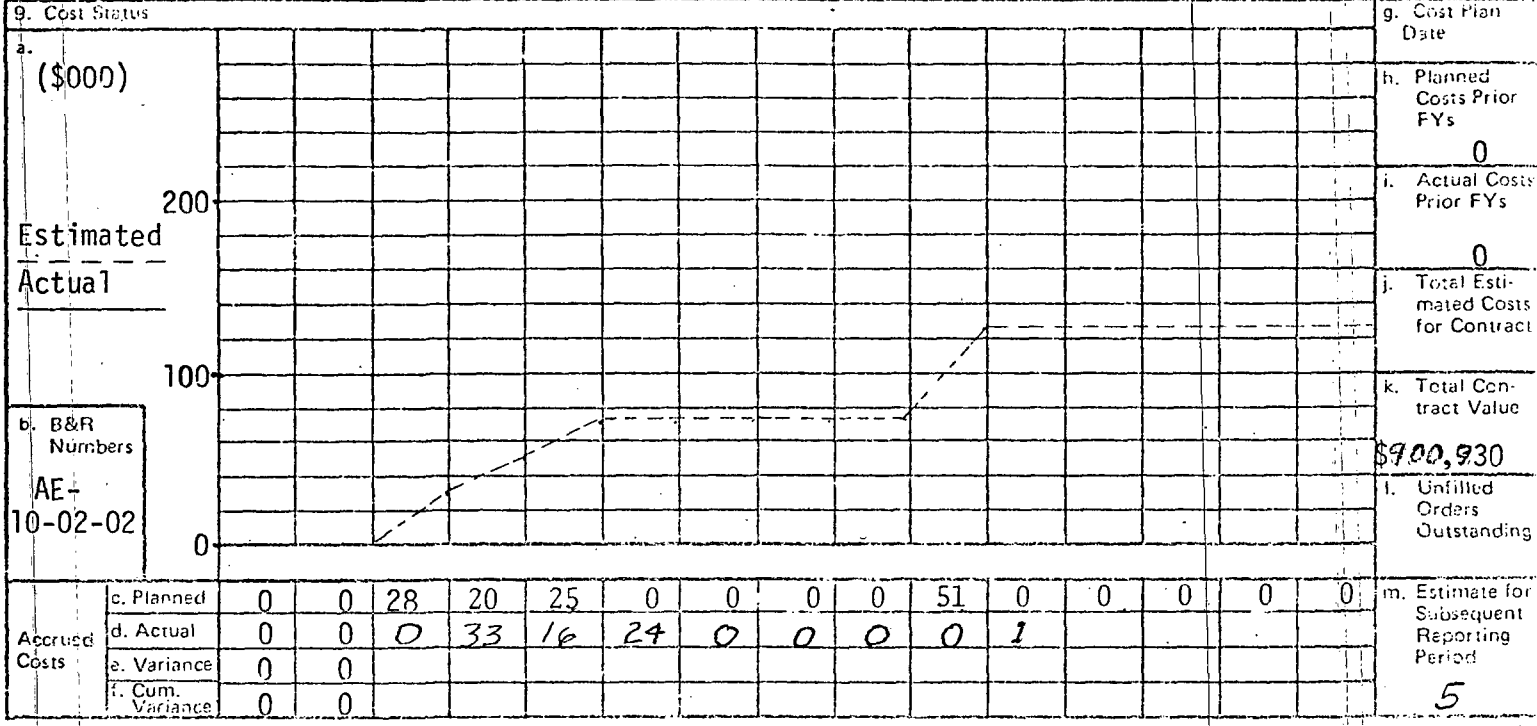
CONTRACT MANAGEMENT SUMMARY REPORT

FORM DOE 536 (1/78)

FORM APPROVED OMB NO. 38R-0190

1. Contract Identification Geothermal Reservoir Assessment Northern Basin & Range		2. Reporting Period _____ through _____	3. Contract Number DE-AC08-79ET-27008
4. Contractor (Name and Address) Getty Oil Co. P. O. Box 5237 Bakersfield, CA 93308		5. Contract Start Date 10/1/78	6. Contract Completion Date 9/30/80

7. Months	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	8. FY 1979
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11. Major Milestone Status

a. Deliver Exist Data	△	
b. Drill 18 500' Holes	▬	
c. Permits	▬	
d. Drill One 1,500' Hole	▬	
e. Permits	▬	
f. Drill 8,000' Expl. Hole		Jan-Apr 1980
g. Test		June 1980
h.		
i.		

