


LAND SEISMIC RECORDING LOG



GLOUCESTER
PAGE 1 of 4

	CLIENT: Union	PROSPECT: STILLWATER	AREA: FALLON NEVADA	LINE NO. LINE 2									
	PARTY NO. 1740	INST. ENG. DAVE MANNICH	CONTRACT # 29-259	DATE: MO 10 DAY 20 YR 79									
INSTRUMENT	<input checked="" type="checkbox"/> 1 SYSTEM <input type="checkbox"/> 2 SYSTEMS	<input type="checkbox"/> 24 & 25-48 <input type="checkbox"/> 48 & 49-96	ODDS & EVENS <input checked="" type="checkbox"/>	TYPE: <input type="checkbox"/> DFS III <input type="checkbox"/> DFS II	<input checked="" type="checkbox"/> DFS I <input type="checkbox"/> OTHER CDX	<input checked="" type="checkbox"/> TRACK <input type="checkbox"/> 21 TRACK	FORMAT: SEG B	<input checked="" type="checkbox"/> GAPPED <input type="checkbox"/> UNGAPPED	PACKING DENSITY:	<input type="checkbox"/> 356 BPI <input type="checkbox"/> 800 BPI	<input type="checkbox"/> 712 BPI <input type="checkbox"/> 1000 BPI		
	NO. BYTES IN HEADER REC: 40	NO. BYTES IN RECORD ID: 240	NO. BYTES PER SCAN:	RECORD NUMBERS:	DEC: <input type="checkbox"/> OCT: <input type="checkbox"/>	GAIN CONSTANT: 24 db	INPUT IMPEDANCE: 500 ohms	(1)	(2)	(3)	(4)	(5)	(6)
CONFIGURATION (MAG TAPE)	FIELD TRACE NOS.: 1-96					AUXILIARY DATA:							
	DATA CHANNEL NOS.: 1-45-100 (ON MAG TAPE)					AUXILIARY CHANNEL NOS.:							
PARAMETER	RECORD LENGTH: 10 sec.	SAMPLE RATE: <input type="checkbox"/> 1 ms. <input type="checkbox"/> 4 ms. <input checked="" type="checkbox"/> 21 ms. <input type="checkbox"/> ms.	GAIN MODE: <input type="checkbox"/> INITIAL <input type="checkbox"/> MANUAL <input checked="" type="checkbox"/> FINAL <input type="checkbox"/> OPERATE	FILTERS:		FREQ: 8	LO CUT HZ SLOPE: 72	FREQ: 64	HI CUT HZ SLOPE: 36	NOTCH FILTER: <input type="checkbox"/> IN <input type="checkbox"/> OUT			
DISPLAY	MODE: <input checked="" type="checkbox"/> ACC <input type="checkbox"/> FLOAT <input type="checkbox"/> AMPLIFIER <input type="checkbox"/> DEFLOAT <input type="checkbox"/> DIRECT	INITIAL GAIN: db	TRIP SENS: db	POLARITY CONVENTION: <input type="checkbox"/> PRESSURE-INCREASE ON GEOPHONE <input type="checkbox"/> NEGATIVE <input checked="" type="checkbox"/> POSITIVE		NUMBERS ON MAG TAPE		<input type="checkbox"/> DOWNBREAK <input type="checkbox"/> UPBREAK		ON DISPLAY			
CFS I	TYPE STACK: VERTICLE	GATE LENGTH:	RECORD REJECTION: AUTO EDIT	NOISE REDUCTION:		NOISE THRESHOLD:	CORR. SCALING:	R.C.U. NORM. ALT SW		NORM			
SOURCE	TYPE: <input type="checkbox"/> DYNAMITE <input type="checkbox"/> VIBROSEIS <input checked="" type="checkbox"/> OTHER 3VIBS	PATTERN: INLINE	NO. OF POSITIONS: 16	INLINE SPACING: 55'	LATERAL SPACING:	STAGGER: -	LENGTH: 220	WIDTH:	LATERAL OFFSET:				
RECEIVER	TYPE: GSC 20 D	PATTERN: INLINE	NO. OF ELEMENTS: 24	INLINE SPACING: 4.5'	LATERAL SPACING:	STAGGER: -	LENGTH: 110'	WIDTH:	LATERAL OFFSET:				
SPREAD	CONNECTION: SER/PAR	RESISTANCE: 200 ohms	SWEEP POSITION: 1/PER		SWEEP START: 12	SWEEP END: 56	SWEEP LENGTH: 1254	SWEEP TAPER: 15	PHASE COMP:				
	NO. OF GROUPS: 96	GROUP INTERVAL: 110	SHOTPOINT INTERVAL: 220		FOLD: 24	OFFSET GROUP 48/96: 5280		DIRECTION OF PROGRESSION: N to S		LEADING GROUP: 96			
	OFFSET GROUP 1: 5280	OFFSET GROUP 48: 330	OFFSET GROUP 48: 330										

DIAGRAMS/MISC. INFORMATION:

SHOTPOINT	TR. to		TR. to		SHOT		SPREAD		REMARKS:	CORR. STACK				
	REEL NO.	REC.	REEL NO.	REC.	SIZE	DEPTH	NO.	OFFSET		DIR.	CDP SWITCH	LINE GROUPS	SET UP	TR 1-48
1	870685	16	17	22	23	26	27	29	30	32	35	37		
		14												
		15												
		16												
101		17									212	151-104, 154-104	1	
103		18									214	153-106, 100-100	2	
106		19									218	158-108, 108-108	3	SPREAD - COLLUMPT + BRIDGE
107		20									218	157-110, 104-100	4	SPREAD - COLLUMPT + BRIDGE
109		21									220	159-112, 106-100	5	
111		22									222	161-114, 108-100	6	
113		23									224	163-116, 110-100	7	
115		24									226	165-118, 112-100	8	
117		25									228	167-120, 114-100	9	
119		26									230	169-122, 116-100	10	
121		27									232	171-124, 118-100	11	
123		28									234	173-126, 120-100	12	
125	870686	29									236	174-128, 122-100	13	FILE 29 RAD
127		31									238	177-130, 124-100	14	
129		32									240	179-132, 126-100	15	
131		34									2	181-134-128-100	16	FILE 33

LAND SEISMIC RECORDING LOG

	CLIENT: <u>UNION</u>	PROSPECT: <u>STILLWATER</u>	AREA: <u>FALLON, NEVADA</u>	LINE NO.: <u>LINE 2</u>	
	PARTY NO.: <u>1740</u>	INST. ENG.: <u>DAVE MORANISH CONTRACT 79-29</u>		DATE: <u>10 20 79</u>	
INSTRUMENT		TYPE: <input type="checkbox"/> DFS III <input type="checkbox"/> DFS X <input checked="" type="checkbox"/> CDX		RECORD NUMBERS: <input type="checkbox"/> DEC. <input type="checkbox"/> OCT.	
(9-TRACK)		NO. BYTES IN HEADER REC: _____		GAIN CONSTANT: _____ db	
CONFIGURATION (MAG TAPE)		FIELD TRACE NOS.: _____		AUXILIARY DATA: _____	
PARAMETER		SAMPLE RATE: <input type="checkbox"/> 1 ms. <input type="checkbox"/> 4 ms.		FILTERS: _____	
DISPLAY		INITIAL GAIN: _____ db		POLARITY CONVENTION: _____	
SOURCE		PATTERN: _____		CORR. SCALING: _____	
RECEIVER		CONNECTION: _____		LATERAL SPACING: _____	
SPREAD		GROUP INTERVAL: _____		DIRECTION OF PROGRESSION: _____	

DIAGRAMS/MISC. INFORMATION:

SHOTPOINT	TR _____ TO _____		TR _____ TO _____		SHOT								SPREAD		REMARKS	CORR. STACK			
	REEL NO.	REC.	REEL NO.	REC.	SIZE	DEPTH	NO.	OFFSET	DIR.	CDP SWITCH	LINE GROUPS	SET UP	TR 1-48			TR 48-96			
													HT.	REC.		HT.	REC.		
1133	870686	35										4	183-136-130-100	153/154	290	301B	1/6 SWEET		
1135		36										6	185-138-132-100						
1137		38										8	187-140-130-100				off # POSITIONS FILE 37 BAD		
1139		39										10	189-142-136-100				FILE 39 BAD		
1141		41										12	191-144-138-100						
1143		42										14	193-146-140-100						
1145		43										16	195-148-142-100						
1147		44										18	197-150-144-100						
1149		45										20	199-152-146-100						
1151	870687	46										22	201-154-148-101						
1153		47										24	203-156-150-103						
1155		48										26	205-158-152-105				FILE # 48 BAD		
1157		50										28	207-160-154-107						
1159		51										30	209-162-156-109						
1161		52										32	211-164-158-111				VP 163 REE 1 ROLL OFF		
1163		53										34	213-166-160-113						
1165		54										36	215-168-162-115						
1167		55										38	217-170-164-117						
1169		56										40	219-172-166-119						
1171		57										42	221-174-168-121						

LAND SEISMIC RECORDING LOG

PROSPECT: STILLWATER AREA: FALLON, NEVADA LINE NO.: LINE 2
 INST. ENG.: DAVE MANNICH CONTRACT # 79-259 DATE: MO 10 DAY 20 YR 79



1-24 & 25-48 ODDS DFS III 9 TRACK GAPPED PACKING (LO) 356 BPI 712 BPI
 1-48 & 49-96 EVENS DFS IV DFS V OTHER 21 TRACK SEG UNGAPPED DENSITY: (HI) 800 BPI 1600 BPI

NO. BYTES IN RECORD ID: _____ NO. BYTES PER SCAN: _____ RECORD NUMBERS: _____ GAIN CONSTANT: _____ INPUT IMPEDANCE: _____ ohms

(1) (2) (3) (4) (5) (6) (7)

AUXILIARY DATA: _____ AUXILIARY CHANNEL NOS.: _____

(ON MAG TAPE)

SAMPLE RATE: 1 ms. 4 ms. 2 ms. _____ ms.

GAIN MODE: INITIAL MANUAL FILTERS: _____ LO CUT _____ HI CUT _____ NOTCH IN OUT
 IFP FINAL OPERATE FREQ. _____ HZ SLOPE _____

TRIP SENS: _____ db POLARITY CONVENTION: _____ PRESSURE INCREASE NEGATIVE POSITIVE } NUMBERS ON DOWNBREAK ON DISPLAY
 UPBREAK

GATE LENGTH: _____ RECORD REJECTION: _____ NOISE REDUCTION: _____ NOISE THRESHOLD: _____ CORR. SCALING: _____ R.C.U. NORM/ALT SW. _____

PATTERN: _____ NO. OF POSITIONS: _____ INLINE SPACING: _____ LATERAL SPACING: _____ STAGGER: _____ LENGTH: _____ WIDTH: _____ LATERAL OFFSET: _____

CHG/HOLE: _____ HOLE DEPTH: _____ SWEEP POSITION: _____ SWEEP START: _____ SWEEP END: _____ SWEEP LENGTH: _____ SWEEP TAPER: _____ PHASE COMP: _____

PATTERN: _____ NO. OF ELEMENTS: _____ INLINE SPACING: _____ LATERAL SPACING: _____

RESISTANCE: _____ ohms STAGGER: _____ LENGTH: _____ WIDTH: _____ LATERAL OFFSET: _____

GROUP INTERVAL: _____ SHOTPOINT INTERVAL: _____ FOLD: _____ DIRECTION OF PROGRESSION: _____

OFFSET GROUP: _____ OFFSET INTERVAL: _____ OFFSET GROUP 48/96: _____ LEADING GROUP: _____

ON: _____

REC.	TR		SHOT										SPREAD		REMARKS	CORR. STACK			
	17	18	REC.	SIZE	DEPTH	NO.	OFFSET	DIR.	CDP SWITCH	LINE GROUPS	SET UP	HT	REC.	HT		REC.	HT		
																		22	23
78						57			42	263-216-215-163	195								
79						58			46	267-225-214-167	196								
80						59			2	265-218-212-165	197								
81						60			6	269-222-216-169	198								
82						61			8	271-224-218-171	199								
83						62			10	273-226-220-173	200								
84						63			13	276-229-223-176	201								
85						64			14	277-230-224-178	202								
86						65			16	280-232-226-180	203								
87						66			18	282-234-228-182	204								
88						67			20	284-236-230-184	205								
89						68			22	286-238-232-186	206								
90						69			24	288-240-234-188	207								
91						70			26	290-242-236-190	208								
92						71			28	292-244-238-192	209								
93						72			30	294-246-240-194	210								
94						73			32	296-248-242-196	211								
95						74			34	298-250-244-198	212								
96						75			36	294-252-246-200	213								
97						76			38	294-250-244-198	214								
98						78			38	294-254-248-202	215								

251
132
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LAND SEISMIC RECORDING LOG

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PROSPECT: STILLWATER	AREA: FALLON, NEVADA	LINE NO. LINE 2	
INST. ENG. DAVE MONNICH	CONTRACT # 79-259	DATE: MO 10 DAY 21 YR 79	

<input type="checkbox"/> 1-24 & 25-48 <input type="checkbox"/> 1-48 & 49-96	ODDS & EVENS	TYPE: <input type="checkbox"/> DFS III <input type="checkbox"/> DFS II <input type="checkbox"/> OTHER	<input type="checkbox"/> 9 TRACK <input type="checkbox"/> 21 TRACK	FORMAT: <input type="checkbox"/> SEG	<input type="checkbox"/> GAPPED <input type="checkbox"/> UNGAPPED	PACKING DENSITY: (L) <input type="checkbox"/> 356 BPI (H) <input type="checkbox"/> 712 BPI <input type="checkbox"/> 1600 BPI
NO. BYTES IN RECORD ID:	NO. BYTES PER SCAN:	RECORD NUMBERS:	<input type="checkbox"/> DEC. <input type="checkbox"/> OCT.	GAIN CONSTANT: _____ db	INPUT IMPEDANCE: _____ ohms	

AUXILIARY DATA:		AUXILIARY CHANNEL NOS.:	
(ON MAG TAPE)			
SAMPLE RATE: <input type="checkbox"/> 1 ms. <input type="checkbox"/> 4 ms.	GAIN MODE: <input type="checkbox"/> INITIAL <input type="checkbox"/> MANUAL <input type="checkbox"/> FINAL <input type="checkbox"/> OPERATE	FILTERS: _____	LO CUT HZ SLOPE _____
INITIAL GAIN: _____ db	TRIP SENS: _____ db	POLARITY CONVENTION: _____	PRESSURE INCREASE ON GEOPHONE: <input type="checkbox"/> NEGATIVE <input type="checkbox"/> POSITIVE
GATE LENGTH: _____	RECORD REJECTION: _____	NOISE REDUCTION: _____	NOISE THRESHOLD: _____

PATTERN:	NO. OF POSITIONS:	INLINE SPACING:	LATERAL SPACING:	STAGGER:	LENGTH:	WIDTH:	LATERAL OFFSET:
CHG/ HOLE:	HOLE DEPTH:	SWEEP POSITION:	SWEEP START:	SWEEP END:	SWEEP LENGTH:	SWEEP TAPER:	PHASE COMP:
PATTERN:	NO. OF ELEMENTS:	INLINE SPACING:	LATERAL SPACING:	STAGGER:	LENGTH:	WIDTH:	LATERAL OFFSET:
RESISTANCE: _____ ohms	SHOTPOINT INTERVAL:	FOLD:	DIRECTION OF PROGRESSION:	GROUP INTERVAL:	OFFSET GROUP:	LEADING GROUP:	

ON:

REC.	TR		SHOT				SPREAD				REMARKS:	CORR. STACK					
	REEL NO.	REC.	SIZE	DEPTH	NO.	OFFSET	DIR.	CDP SWITCH	LINE GROUPS	SEY UP		JR 1-48	JR 48-96	HT	REC.	HT	REC.
111																	
112											DAILY TESTS						
113											SIM 5212						
114											" 5785						
115											" 5786						
116											40 294-256-250-204						
117											42 294-258-252-204						
118											44 294-260-254-208						
119											46 294-262-256-210						
120											48 294-264-258-212						
121											50 294-266-260-214						
122											52 294-268-262-216						
123											54 294-270-264-218						
124											56 294-272-266-220						
125											58 294-274-268-222						
126											60 294-276-270-224						
127											62 294-278-272-226						
128											64 294-280-274-228						
129											66 294-282-276-230						
130											68 294-284-278-232						
131																	

10/23 VIBS No SWEEPS

YESTERDAY VIBS SITUOK 253
INSTEAD OF 251 SO ROLLS
ARE OFF FOR THAT UP.