12. Remarks

13. Signature of Contractor's Project Manager and Date
O/S N. J. KAPPELER **9/14/79**

14. Signature of Government Technical Representative and Date

COLORADO ENCL

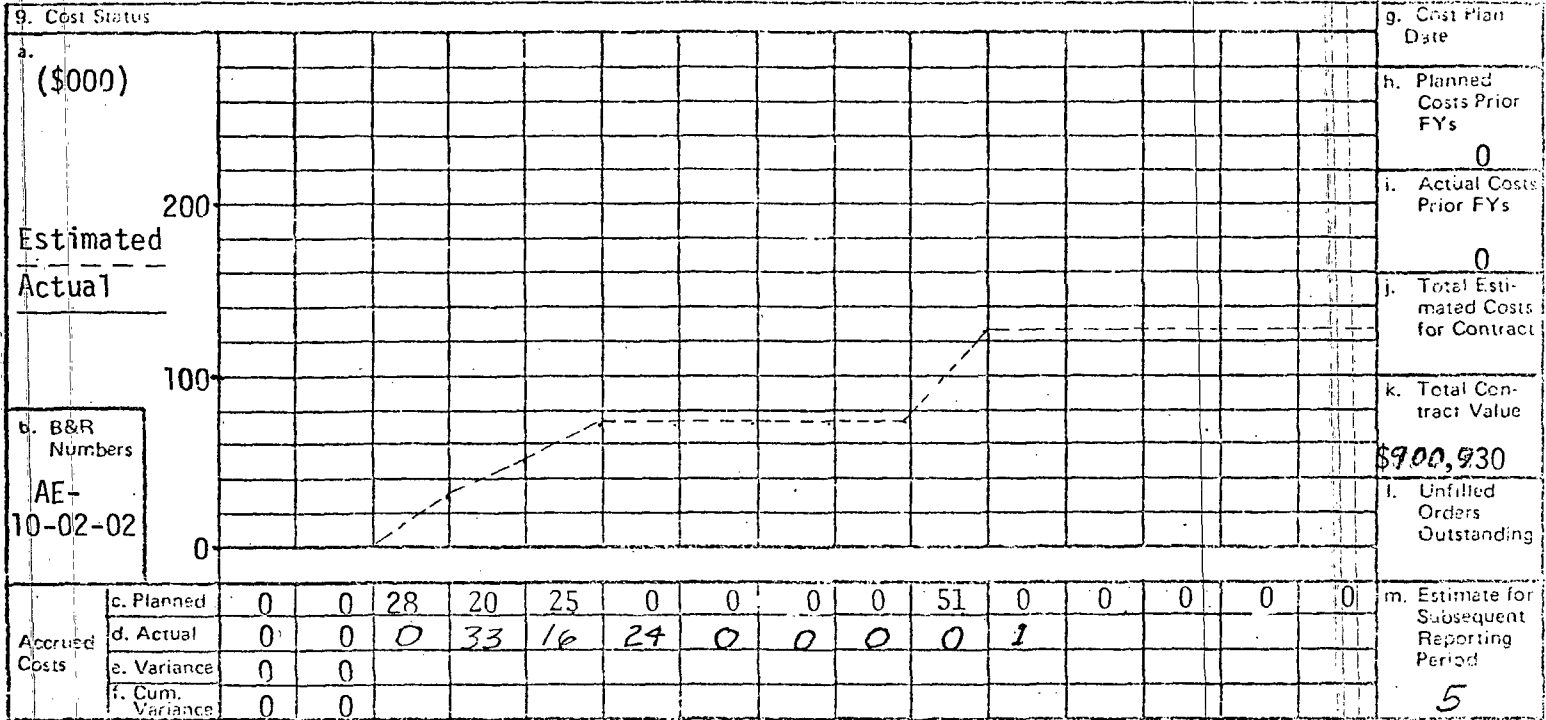
CONTRACT MANAGEMENT SUMMARY REPORT

FORM APPROVED
OMB NO. 38R-0190

FORM DOE 536
(1/78)

1. Contract Identification Geothermal Reservoir Assessment Northern Basin & Range		2. Reporting Period _____ through _____	3. Contract Number DE-AC08-79ET-27008
4. Contractor (Name and Address) Getty Oil Co. P. O. Box 5237 Bakersfield, CA 93308		5. Contract Start Date 10/1/78	6. Contract Completion Date 9/30/80

7. Months	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	8. FY 1979
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11. Major Milestone Status															
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a. Deliver Exist Data	△															
b. Drill 18 500' Holes	[Bar]															
c. Permits	[Bar]															
d. Drill One 1,500' Hole	[Bar]															
e. Permits	[Bar]															
f. Drill 8,000' Expl. Hole																Jan-Apr 1980
g. Test																June 1980
h.																
i.																