FILE 116 BAD

RECOVER FOR 281 STACK
RECOVER FOR 283 "

4 - 4

LIPF	SPN	FIELD	RECORD	OUTPUT	VSN	SPT
2		TAPE		TAPE	REC	
		101	870685	17	17905344	2
		103		18		3
		105		19		4
		107		20		5
		109		21		6
		111		22		7
		113		23		8
		115		24		9
		117		25		10
		119		26		11
		121		27		12
		123	✓	28		13
13		125	870686	30		14 4 Dummy
		127		31		15
		129		32		16
		131		34		17
		133		35		18
		135		36		19
		137		38		20
		139		40		21
		141		41		22
		143		42		23
		145		43		24
		147		44		25
		149	✓	45		26
		151	870687	46		27
		153		47		28
		155		49		29
		157		50		30
		159	✓	51	✓	31

SPN	FIELD		OUTPUT		VSN	SPI
	TAPE	RECORD	TAPE	REC		
161	870687	52	J7905344	32		
163		53		33	Dummy	
165		54		34	0	
167		55		35		
169		56		36	--	
171		57		37		
173		58		38		
175		59		39		
177		60		40		
179	✓	61		41		
181	870688	62		42		
183		63		43	Dummy	
185		64		44	Dummy	
187		65		45	0	
189		66		46		
191		67		47		
193		68		48		
195		69		49	Dummy	
197		70		50	Dummy	
199		71		51	1	0
201		72		52	2	
203		73		53	3	
205		74		54	4	
207		75		55	5	
209		76		56	6	
211	✓	77		57	7	
213	870689	78		58	8	
215		79		59	9	
217		80		60	10	
219	✓	81	✓	61	11	

SPN	FIELD		OUTPUT		VSN	SPI
	TAPE	RECORD	TAPE	REC		
221	870689	82	87905344	62	12	
223		83		63	13	
225		84		64	14	
227		85		65	15	
229		86		66	16	
231		87		67	17	
233		89		68	18	
235		90		69	19	
237		91		70	20	
239		92		71	21	
241	✓	93		72	22	
243	870690	94		73	23	
245		95		74	24	
247		96		75	25	
249		97		76	26	
251		98		77	27	
253		115		78	28	
255		117		79	29	
257		118		80	30	
259		119		81	31	
261		120		82 ⁸¹	32	
263		121		83 ²	33	Dimension -
265	✓	122		84 ³	34	Dimension +
267	870691	123		85 ⁴	35	Dimension +
269		124		86 ⁵	36	0
271		125		87	37	
273		126		88	38	
275		127		89	39	
277		128		90	40	
279	✓	129	✓	91	41	

LINE	SF	EASTING	NORTHING	ELEVATION	
2	→	100	00502910	01752165	00003220
2		101	00502942	01752062	00003220
2		102	00502986	01757959	00003220
2		103	00509024	01757855	00003220
2		104	00509062	01757732	00003220
2	✓	105	00509100	01757649	00003220
2		106	00509110	01757539	00003220
2		107	00509120	01757429	00003220
2		108	00509130	01757320	00003220
2		109	00509140	01757210	00003220
2	✓	110	00509150	01757100	00003221
2		111	00509122	01756993	00003221
2		112	00509099	01756887	00003221
2		113	00509065	01756780	00003221
2		114	00509037	01756674	00003221
2		115	00509009	01756567	00003221
2		116	00508980	01756461	00003222
2		117	00508952	01756354	00003222
2		118	00508924	01756248	00003222
2		119	00508896	01756141	00003222
2		120	00508867	01756035	00003222
2		121	00508839	01755928	00003222
2		122	00508811	01755822	00003223
2		123	00508783	01755715	00003223
2		124	00508754	01755609	00003223
2		125	00508726	01755502	00003223
2		126	00508698	01755396	00003223
2		127	00508670	01755289	00003223
2		128	00508641	01755183	00003224
2		129	00508613	01755076	00003224
2		130	00508585	01754970	00003224
2		131	00508557	01754863	00003224
2		132	00508528	01754757	00003223
2	✓	133	00508500	01754650	00003223
2		134	00508526	01754542	00003223
2		135	00508552	01754434	00003222
2		136	00508579	01754326	00003222
2		137	00508605	01754218	00003221
2		138	00508631	01754110	00003221
2		139	00508657	01754001	00003220
2		140	00508683	01753893	00003220
2		141	00508710	01753785	00003220
2		142	00508736	01753677	00003221
2		143	00508762	01753569	00003221
2		144	00508788	01753461	00003221
2		145	00508814	01753353	00003221
2		146	00508840	01753245	00003221
2		147	00508867	01753137	00003222
2		148	00508893	01753029	00003222
2		149	00508919	01752920	00003222
2		150	00508945	01752812	00003222
2		151	00508971	01752704	00003223
2		152	00508998	01752596	00003223

BEGINNING OF LINE

LINE	SP	EASTING	NORTHING	ELEVATION
152		00509024	01752422	00003222
✓ 154		00509030	01752320	00003222
155		00509042	01752270	00003224
156		00509043	01752160	00003224
157		00509042	01752050	00003224
158		00509040	01751940	00003224
159		00509032	01751830	00003225
160		00509033	01751720	00003225
161		00509033	01751610	00003225
162		00509030	01751500	00003225
163		00509022	01751390	00003226
164		00509025	01751220	00003226
165		00509022	01751170	00003226
166		00509020	01751060	00003227
167		00509012	01750950	00003227
168		00509013	01750840	00003227
169		00509012	01750730	00003227
170		00509010	01750620	00003228
171		00509008	01750510	00003228
172		00509005	01750400	00003228
173		00509003	01750290	00003228
✓ 174		00509000	01750180	00003229
175		00509007	01750070	00003227
176		00509014	01749960	00003225
177		00509021	01749850	00003222
178		00509029	01749740	00003222
179		00509036	01749630	00003222
180		00509042	01749520	00003222
181		00509050	01749410	00003222
182		00509057	01749300	00003222
183		00509064	01749190	00003222
184		00509071	01749080	00003222
185		00509079	01748970	00003224
186		00509026	01748860	00003224
187		00509092	01748750	00003224
188		00509100	01748640	00003225
189		00509107	01748530	00003225
190		00509114	01748420	00003225
191		00509121	01748310	00003225
192		00509129	01748200	00003226
193		00509136	01748090	00003226
194		00509143	01747980	00003226
195		00509150	01747870	00003227
196		00509157	01747760	00003227
197		00509164	01747650	00003228
198		00509171	01747540	00003228
199		00509179	01747430	00003228
200		00509186	01747320	00003229
201		00509193	01747210	00003229
✓ 202		00509200	01747100	00003229
203		00509192	01746990	00003229
204		00509186	01746881	00003229
205		00509180	01746771	00003229
206		00509173	01746662	00003229
207		00509166	01746552	00003229



	SP	EASTING	NORTHING	ELEVATION
2	208	00509159	01746443	00003890
2	209	00509152	01746333	00003889
2	210	00509145	01746224	00003889
2	211	00509139	01746114	00003889
2	212	00509132	01746003	00003888
2	213	00509125	01745895	00003888
2	214	00509118	01745785	00003888
2	215	00509111	01745676	00003889
2	216	00509103	01745566	00003889
2	217	00509098	01745457	00003889
2	218	00509091	01745347	00003889
2	219	00509084	01745238	00003889
2	220	00509077	01745128	00003889
2	221	00509070	01745019	00003889
2	222	00509064	01744909	00003890
2	223	00509057	01744800	00003890
2	224	00509050	01744690	00003890
2	225	00509051	01744580	00003890
2	226	00509052	01744470	00003890
2	227	00509053	01744360	00003890
2	228	00509054	01744249	00003890
2	229	00509055	01744139	00003891
2	230	00509056	01744029	00003891
2	231	00509057	01743919	00003891
2	232	00509058	01743809	00003891
2	233	00509059	01743699	00003891
2	234	00509060	01743589	00003891
2	235	00509061	01743478	00003891
2	236	00509062	01743368	00003892
2	237	00509063	01743258	00003892
2	238	00509064	01743148	00003892
2	239	00509065	01743038	00003892
2	240	00509066	01742928	00003892
2	241	00509067	01742818	00003892
2	242	00509068	01742707	00003892
2	243	00509069	01742597	00003893
2	244	00509070	01742487	00003893
2	245	00509071	01742377	00003893
2	246	00509072	01742267	00003893
2	247	00509073	01742157	00003893
2	248	00509074	01742047	00003893
2	249	00509075	01741936	00003894
2	250	00509076	01741826	00003894
2	251	00509077	01741716	00003894
2	252	00509078	01741606	00003894
2	253	00509079	01741496	00003894
2	254	00509080	01741386	00003894
2	255	00509081	01741276	00003894
2	256	00509082	01741165	00003895
2	257	00509083	01741055	00003895
2	258	00509084	01740945	00003895
2	259	00509085	01740835	00003895
2	260	00509086	01740725	00003895
2	261	00509087	01740615	00003895
2	262	00509088	01740505	00003895

	EASTING	NORTHING	ELEVATION
263	00509089	01740294	00003298
264	00509090	01740284	00003298
265	00509091	01740174	00003298
266	00509092	01740064	00003298
267	00509093	01739954	00003298
268	00509094	01739844	00003298
269	00509095	01739734	00003298
270	00509096	01739623	00003297
271	00509097	01739513	00003297
272	00509098	01739403	00003297
273	00509099	01739293	00003297
274	00509100	01739183	00003297
275	00509101	01739073	00003297
276	00509102	01738963	00003297
277	00509103	01738853	00003298
278	00509104	01738742	00003298
279	00509105	01738632	00003298
280	00509106	01738522	00003298
281	00509107	01738412	00003298
282	00509108	01738302	00003298
283	00509109	01738192	00003298
284	00509110	01738081	00003299
285	00509111	01737971	00003299
286	00509112	01737861	00003299
287	00509113	01737751	00003299
288	00509114	01737641	00003299
289	00509115	01737531	00003299
290	00509116	01737421	00003299
291	00509117	01737310	00003900
292	00509118	01737200	00003900
293	00509119	01737090	00003900
294	00509120	01736980	00003900

E.O.L.




LAND SEISMIC RECORDING LOG

	CLIENT: <u>Union</u>	PROSPECT: <u>Stillwater</u>	AREA: <u>Fallon Nevada</u>	LINE NO.: <u>3</u>					
	PARTY NO.: <u>1740</u>	INST. ENG.: <u>DAVE MANNICH</u>	CONTRACT: <u>99-259</u>	DATE: <u>MO 10 DAY 21 YR 29</u>					
INSTRUMENT (9-TRACK)	<input checked="" type="checkbox"/> 1 SYSTEM <input type="checkbox"/> 2 SYSTEMS	<input type="checkbox"/> 1-24 & 25-48 <input checked="" type="checkbox"/> 1-48 & 49-96	ODDS & EVENS	TYPE: <input type="checkbox"/> DFS III <input type="checkbox"/> DFS IX	<input checked="" type="checkbox"/> DFS X <input type="checkbox"/> OTHER <u>CDX</u>	<input type="checkbox"/> 9 TRACK <input type="checkbox"/> 21 TRACK	FORMAT: <u>B</u>	<input type="checkbox"/> GAPPED <input type="checkbox"/> UNGAPPED	PACKING DENSITY: (LO) <input type="checkbox"/> 356 BPI (HI) <input type="checkbox"/> 712 BPI <input type="checkbox"/> 800 BPI <input type="checkbox"/> 1000 BPI
	NO. BYTES IN HEADER REC.	NO. BYTES IN RECORD ID:	NO. BYTES PER SCAN:	RECORD NUMBERS:	<input type="checkbox"/> DEC. <input type="checkbox"/> OCT.	GAIN CONSTANT: <u>24</u> db	INPUT IMPEDANCE: <u>500</u> ohms	(1) (2) (3) (4) (5) (6) (7)	
CONFIGURATION (MAG TAPE)	FIELD TRACE NOS.: <u>1-96</u>				AUXILIARY DATA:				
	DATA CHANNEL NOS.: <u>1-4-5-100</u> (ON MAG TAPE)				AUXILIARY CHANNEL NOS.:				
PARAMETER	RECORD LENGTH: _____ sec.	SAMPLE RATE: <input type="checkbox"/> 1 ms. <input type="checkbox"/> 4 ms. <input checked="" type="checkbox"/> 7 ms. <input type="checkbox"/> _____ ms.	GAIN MODE: <input type="checkbox"/> INITIAL <input type="checkbox"/> MANUAL <input checked="" type="checkbox"/> FINAL <input type="checkbox"/> OPERATE	FILTERS: FREQ. <u>8</u> HI CUT HZ SLOPE <u>92</u>	FREQ. <u>64</u> HI CUT HZ SLOPE _____	NOTCH FILTER: <input type="checkbox"/> IN <input checked="" type="checkbox"/> OUT			
DISPLAY	MODE: <input type="checkbox"/> FLOAT <input type="checkbox"/> AMPLIFIER <input checked="" type="checkbox"/> AGC <input type="checkbox"/> DEFLOAT <input type="checkbox"/> DIRECT	INITIAL GAIN: <u>0</u> db	JIP SENS: <u>0</u> db	POLARITY CONVENTION: _____	PRESSURE INCREASE ON GEOPHONE: <u>POS</u>	<input checked="" type="checkbox"/> POSITIVE <input type="checkbox"/> NEGATIVE	NUMBERS ON MAG TAPE: <input type="checkbox"/> DOWNBREAK <input type="checkbox"/> UPBREAK	ON DISPLAY	
CFS I	TYPE STACK: <u>VERTICLE</u>	GATE LENGTH: <u>256</u>	RECORD REJECTION: <u>AUTO EDIT</u>	NOISE REDUCTION: _____	NOISE THRESHOLD: _____	CORR. SCALING: _____	R.C.U. NORM / ALT SW. <u>NO RM</u>		
SOURCE	TYPE: <input type="checkbox"/> DYNAMITE <input type="checkbox"/> VIBROSEIS <input checked="" type="checkbox"/> OTHER <u>3VIBS</u>	PATTERN: <u>INLINE</u>	NO. OF POSITIONS: <u>16</u>	INLINE SPACING: <u>55'</u>	LATERAL SPACING: _____	STAGGER: _____	LENGTH: <u>110</u>	WIDTH: _____	LATERAL OFFSET: _____
	CHG/ HOLE: _____	HOLE DEPTH: _____	SWEEP POSITION: <u>1/PER</u>	SWEEP START: <u>12</u>	SWEEP END: <u>56</u>	SWEEP LENGTH: <u>16</u>	SWEEP TAPER: <u>15</u>	PHASE COMP: _____	
RECEIVER	TYPE: <u>650 20 D</u>	PATTERN: <u>INLINE</u>	NO. OF ELEMENTS: <u>24</u>	INLINE SPACING: <u>5'</u>	LATERAL SPACING: _____	STAGGER: _____	LENGTH: <u>110</u>	WIDTH: _____	LATERAL OFFSET: _____
	CONNECTION: <u>SER/PAR</u>	RESISTANCE: <u>500</u> ohms							
SPREAD	NO. OF GROUPS: <u>96</u>	GROUP INTERVAL: <u>110</u>	SHOTPOINT INTERVAL: <u>220</u>	FOLD: <u>24</u>	DIRECTION OF PROGRESSION: <u>E TO W</u>				
	OFFSET GROUP 1: <u>5280</u>	OFFSET GROUP <u>96</u> : <u>330</u>	OFFSET GROUP <u>96</u> : <u>330</u>	OFFSET GROUP <u>48/96</u> : <u>5280</u>	LEADING GROUP: <u>96</u>				

DIAGRAMS/MISC. INFORMATION:

SHOTPOINT	TR. _____ TO _____		TR. _____ TO _____		SHOT										SPREAD			REMARKS	CORR. STACK			
	REEL NO.	REC.	REEL NO.	REC.	SIZE	DEPTH	NO.	OFFSET	DIR.	CDP SWITCH	LINE GROUPS		SKY UP	HT.	REC.	HT.	REC.					
1163	870692	16	17	22	23	26	27	29	30	32	35	37			193	163-116-114-115	180	STACK	240	3VIBS	16	SUFFERS
115		2													195	165-118						
117		3													197	167-120-114-113						
119		4													199	169-122-116-113						
121		5													201	171-124-118-113						
123		6													203	173-126-120-113						
125		7													205	175-128-122-113						
127		8													207	177-130-124-113						
129		9													209	179-132-126-113						
131		10													211	181-134-128-113						
133		11													213	183-136-130-113						
135		12													215	185-138-132-113		RECOVER FOR		STACK		
137		13													217	187-140-134-113		RECOVER FOR		"		
139		14													219	189-142-136-113		"		"		
141		15													221	191-144-138-113		"		"		
143		16													223	193-146-140-113						
145	870693	17													225	195-148-142-113						
147		18													227	197-150-144-113						
149		19													229	199-152-146-113						
151		20													231	201-154-148-113						

LAND SEISMIC RECORDING LOG

	CLIENT: <i>Union</i>	PROSPECT: <i>STILLWATER</i>	AREA: <i>FALCON NEVADA</i>	LINE NO.: <i>3</i>
	PARTY NO.: <i>1740</i>	INST. ENG.: <i>DAVE MONNICH</i>	CONTRACT #: <i>29-259</i>	DATE: <i>MO 10 DAY 21 YR 29</i>

SHOTPOINT	TR. to		TR. to		SHOT				SPREAD				REMARKS	CORR. STACK			
	REEL NO.	REC.	REEL NO.	REC.	SIZE	DEPTH	NO.	OFFSET	DIR.	COP SWITCH	LINE GROUPS			SET UP	TR 1-48	TR 48-96	
															HT.	REC.	HT.
153	870693	21					211					233	203-156-150-113	153			
155		22					212					235	205-158-152-113				
157		23					213					237	202-160-154-113				
159		24					214					239	209-162-156-113				STACK
161		25					215					1 239	211-164-158-113				STACK
163		26					216					3	213-166-160-113				STACK
165		27					217					7	219-170-164-113				RECOVER FOR 165
167		28					218					11	221-174-168-121				" " " 167
171		29					219					7	217-170-164-113				" " " 169
171		30					220					11	221-174-168-121				
173		31					221					13	223-176-170-123				
175		32					222					15	225-178-172-125				STACK
175		33					223					19	229-182-176-129				" RECOVER FOR 177
179	780894	34					224					19	229-182-176-129				VIBS ON 181
181		35					225					9	239-194-178-131	148			
183		36					226					10	232-186-180-132				
185		37					227					13	235-188-182-135				
187		38					228					15	237-190-184-137				
189		39					229					17	239-192-186-139				
191		40					230					19	241-194-188-141				
193		41					231					21	245-196-190-145				
197		42					232					21	245-196-190-145				RECOVER FOR 195 STACK
197		43					233					25	247-200-194-147				
199		44					234					27	249-202-196-149				
201		45					235					29	251-204-198-151				
203		46					236					31	253-206-200-153				
209		47					237					33	255-208-202-155				
209		48					238					35	257-210-204-157				
209		49					239					37	259-212-206-159				
211	820895	50					240					39	261-214-208-161				
213		51					241					41	263-216-210-163				
215		52					242					43	265-218-212-165				
217		53					243					45	267-220-214-167				
219		54					244					47	269-222-216-169				
221		55					245					45	268-220-216-167	202			WRONG ROLL 1-11
223		56					246					45	268-220-216-167	203			