12. Remarks

13. Signature of Contractor's Project Manager and Date O/S N. J. KAPPELER 9/14/79	14. Signature of Government Technical Representative and Date
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COLADO ENCL



Department of Energy
Nevada Operations Office
P. O. Box 14100
Las Vegas, NV 89114

SEP 10 1979

Mr. N. J. Kappeler
Division Exploration Manager
Getty Oil Company
P. O. Box 5237
Bakersfield, CA 93388

Dear Mr. Kappeler:

CONTRACT DE-AC08-79ET27003, PROPOSED ADDITION OF GEOTHERMOMETRIC/
GEOCHEMICAL STUDY

We have reviewed your proposal, dated July 13, 1979, to include the subject study as additional work in the Colado geothermal reservoir assessment project, and we have determined that it is not acceptable as submitted. The rationale behind the determination includes the following factors:

1. The geochemical survey envisioned by DOE in our initial informal request was for soil sample analyses for volatile elements such as Mercury and Arsenic and did not envision fluids geochemistry or geothermometry studies.
2. The geochemical survey was intended to be complemented by two other techniques, namely dipole-dipole resistivity and spontaneous potential surveys, in accordance with our goals to fill data gaps and document the utility of the survey types, in the geothermal reservoir assessment case studies program.
3. The requested funding support (\$20K) for the proposed study exceeded by a factor of four the amount DOE felt warranted for geochemical investigations in your Colado project.
4. The intent of the supplemental funds for the case studies program is to support the acquisition and distribution of basic data types as opposed to detailed interpretive or consultant studies such as included in your proposal.

DRAFT

DNZ
8/31/79

Mr. N. J. Kappeler
Division Exploration Manager
Getty Oil Company
P. O. Box 5237
Bakersfield, CA 93338

Dear Mr. Kappeler:

CONTRACT DE-AC08-79ET27008, PROPOSED ADDITION OF GEOTHERMOMETRIC/
GEOCHEMICAL STUDY

We have reviewed your proposal, dated July 13, 1979, to include the subject study as additional work in the Colado geothermal reservoir assessment project, and we have determined that it is not acceptable as submitted. The rationale behind the determination includes the following factors:

1. The geochemical survey envisioned by DOE in our initial informal request was for soil sample analyses for volatile elements such as Mercury and Arsenic and did not envision fluids geochemistry or geothermometry studies.
2. The geochemical survey was intended to be complemented by two other techniques, namely dipole-dipole resistivity and spontaneous potential surveys, in accordance with our goals to fill data gaps in the geothermal reservoir assessment case studies program.
and document the field of the survey types
3. The requested funding support (\$20K) for the proposed study exceeded by a factor of four the amount DOE felt warranted for ^(Geochemical) investigations in your Colado project.

DRAFT

Mr. H. J. Kappeler

- 2 -

We appreciate the interest shown by Getty Oil Company in addressing the DOE desire for additional data and regret that we are unable to support the proposal.

Sincerely,

J. B. Cotter

E&EAD:JNF-

cc: Dr. H. P. Ross, UURI,
Salt Lake City, UT

u)

The intent of the supplemental funds for the Case Study program is to support the acquisition and distribution of basic data types, as opposed to detailed interpretation or consult. studies such as included in the Getty proposal.



Getty Oil Company | P. O. Box 5237, Bakersfield, California 93388 • Telephone: (805) 399-2961

Western Exploration and Production Division

August 1, 1979

Contracting Officer
Attention: Engineering & Energy
Applications Division
Department of Energy
P. O. Box 14100
Las Vegas, Nevada 89114

Re: Contract DE-AC08-79ET-27008
Colado Area, Nevada
Period 6-1-79 to 8-1-79
Report #7

Gentlemen:

Permit applications have been filed for two (2) 1500 foot gradient holes, and we are awaiting issuance of permits and contract modifications to cover the drilling of these two (2) 1500 foot holes.

One copy of Form DOE-536 is attached.

Very truly yours,

GETTY OIL COMPANY

N. J. KAPPELER

N. J. Kappeler
Division Exploration Manager

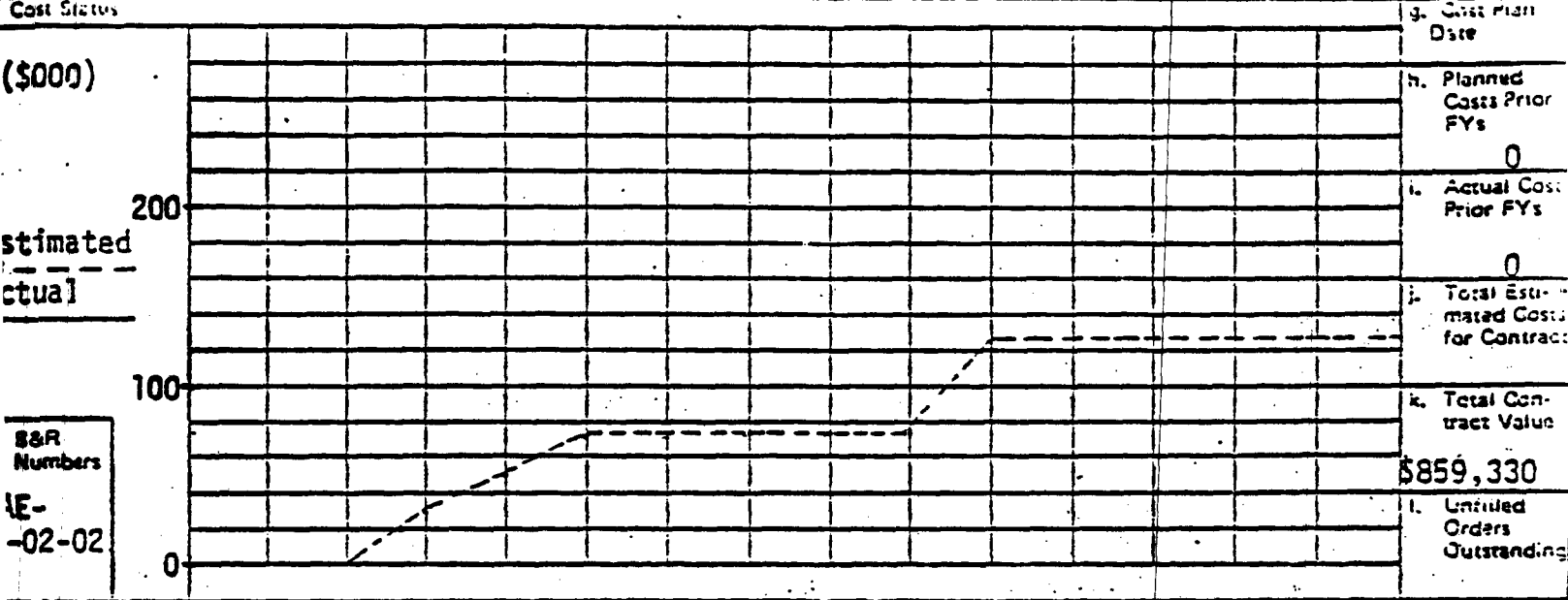
NJK:JJD:blb

Enclosure

cc: (3) Dr. H. P. Ross ✓
Earth Science Laboratory
University of Utah Research
420 Chipeta Way, Suite 120
Salt Lake City, Utah 84108

Contract Identification Geothermal Reservoir Assessment Northern Basin & Range	2. Reporting Period _____ through _____		3. Contract Number DE-AC08-79ET-27008	
Contractor (Name and Address) Getty Oil Co. P. O. Box 5237 Bakersfield, CA 93308			5. Contract Start Date 10/1/78	
			6. Contract Completion Date 9/30/80	

Months	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	8. FY 1970
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Budget	e. Planned	0	0	28	20	25	0	0	0	0	51	0	0	0	0	0	m. Estimate for Subsequent Reporting Period 0
	d. Actual	0	0	0	33	16	24	0	0	0							
	e. Variance	0	0														
	f. Cum. Variance	0	0														