LINE	SPN	FIELD		OUTPUT		-VSN-	SPI
		TAPE	RECORD	TAPE	REC		
3	113	870692	1	57905342	2		
	115		2	/	3		
	117		3		4		
	119		4		5		
	121		5		6		
	123		6		7		
	125		7		8		
	127		8		9		
	129		9		10		
	131		10		11		
	133		11		12		
	135		12		13		
	137		13		14		
	139		14		15		
	141		15		16		
	143	✓	16		17		
	145	870693	17		18		
	147		18		19		
	149		19		20		
	151		20		21		
	153		21		22		
	155		22		23		
	157		23		24		
	159		24		25		
	161		25		26		
	163		26		27		
	165		27		28		
	167		28		29		dummy
	169		29		30		
	171	✓	30	✓	31		

SPN	FIELD		OUTPUT		VSN	SPI
	TAPE	RECORD	TAPE	REC		
173	870693	31	J7905342	32		
175		32		33		
177	✓	33		34		
179	870694	34		35		
181		35		36		
183		36		37		
185		37		38		
187		38		39		
189		39		40		
191		40		41		
193		41		42		
195		42		43		
197		43		44		
199		44		45		
201		45		46	Dummy	
203		46		47	0	
205		47		48		
207		48		49		
209	✓	49		50		
211	870695	50		51		
213		51		52		
215		52		53		
217		53		54		
219		54		55		
221		55		56		
223	✓	56		57	Dummy	
225	870696	74		58	0	
227		75		59		
229		76		60		
231	✓	77	✓	61		

	SP	EASTING	NORTHING	ELEVATION
3	166	00512475	01746633	00003883
3	✓ 167	00512392	01746635	00003883
3	168	00512290	01746674	00003883
3	169	00512121	01746693	00003883
3	170	00512073	01746612	00003883
3	171	00511965	01746630	00003883
3	172	00511856	01746649	00003884
3	173	00511748	01746668	00003885
3	174	00511640	01746687	00003886
3	175	00511532	01746706	00003886
3	176	00511423	01746725	00003887
3	177	00511315	01746743	00003887
3	178	00511207	01746762	00003886
3	179	00511098	01746781	00003885
3	✓ 180	00510990	01746800	00003885
3	181	00510880	01746808	00003885
3	182	00510771	01746816	00003886
3	183	00510661	01746824	00003886
3	184	00510551	01746832	00003886
3	185	00510442	01746840	00003887
3	186	00510332	01746848	00003887
3	187	00510222	01746856	00003887
3	188	00510113	01746864	00003887
3	189	00510003	01746872	00003887
3	190	00509893	01746880	00003887
3	191	00509784	01746888	00003887
3	192	00509674	01746896	00003887
3	193	00509564	01746904	00003887
3	194	00509455	01746912	00003887
3	✓ 195	00509345	01746920	00003886
3	196	00509235	01746921	00003888
3	197	00509125	01746922	00003889
3	198	00509015	01746923	00003890
3	199	00508905	01746924	00003892
3	200	00508795	01746925	00003892
3	201	00508685	01746926	00003892
3	202	00508575	01746927	00003892
3	203	00508466	01746929	00003892
3	204	00508356	01746930	00003892
3	205	00508246	01746931	00003892
3	206	00508136	01746932	00003892
3	207	00508026	01746933	00003892
3	208	00507916	01746934	00003894
3	209	00507806	01746935	00003895
3	210	00507696	01746936	00003895
3	211	00507586	01746937	00003895
3	212	00507476	01746938	00003895
3	213	00507366	01746939	00003895
3	214	00507256	01746940	00003895
3	215	00507146	01746941	00003895
3	216	00507036	01746942	00003895
3	217	00506926	01746943	00003894
3	218	00506817	01746945	00003894
3	219	00506707	01746946	00003894
3	220	00506597	01746947	00003894

SP		EASTING	NORTHING	ELEVATION
3	221	00506487	01746948	00003894
3	222	00506377	01746949	00003893
3	223	00506267	01746950	00003893
3	224	00506157	01746951	00003893
3	225	00506047	01746952	00003893
3	226	00505937	01746953	00003892
3	227	00505827	01746954	00003892
3	228	00505717	01746955	00003892
3	229	00505607	01746956	00003892
3	230	00505497	01746957	00003892
3	231	00505387	01746958	00003891
3	232	00505277	01746959	00003891
3	233	00505168	01746961	00003891
3	234	00505058	01746962	00003891
3	235	00504948	01746963	00003890
3	236	00504838	01746964	00003890
3	237	00504728	01746965	00003890
3	238	00504618	01746966	00003889
3	239	00504508	01746967	00003889
3	240	00504398	01746968	00003888
3	241	00504288	01746969	00003888
3	242	00504178	01746970	00003888
3	243	00504068	01746971	00003887
3	244	00503958	01746972	00003887
3	245	00503848	01746973	00003887
3	246	00503738	01746974	00003886
3	247	00503628	01746975	00003886
3	248	00503519	01746977	00003886
3	249	00503409	01746978	00003885
3	250	00503299	01746979	00003885
3	251	00503189	01746980	00003885
3	252	00503079	01746981	00003884
3	253	00502969	01746982	00003885
3	254	00502859	01746983	00003885
3	255	00502749	01746984	00003886
3	256	00502639	01746985	00003886
3	257	00502529	01746986	00003887
3	258	00502419	01746987	00003887
3	259	00502309	01746988	00003888
3	260	00502199	01746989	00003888
3	261	00502089	01746990	00003889
3	262	00501979	01746991	00003889
3	263	00501870	01746993	00003889
3	264	00501760	01746994	00003889
3	265	00501650	01746995	00003889
3	266	00501540	01746996	00003888
3	267	00501430	01746997	00003888
3	268	00501320	01746998	00003888
3	269	00501210	01746999	00003888
3	→ 270	00501100	01747000	00003888

E.O.L.

113 00512033 01746948
 219 00506707 01746945 00003894
 220 00506597 01746947 00003894

LAND SEISMIC RECORDING LOG

CLIENT: UNION	PROSPECT: STILLWATER	AREA: FALLON NEVADA	LINE NO: 4	DATE: MO 10 DAY 24 YR 79
PARTY NO: 1740	INST. ENG: DAVE MANNICI	CONTR. # 79-259		

SHOTPOINT	TR 10		TR 10		SHOT		SPREAD		REMARKS	CORR. STACK						
	REEL NO	REC.	REEL NO	REC.	SIZE	DEPTH	NO	OFFSET		DIR	CDP SWITCH	LINE-GROUPS	SET UP	TR 14B	TR 28V6	
													HT	REC	HT	REC
157	870700	30									VIB SIM 5212					
159		31									5286					
161		32									5285					
163		35								9	107-154-160-207					
165		36								11	109-156-162-209					
167		37								13	111-158-164-211					
169		38								15	113-160-166-213					
171		39								17	115-162-168-215					
173		40								19	117-164-170-219					
175		42								23	121-168-174-223					
177		43								27	125-172-178-227					
179		44								31	129-176-182-231					
181		45								35	133-180-186-235					
183		46								39	137-184-190-239					
185		48														
187		49								27	125-172-178-227					
189		50								31	129-176-182-231					
191		51								35	133-180-186-235					
193		52								39	137-184-190-239					
195		53								43	141-188-194-243					
197		54								47	145-192-198-247					
199		55								1	147-194-200-249					
201		56								3	149-196-202-251					
203		57								5	151-198-204-253					
205		58								7	153-200-206-255					
207		59								8	154-201-207-256					
209		60								5	151-198-204-253					
211		61								9	155-202-208-257					
213		62								13	159-206-212-261					
215		63								17	163-210-216-265					
217		64								19	165-212-218-267					
219		65								23	169-216-222-270					
221	870702	65								23	169-216-222-270					