Major Milestone Status	
Deliver Exist Data	△
Drill 18 500' Holes	▬
Permits Drill One 500' Hole	▬
Permits Drill 8,000' Expl Hole	▬
est	Jan-Apr 1980
	June 1980

Remarks

Signature of Contractor's Project Manager and Date O/S N. J. KAPPELER 8-1-79	14. Signature of Government Technical Representative and Date
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APPENDIX A

STATEMENT OF WORK

A. Chevron Resources Company's Beowawe proposal dated May 30, 1978, submitted in response to RFP No. ET-78-R-08-0003 is incorporated herein and made a part of this Contract No. ET-78-C-08-1590 except as modified by such Contract. The Contractor shall use its best efforts to perform the proposed work described herein and to acquire and deliver to DOE the resulting new data and will deliver existing data described below.

B. The program to acquire new data encompassed by this Contract is as follows:

- 1. Conduct a reflection seismic survey consisting of 8 line miles in the vicinity of the proposed new exploratory well.
- 2. Drill a geothermal exploratory hole in Section 17 or Section 18, T 31 N, R 48 E, MDM, to a depth of approximately 4,000 feet, or such lesser depth as Contractor may determine in the event that fluids, which in Contractor's opinion, are of a commercial temperature are encountered at a lesser depth or drilling conditions are encountered which, in Contractor's opinion, makes further drilling unduly hazardous or impractical. The drilling program including logging and short-term (12- to 24-hour) flow testing shall be substantially as set forth in Appendices I and II of above-referenced Chevron Resources Company proposal; PROVIDED, HOWEVER, Contractor shall be required to conduct short-term flow testing only after the exploratory well is drilled to its objective depth and logged and only if such short-term flow test is deemed warranted by Contractor.

C. The program to provide existing data encompassed by this Contract is as follows:

- 1. Provide existing drilling, logging, completion, and drill stem testing data from the 9,563-foot-deep Chevron-Ginn Well No. 1-13 and the 5,680-foot-deep Chevron-Rossi Well No. 21-19. The data will include physical samples and printed material as described in the Chevron proposal incorporated herein and enumerated in D. below.
- 2. Provide existing geophysical survey data described in the above Chevron proposal and enumerated in D. below.

*Rec. 12-1-78 → C.
Inventory Compl. 12-6-78
Data Complete HPC
12-7-78*

D. Deliverables to be provided by the Contractor are as follows:

1. Results from the reflection seismic survey of B.1. above.
2. Drilling, logging, and short-term flow testing data from B.2. above to include:
 - a. Drill hole cuttings--approximately 1,000 gm sample over each 10- to 20-foot interval as drilling conditions permit.
 - b. Core samples--approximately 50 percent of total core recovered.
 - c. Fluid samples--approximately 1,000 cc samples representative of the short-term flowing period and 50 percent of any samples taken during drilling.
 - d. Mud logging data
 - e. Geophysical logging data
 - f. Short-term flow testing data
 - g. Drilling and completion histories
 - h. Any analyses from a. through f. above
3. Data From Chevron-Ginn Well No. 1-13
 - MJB* a. Cuttings samples (30 to 50 gm at 10-foot intervals from 125 feet to 9,551 feet)
 - ✓ b. Core description (9,551 feet to 9,563 feet)
 - ✓ c. Fluid samples data from drill stem tests
 - ✓ d. Drilling and completion history
 - ✓ e. Mud logging data
 - ✓ f. Geophysical logs
 - ✓(1) Induction electric
 - ✓(2) Dual induction laterolog
 - ✓(3) Compensated neutron

- ✓(4) Compensated formation density
- ✓(5) Gamma ray
- ✓(6) Caliper
- ✓(7) Dipmeter
- ✓(8) Temperature
- ✓(9) Pressure

4. Data From Chevron-Rossi Well No. 21-19

- ✓a. Cuttings samples (30 to 50 gm at 10-foot intervals from approximately 50 feet to 5,680 feet)
- ✓b. Fluid sample analysis, drill stem test (4,370 feet to 5,680 feet)
- c. Mud logging data
- ✓d. Drilling and completion histories
- ✓e. Geophysical logging data
 - ✓(1) Log run No. 1, Welex 10/18/76 (200 feet to 1,998 feet)
 - ✓(a) Induction
 - ✓(b) Compensated acoustic velocity
 - ✓(c) Dipmeter
 - ✓(d) Caliper
 - ✓(2) Log run No. 2, Schlumberger 11/20/76 (1,988 to 4,371 feet)
 - ✓(a) Dual induction laterolog
 - ✓(b) Compensated formation density
 - (c) Gamma Ray
 - (d) Caliper
 - ✓(e) Dipmeter

- ✓(f) Sonic
 - ✓(3) Log run No. 3, Schlumberger 12/3/76 (4,374 to 5,680 feet)
 - ✓(a) Dual induction laterolog
 - ✓(b) Compensated neutron
 - ✓(c) Compensated formation density
 - ✓(d) Gamma ray (5,590 to 5,680 feet)
 - ✓(e) Caliper
 - ✓(f) Dipmeter
 - ✓(g) Sonic
 - ✓(4) Directional surveys (various intervals)
 - ✓(5) Temperature surveys from surface to 5,580 feet on 12/8/76, 2/8/77, 3/7/77, 3/28/77, and 4/15/77
 - ✓(6) Pressure surveys 3/7/77 and 4/15/77
5. Existing geophysical survey data shall be provided from the following surveys:
- ✓a. Resistivity over 40 square miles
 - ✓b. Magneto-telluric over ^{30 lw}~~50~~ square miles
 - ✓c. Self-potential over approximately 10 square miles
 - ✓d. Aeromagnetic over 30 square miles
 - ✓e. Microearthquake over 8 square miles
 - ✓f. Reflection seismic over 17.5 line miles
 - ✓g. Ground noise over 1.5 square miles

E. Delivery and release schedule for above data as follows:

1. Existing data shall be delivered within 60 days of contract execution and released by DOE anytime thereafter.
2. New data shall be delivered within 30 days after drilling is completed but shall not be released by DOE until six months after drilling is completed.

3. Physical samples such as drill cuttings, core samples, and fluid samples will be delivered to the Geothermal Sample Library, University of Utah, Salt Lake City, Utah, or placed in the custody of a University of Utah representative at the drill site.

Four copies of all other deliverable data described above will be required, with distribution as shown in paragraph B.1. of Appendix C, Reports.

APPENDIX C

REPORTS

Reporting requirements under this Contract are as follows:

A. Description of Reports

1. Technical Progress Report--Summarize the work performed during the reporting period and describe planned activities for the next period. Identify significant problems encountered or anticipated and actions taken or proposed to resolve them.
2. Cost Report--Submit a monthly cost management report in accordance with instructions to be provided by the Contracting Officer.
3. Final Technical Report--Provide a comprehensive description of the drilling operations including approach used, problems encountered, results obtained, and recommendations. Provide a description of each well as completed, including downhole and surface equipment and configuration.

B. Format, Frequency, Number of Copies, Due Dates

1. Technical Progress Report--Letter. Submit monthly with one copy to C.1. addressee below and three copies to C.2. addressee below. Due 10 working days after month ends.
2. Cost Report--Format, number of copies, and due dates shall be in accordance with instructions to be provided.
3. Final Technical Report--Formal report including cover page, title page, abstract, and table of contents. Submit three copies in draft form to each addressee listed in C. below. The draft report shall be due 45 days after completion of all field activities. The Director, Engineering and Energy Applications Division (E&EAD), will compile comments on the draft report and notify the Contractor of approval or of recommended changes. The report will then be prepared in final form and resubmitted in accordance with Technical Information Reporting Instructions to be provided.
4. Informal Reports--Telephone communications between the Contractor and DOE shall be conducted on an "as needed" basis to assist in maintaining overall project coordination.

C. Addressees for Reports and Deliverables Other Than Physical Samples

1. Contracting Officer
ATTN: Engineering & Energy Applications
Division (E&EAD)
Department of Energy
Nevada Operations Office
Post Office Box 14100
Las Vegas, NV 89114

2. Dr. H. P. Ross
Earth Science Laboratory (ESL)
University of Utah Research
Institute (UURI)
391 Chipeta Way
Salt Lake City, UT 84108

D. Addressee for Physical Samples

Mr. M. Bullett
Geothermal Sample Library
University of Utah Research
Institute
391 Chipeta Way
Salt Lake City, UT 84108



Getty Oil Company. P. O. Box 5237, Bakersfield, California 93388 • Telephone: (805) 399-2961

Western Exploration and Production Division

April 11, 1979

Contracting Officer
Attention: Engineering and Energy
Applications Division
Department of Energy
P.O. Box 14100
Las Vegas, Nevada 89114