LINE	SPN	FIELD		OUTPUT		VSN	SPI
		TAPE	RECORD	TAPE	REC		
4		870698	1	57905343	2	Dummy	
			2		3	d	
			3		4		
			4		5	Dummy	
			5		6	d	
			6		7		
			7		8		
			8		9		
			9		10		
			10		11		
			11		12		
			12		13		
			13		14		
			14		15		
			15		16		
		✓	16		17		
		870699	18		18		
			19		19		
			20		20		
			21		21		
			22		22		
			23		23		
			24		24		
			25		25		
			26		26		
			27		27		
			28		28		
		✓	29		29		
		870700	35		30		
		↓	36	✓	31		

SPN	FIELD		OUTPUT		VSN	SPI
	TAPE	RECORD	TAPE	REC		
161	870700	37	J7905343	32		
163		38		33		
165		39		34		
167		40		35		
169		42		36		
171		43		37		
173		44		38		
175		45		39		
177		46		40		
179		DUMMY		41		
181		DUMMY		42		
183	✓	DUMMY		43		
185	870701	48		44		
187		49		45		
189		50		46		
191		51		47		
193		52		48		
195		53		49		
197		54		50		
199		55		51		
201		56		52		
203		57		53		
205		58		54		
207		59		55		
209		60		56		
211		61		57		
213		62		58		
215		63		59		
217	✓	64		60		
219	870702	65	✓	61		

SPN	FIELD		OUTPUT		VSN	SP
	TAPE	RECORD	TAPE	REC		
221	870702	66	17905343	62		
223		67		63		
225		68		64		
227		69		65		
229		70		66		
231		71		67		
233		72		68		
235		73		69		
237		74		70		
239		75		71		
241		76		72		
243		77		73		
245		78		74		
247		79		75	Dummy	
249	✓	80		76	○	
251	870703	81		77		
253		82		78		
255		83		79		
257		84		80		
259		85		81		
261		86		82		
263		87		83		
265		88		84		
267		89		85		
269	✓	90	✓	86		

LINE	SP	EASTING	NORTHING	ELEVATION
BEGINNING OF LINE	→ 101	00497528	01741500	00003898
4	102	00497638	01741501	00003899
4	103	00497748	01741502	00003899
4	104	00497858	01741503	00003899
4	105	00497968	01741504	00003900
4	106	00498078	01741505	00003900
4	107	00498188	01741506	00003900
4	108	00498298	01741507	00003900
4	109	00498408	01741508	00003901
4	110	00498518	01741509	00003901
4	111	00498628	01741510	00003901
4	112	00498738	01741510	00003899
4	113	00498848	01741511	00003899
4	114	00498958	01741512	00003899
4	115	00499068	01741513	00003899
4	116	00499178	01741514	00003898
4	117	00499288	01741515	00003898
4	118	00499398	01741516	00003898
4	119	00499508	01741517	00003898
4	120	00499618	01741518	00003898
4	121	00499728	01741519	00003898
4	122	00499838	01741520	00003898
4	123	00499948	01741521	00003898
4	124	00500058	01741522	00003898
4	125	00500168	01741523	00003898
4	126	00500278	01741524	00003898
4	127	00500388	01741525	00003898
4	128	00500498	01741526	00003898
4	129	00500608	01741527	00003898
4	130	00500718	01741528	00003898
4	131	00500828	01741529	00003897
4	132	00500938	01741530	00003897
4	133	00501048	01741530	00003897
4	134	00501158	01741531	00003897
4	135	00501268	01741532	00003897
4	136	00501378	01741533	00003897
4	137	00501488	01741534	00003897
4	138	00501598	01741535	00003897
4	139	00501708	01741536	00003897
4	140	00501818	01741537	00003897
4	141	00501928	01741538	00003897
4	142	00502038	01741539	00003897
4	143	00502148	01741540	00003897
4	144	00502258	01741541	00003897
4	145	00502368	01741542	00003897
4	146	00502478	01741543	00003897
4	147	00502588	01741544	00003896
4	148	00502698	01741545	00003896
4	149	00502808	01741546	00003896
4	150	00502918	01741547	00003896
4	151	00503028	01741548	00003896
4	152	00503138	01741549	00003895
4	153	00503248	01741550	00003895

LINE	SP	EASTING	NORTHING	ELEVATION
4	154	00503358	01741550	00003895
4	155	00503468	01741551	00003895
4	156	00503578	01741552	00003895
4	157	00503688	01741553	00003894
4	158	00503798	01741554	00003894
4	159	00503908	01741555	00003894
4	160	00504018	01741556	00003894
4	161	00504128	01741557	00003894
4	162	00504238	01741558	00003894
4	163	00504348	01741559	00003894
4	164	00504458	01741560	00003894
4	165	00504568	01741561	00003894
4	166	00504678	01741562	00003894
4	167	00504788	01741563	00003894
4	168	00504898	01741564	00003894
4	169	00505008	01741565	00003894
4	170	00505118	01741566	00003893
4	171	00505228	01741567	00003893
4	172	00505338	01741568	00003893
4	173	00505448	01741569	00003893
4	174	00505558	01741570	00003893
4	175	00505668	01741570	00003893
4	176	00505778	01741571	00003893
4	177	00505888	01741572	00003893
4	178	00505998	01741573	00003893
4	179	00506108	01741574	00003893
4	180	00506218	01741575	00003893
4	181	00506328	01741576	00003893
4	182	00506438	01741577	00003893
4	183	00506548	01741578	00003893
4	184	00506658	01741579	00003894
4	185	00506768	01741580	00003894
4	186	00506878	01741581	00003894
4	187	00506988	01741582	00003894
4	188	00507098	01741583	00003895
4	189	00507208	01741584	00003895
4	190	00507318	01741585	00003895
4	191	00507428	01741586	00003895
4	192	00507538	01741587	00003895
4	193	00507648	01741588	00003896
4	194	00507758	01741589	00003896
4	195	00507868	01741590	00003896
4	196	00507978	01741590	00003896
4	197	00508088	01741591	00003897
4	198	00508198	01741592	00003896
4	199	00508308	01741593	00003896
4	200	00508418	01741594	00003896
4	201	00508528	01741595	00003896
4	202	00508638	01741596	00003896
4	203	00508748	01741597	00003896
4	204	00508858	01741598	00003896
4	205	00508968	01741599	00003896
4	✓ 206	00509078	01741600	00003895
4	207	00509090	01741710	00003895
4	208	00509102	01741820	00003895

LINE

SP

EASTING

NORTHING

ELEVATION

4	209	00509115	01741930	00003895
4	210	00509127	01742040	00003894
4	211	00509139	01742150	00003894
4	212	00509151	01742260	00003894
4	213	00509163	01742370	00003893
4	214	00509176	01742480	00003893
4	215	00509188	01742590	00003893
4	216	00509200	01742700	00003892
4	217	00509310	01742699	00003892
4	218	00509420	01742697	00003892
4	219	00509530	01742695	00003892
4	220	00509640	01742693	00003892
4	221	00509750	01742692	00003892
4	222	00509860	01742690	00003892
4	223	00509970	01742688	00003892
4	224	00510080	01742686	00003891
4	225	00510190	01742685	00003891
4	226	00510300	01742683	00003891
4	227	00510410	01742681	00003891
4	228	00510520	01742680	00003891
4	229	00510630	01742678	00003891
4	230	00510740	01742676	00003891
4	231	00510850	01742675	00003891
4	232	00510960	01742673	00003891
4	233	00511070	01742671	00003891
4	234	00511180	01742669	00003890
4	235	00511290	01742668	00003890
4	236	00511400	01742666	00003890
4	237	00511510	01742664	00003890
4	238	00511620	01742663	00003890
4	239	00511730	01742661	00003890
4	240	00511840	01742659	00003890
4	241	00511950	01742658	00003890
4	242	00512060	01742656	00003890
4	243	00512170	01742654	00003890
4	244	00512280	01742653	00003889
4	245	00512390	01742651	00003889
4	246	00512500	01742649	00003889
4	247	00512610	01742647	00003889
4	248	00512720	01742646	00003889
4	249	00512830	01742644	00003889
4	250	00512940	01742642	00003889
4	251	00513050	01742641	00003889
4	252	00513160	01742639	00003889
4	253	00513270	01742637	00003889
4	254	00513380	01742636	00003889
4	255	00513490	01742634	00003888
4	256	00513600	01742632	00003888
4	257	00513710	01742631	00003888
4	258	00513820	01742629	00003888
4	259	00513930	01742627	00003888
4	260	00514040	01742625	00003888
4	261	00514150	01742624	00003888
4	262	00514260	01742622	00003888
4	263	00514370	01742620	00003888



P. O. Box 15225
Rio Rancho, New Mexico 87174
Telephone (505) 897-1776

June 2, 1981

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

Earth Sciences Laboratory
Univ. of Utah Research Institute
391 Chipeta Way
Salt Lake City, Utah 84108

Attn: Mr. J. B. Cotter, Director
Engineering and Energy
Applications Division

Attn: Dr. Howard P. Ross

CONTRACT DE-AC08-79ET-27012
GEOHERMAL RESERVOIR ASSESSMENT
NORTHERN BASIN AND RANGE

Gentlemen:

Attached are the Technical Progress Report and Form DOE 536, Contract Management Summary Report, for the month of May 1981.

Very truly yours,

C. Frank Corbin
Supervisor of Administration
and Accounting

BB/rr

Attachments

cc: Accounting Reports Branch
Department of Energy
P. O. Box 14100
Las Vegas, Nevada 89114

bcc: D. L. Ash
S. C. Lipman
J. E. Mack
Dr. Carel Otte
L. E. Poli
D. E. Pyle
N. J. Stefanides
V. E. Suter

CONTRACT NO. DE-AC08-79ET-27012
GEOTHERMAL RESERVOIR ASSESSMENT
NORTHERN BASIN AND RANGE

TECHNICAL PROGRESS REPORT

MAY 1981

Moved in Brinkerhoff-Signal Rig #2, on day rate of 0800 hours, 5/14/81. Drilled cement out of previously set 30" casing with shoe at 76'.

Drilled 17-1/2" hole to 315' and opened 17-1/2" hole to 26" hole. Ran and cemented 20", 94#, H40 buttress casing with shoe at 299'. Cemented with 1000 cubic feet "G" slurry with good returns to surface.

Installed and tested 20" B.O.P.'s. Drilled out cement and drilled 17-1/2" hole from 315' to 1404'. Logged, raised mud weight to 72#/cubic foot due to water flow and ran 13-3/8", 61#, K55 buttress casing from surface to 1390'. Cemented with 1620 cubic feet slurry with good cement returns to surface.

Installed 13-3/8" B.O.P.'s and tested. Drilled out cement in 13-3/8" casing and drilled 12-1/4" hole from 1404' to 5095' with Eastman turbodrill runs to direct the hole westerly (direction and angle at 4977' = 22° S83°W). Logged hole and ran 9-5/8", 40#, N80 buttress and 9-5/8", 40#, K55 buttress casing as a liner, hung at 1182' with shoe at 5078'. Cooled hole, prepared to cement casing at 2400 hours, 5/31/81.

U.S. DEPARTMENT OF ENERGY

FORM DOE 536
(1/78)

CONTRACT MANAGEMENT SUMMARY REPORT

FORM APPROVED
OMB NO. 38R-0190

1. Contract Identification	GEOHERMAL RESERVOIR ASSESSMENT NORTHERN BASIN AND RANGE	2. Reporting Period	5/1/81 through 5/31/81	3. Contract Number	DE-AC08-79ET-27012
4. Contractor (Name and Address)	UNION OIL COMPANY OF CALIFORNIA 461 S. BOYLSTON STREET LOS ANGELES, CALIFORNIA 90017			5. Contract Start Date	10/1/78
				6. Contract Completion Date	6/30/81

7. Months	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	B. FY 1981
-----------	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	------------

9. Cost Status																g. Cost Plan Date	10/80
a. (\$000)																h. Planned Costs Prior FYs	\$886,000
Planned																i. Actual Costs Prior FYs	\$389,000
Actual																j. Total Estimated Costs for Contract	\$841,000
Estimated																k. Total Contract Value	\$886,000
500																l. Unfilled Orders Outstanding	
b. B&R Numbers																m. Estimate for Subsequent Reporting Period	-0-
0																	
Accrued Costs		c. Planned	0	0	0	0	0	140	300	12	0	0	0	0	0	0	
		d. Actual	0	0	0	0	0	0	0	280							
		e. Variance	0	0	0	0	0	(140)	(300)	268							
		f. Cum. Variance	0	0	0	0	0	(140)	(440)	(172)							

10. Manpower Status (Direct Labor)																e. Manpower Plan Date	
a.																f. Planned Manpower Prior FYs	
																g. Actual Manpower Prior FYs	
																h. Total Estimated Manpower for Contract	
																i. Total Contract Manpower	
Manpower		b. Planned															
		c. Actual															
		d. Variance															

11. Major Milestone Status:		
a. Drill 8000' Expl. Hole		Completed 5/79
b. Test		Completed 5/79
c. Seismic Survey		Completed 11/79
d. Drill 10,000' Expl. Hole		
e. Test		
f. Report		
g.		
h.		
i.		

12. Remarks

13. Signature of Contractor's Project Manager and Date
C. A. Corbin/H 6-2-81

14. Signature of Government Technical Representative and Date



Seismograph Service Corporation

A SUBSIDIARY OF RAYTHEON COMPANY

TRANSMITTAL MEMORANDUM
SSC-1033-E

DATE 9/19/83

PLEASE ACKNOWLEDGE RECEIPT AND RETURN GREEN COPY TO:

<input type="checkbox"/> P. O. BOX 1590 TULSA, OKLAHOMA 74102	<input checked="" type="checkbox"/> 45 STOCKDALE HWY. SUITE 125 BAKERSFIELD, CALIF. 93309	<input type="checkbox"/> 605 WEST OHIO MIDLAND, TEXAS 79702	<input type="checkbox"/> OTHER
<input type="checkbox"/> 8323 SOUTHWEST FREEWAY SUITE 101 HOUSTON, TEXAS 77074		<input type="checkbox"/> 300 COLUMBINE BLDG. 1845 SHERMAN STREET DENVER, COLORADO 80203	

ATTENTION OF

SHIP TO	CLIENT UURI, EARTH SCIENCE LAB	SHIP VIA GREILLY TRUCKING	CHARGE UNION OIL OF CALIF.
	ADDRESS 420 CHIPETA, SUITE 120	PROSPECT STILLWATER, NEV.	
	SALT LAKE CITY, UTAH 84008	LINE NUMBER 2, 3 & 4	
		JOB NUMBER	
	ATTENTION MR HOWARD ROSS	RETURN DATA TO THIS OFFICE <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
PHONE	SHIPPED BY: G. CHURCH		

JOB NUMBER	LINE NUMBER	SP to SP	PROFILES	FILMS/REELS	AREA OR TYPE PROCESS	COPIES OF SECTIONS/ TRANSMITTALS TO
Box No. 1	2	o	ORIGINAL FIELD TAPES	870685, 870686, 870687, 870688 870689, 870690, 870691		
Box No. 1	3	o	ORIGINAL FIELD TAPES	870692, 870693, 870694, 870695 870696, 870697		
Box No. 2	4	o	ORIGINAL FIELD TAPES	870698, 870699, 870700, 870701 870702, 870703		
Box No. 2	2	o	FIELD CORRELATED TAPE	J7905344		
	3	o	FIELD CORRELATED TAPE	J7905342		
	4	o	FIELD CORRELATED TAPE	J7905343		
Box No. 2	2,3,4	o	FINAL STACK SECTIONS IN SEG Y			
Box No. 1	2,3,4	o	OBSERVER'S REPORTS			

RECEIVED BY Howard P. Ross DATE Sept. 28, 1983

NOTE: Films should be stored flat except for temporary storage.

UURI

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

July 20, 1983

Mr. Mike Reblin
Union Oil Company of California
2323 Knoll Drive
Ventura, CA 93003

Dear Mr. Reblin:

Transmitted herewith are digital magnetic data tapes (23) and observer's reports from the 1979 Stillwater Seismic survey, as requested by M.D. Watts of UOC, Santa Rosa office.

The line numbers and corresponding tapes are:

<u>Line 2</u>	<u>Reel No.</u>
	870685 870689
	870686 870690
	870687 870691
	870688

<u>Line 3</u>	<u>Reel No.</u>
	870692 870695
	870693 870696
	870694 870697

<u>Line 4</u>	<u>Reel No.</u>
	870698 870701
	870699 870702
	870700 870703

Also enclosed are field correlated tapes:

<u>Line No.</u>	<u>Reel No.</u>
2	J7905344
3	J7905342
4	J7905343

WPT

and final stacked sections in SEG-Y format:

Reel No.

J8006166

I understand that Union Oil Company will duplicate these data tapes and return the copies to the Earth Science Laboratory, University of Utah Research Institute. We are responsible for maintaining a file of all data sponsored by the Department of Energy/Division of Geothermal Energy's Industry Coupled and Exploration Technology programs.

Please acknowledge receipt by signing and returning one copy of this letter.

Sincerely,



Howard P. Ross
Section Head, Geophysics

HPR:jp

cc: M. D. Watts
D. L. Nielson

Received by: _____

Date: _____

Union Science & Technology Division

Union Oil Company of California
376 South Valencia Avenue
P. O. Box 76, Brea, California 92621
Telephone (714) 528-7201



March 24, 1980

Dr. Howard Roth
University of Utah Research Institute
Earth Science Lab
420 Chipeta Way, Suite 120
Salt Lake City, Utah 84108

Dear Dr. Roth:

Please find enclosed field tapes and observer's reports from the 1979 Stillwater seismic survey Fallon, Nevada listed below.