Re: Contract DE-AC08-79ET 27008
Colado Area, Nevada
Period 3-1-79 to 4-1-79
Report #4

Gentlemen:

Colado Area Phase I, Drill 18 Temperature Gradient Holes, has been finished with the completion of Well #6-6 on March 15, 1979. In the previous report G.H. #13-26 had reached a depth of 400 feet at report time. It was subsequently completed and the remaining wells as follows:

G.H. #13-26	TD 500'
G.H. #17-24	TD 500'
G.H. #18-24	TD 500'
G.H. #16-22	TD 500'
G.H. #14-22	TD 500'
G.H. #15-21	TD 500'
G.H. #6-6	TD 500'

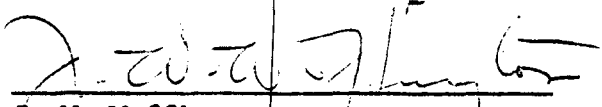
All of the Ditch Samples from the remaining wells have been forwarded to the Earth Science Laboratory in Salt Lake City, Utah.

It is anticipated that two temperature gradient surveys will be conducted after the wells have stabilized. The first survey will be completed very shortly with the final survey to be conducted in the middle of May, 1979.

One copy of Form DOE-566 is attached.

Very truly yours,

GETTY OIL COMPANY


J. W. Woffington
Division Exploration Manager

JWW:jh
cc: (3)

Dr. H.P. Ross ✓
University of Utah Research
420 Chipeta Way, Suite 120
Salt Lake City, Utah 84108

CONTRACT MANAGEMENT SUMMARY REPORT

1. Contract Identification Geothermal Reservoir Assessment Northern Basin & Range	2. Reporting Period _____ through _____	3. Contract Number DE-AC08-79ET-27008
4. Contractor (Name and Address) Getty Oil Co. P. O. Box 5237 Bakersfield, CA 93308		5. Contract Start Date 10/1/78
		6. Contract Completion Date 9/30/80

7. Months	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	8. FY 1979
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9. Cost Status																g. Cost Plan Date																																																																	
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11. Major Milestone Status	
*Deliver Exist Data	△
*Drill 18 500' Holes	▬
*Permits	▬
*Drill One 500' Hole	▬
*Permits	▬
*Drill 8,000' Expl Hole	Jan-Apr 1980
*Test	June 1980

12. Remarks

13. Signature of Contractor's Project Manager and Date 4/11/79	14. Signature of Government Technical Representative and Date
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1. Contract Identification Geothermal Reservoir Assessment Northern Basin & Range	2. Reporting Period _____ through _____	3. Contract Number DE-AC08-79ET-27008
4. Contractor (Name and Address) Getty Oil Co. P. O. Box 5237 Bakersfield, CA 93308		5. Contract Start Date 10/1/78
		6. Contract Completion Date 9/30/80

7. Months	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	8. FY 1979
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2. Remarks

3. Signature of Contractor's Project Manager and Date 4/11/79	14. Signature of Government Technical Representative and Date
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Getty Oil Company | P. O. Box 5237, Bakersfield, California 93388 • Telephone: (805) 399-2961

Western Exploration and Production Division

February 4, 1981

University of Utah Research Institute
Earth Science Lab
420 Chipeta Way
Salt Lake City, Utah 84108

Attention: Mr. Dennis Nielson

Gentlemen:

Re: Well Histories and Final Temperatures
Data From Getty Oil Company's Shallow
Gradient Hole Program - Beowawe Area
Eureka County, Nevada


Enclosed with this letter of transmittal, please find the following data sent to you in triplicate as per instructions from the DOE-DGE Office in Las Vegas, Nevada. This data is the final results from our gradient hole work at Beowawe.

1. Well Histories of 14.5 wells drilled on Federal and private acreage at Beowawe.
2. Two temperature log surveys approximately sixty (60) days apart after completion of each well.

A copy of this data has been sent to the DOE-DGE Office at Las Vegas, Nevada. Please sign and return the duplicate copy of the transmittal letter to signify your receipt of this data.

Sincerely yours,

GETTY OIL COMPANY


Wayne A. Shaw
Senior Geologist

WAS:blc
Enclosures
cc: DOE-DGE, Las Vegas, Nevada

Received:

By Don L. Nish

Date 2/12/81