Line 2

Reel No.

870685-10/20 870689-10/20
870686-10/20 870690-10/20
870687-10/20 870691-10/20
870688-10/20

Line 3

Reel No.

10-21-79 870692 870695-10/21/79
10-21-79 870693 870696-10/21/79
10-21-79 870694 870697-10/21/79

Line 4

Reel No.

10-21-79 870698 870701-10/21/79
10-21-79 870699 870702-10/21/79
10-21-79 870700 870703-10/21/79

Also enclosed are field correlated tapes:

<u>Line No.</u>	<u>Reel No.</u>
2	J7905344
3	J7905342
4	J7905343

and final stacked sections in SEG-Y format:

<u>Reel No.</u>
J8006166

Please acknowledge receipt by signing and returning one copy of this letter.

Yours truly,



W. E. Snyderman

WES:ds

Received by: _____

Date: _____



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

AUG 26 1981

Mr. Dennis Nielson
University of Utah Research Institute
Earth Science Laboratory
420 Chipeta Way, Suite 120
Salt Lake City, UT 84108

Dear Mr. Nielson:

UNION OIL CO., CONTRACT DE-AC08-79ET27012 DELIVERABLES

Our records indicate that all deliverables associated with drilling the Phase II geothermal exploratory hole, R. Weishaupt No. 1, have been received by this office in accordance with the contract provisions.

Please review your records to ensure that the same deliverables plus the drill hole cuttings have been received by your organization. You may indicate such receipt by signing in the space provided below and returning this letter to me.

Sincerely,

Joseph N. Fiore

J. N. Fiore
Project Engineer
Geothermal Branch
Energy Applications Division

EAD:JNF-1342

Signature *Dennis Nielson* Date *9/18/81*
Dennis Nielson Date



9-420

P. O. Box 15225
Rio Rancho, New Mexico 87174
Telephone (505) 897-1776

August 17, 1981

Earth Sciences Laboratory
University of Utah Research Inst.
391 Chipeta Way
Salt Lake City, Utah 84108

Attention: Dr. Howard P. Ross

CONTRACT DE-AC08-79ET-27012
GEOHERMAL RESERVOIR ASSESSMENT
NORTHERN BASIN AND RANGE

Gentlemen:

Enclosed are three copies of the technical report on the well Richard Weishaupt No. 1 as well as the final technical report "Geothermal Reservoir Assessment Case Study" for the Stillwater Prospect.

Also enclosed are three copies of the electric logs run in the well Richard Weishaupt No. 1.

Very truly yours,

A handwritten signature in black ink, appearing to read "C. Frank Corbin".

C. Frank Corbin
Supervisor of Administration
and Accounting

CFC/rr

Enclosures



P. O. Box 15225
Rio Rancho, New Mexico 87174
Telephone (505) 897-1776

July 7, 1981

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

Earth Sciences Laboratory
Univ. of Utah Research Institute
391 Chipeta Way
Salt Lake City, Utah 84108

Attn: Mr. J. B. Cotter, Director
Engineering and Energy
Applications Division

Attn: Dr. Howard P. Ross

CONTRACT DE-AC08-79ET-27012
GEOHERMAL RESERVOIR ASSESSMENT
NORTHERN BASIN AND RANGE

Gentlemen:

Attached are the Technical Progress Report and Form DOE 536, Contract Management Summary Report, for the month of June 1981.

Very truly yours,

A handwritten signature in dark ink, appearing to read "C. Frank Corbin".

C. Frank Corbin
Supervisor of Administration
and Accounting

CFC:pd

Attachments

cc: Accounting Reports Branch
Department of Energy
P. O. Box 14100
Las Vegas, Nevada 89114

CONTRACT NO. DE-AC08-79ET-27012
GEOTHERMAL RESERVOIR ASSESSMENT
NORTHERN BASIN AND RANGE

TECHNICAL PROGRESS REPORT

JUNE 1981

Drilled an 8-3/4" hole through volcanic formations from 5095' to 10,014'. Ran electric logs over the 8-3/4" hole section.

A 7" slotted liner was run and hung from 4972' to 9995'. The drilling mud was displaced with clear water, liner slots were washed, and the well was shut in.

A casing caliper log indicated the 13-3/8" casing was in excellent condition, thereby obviating the need to tie back the 9-5/8" liner to surface.

Brinkerhoff-Signal Rig #2 was rigged down and released on June 30, 1981.

It is planned to leave the well shut in for approximately ten days to allow temperatures to approach static conditions. Temperature and pressure surveys will then be run and a flow test conducted.

CONTRACT MANAGEMENT SUMMARY REPORT

FORM DOE
(1/79)

1. Contract Identification GEOTHERMAL RESERVOIR ASSESSMENT NORTHERN BASIN AND RANGE	2. Reporting Period 6/1/81 through 6/30/81	3. Contract Number DE-AC08-79ET-27012
4. Contractor (Name and Address) UNION OIL COMPANY OF CALIFORNIA 461 S. BOYLSTON STREET LOS ANGELES, CALIFORNIA 90017	5. Contract Start Date 10/1/78	6. Contract Completion Date 8/30/81


7. Months	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	& FY 1981
-----------	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	-----------

9. Cost Status															g. Cost Plan Date 10/80		
a. (\$000)	Planned																h. Planned Costs Prior FYs \$886,000
	Actual																i. Actual Costs Prior FYs \$389,000
	Estimated																j. Total Estimated Costs for Contract \$841,000
	B&R Numbers																k. Total Contract Value \$886,000
Accrued Costs	c. Planned	0	0	0	0	0	140	300	12	0	0	0	0	0	0	0	m. Estimate for Subsequent Reporting Period -0-
	d. Actual	0	0	0	0	0	0	0	280	160							
	e. Variance	0	0	0	0	0	(140)	(300)	(268)	160							
	f. Cum. Variance	0	0	0	0	0	(140)	(440)	(172)	(12)							

10. Manpower Status (Direct Labor)															e. Manpower Plan Date		
Manpower	b. Planned																i. Total Contract Manpower
	c. Actual																
	d. Variance																
															f. Planned Manpower Prior FYs		
															g. Actual Manpower Prior FYs		
															h. Total Estimated Manpower for Contract		

11. Major Milestone Status																
a. Drill 8000' Expl. Hole																Completed 5/79
b. Test																Completed 5/79
c. Seismic Survey																Completed 11/79
d. Drill 10,000' Expl. Hole																
e. Test																
f. Report																
g.																
h.																
i.																

12. Remarks

13. Signature of Contractor's Project Manager and Date
 7-7-81

14. Signature of Government Technical Representative and Date

CONTRACT NO. DE-AC08-79ET-27012
GEOTHERMAL RESERVOIR ASSESSMENT
NORTHERN BASIN AND RANGE

TECHNICAL PROGRESS REPORT

JUNE 1981

Drilled an 8-3/4" hole through volcanic formations from 5095' to 10,014'. Ran electric logs over the 8-3/4" hole section.

A 7" slotted liner was run and hung from 4972' to 9995'. The drilling mud was displaced with clear water, liner slots were washed, and the well was shut in.

A casing caliper log indicated the 13-3/8" casing was in excellent condition, thereby obviating the need to tie back the 9-5/8" liner to surface.

Brinkerhoff-Signal Rig #2 was rigged down and released on June 30, 1981.

It is planned to leave the well shut in for approximately ten days to allow temperatures to approach static conditions. Temperature and pressure surveys will then be run and a flow test conducted.

1. Contract Identification GEOTHERMAL RESERVOIR ASSESSMENT NORTHERN BASIN AND RANGE	2. Reporting Period 6/1/81 through 6/30/81	3. Contract Number DE-AC08-79ET-27012
4. Contractor (Name and Address) UNION OIL COMPANY OF CALIFORNIA 461 S. BOYLSTON STREET LOS ANGELES, CALIFORNIA 90017		5. Contract Start Date 10/1/78
		6. Contract Completion Date 8/30/81

7. Months	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	& FY 1981
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9. Cost Status															g. Cost Plan Date 10/80																																																																
a. (\$000)															h. Planned Costs Prior FYs \$886,000																																																																
Planned															i. Actual Costs Prior FYs \$389,000																																																																
Actual															j. Total Estimated Costs for Contract \$841,000																																																																
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500															l. Unfilled Orders Outstanding																																																																
b. B&R Numbers															m. Estimate for Subsequent Reporting Period -0-																																																																
0																																																																															
<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:5%;">c. Planned</td> <td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>140</td><td>300</td><td>12</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td> </tr> <tr> <td>d. Actual</td> <td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>280</td><td>160</td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td>e. Variance</td> <td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>(140)</td><td>(300)</td><td>268</td><td>160</td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td>f. Cum. Variance</td> <td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>(140)</td><td>(440)</td><td>(172)</td><td>(12)</td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> </table>															c. Planned	0	0	0	0	0	140	300	12	0	0	0	0	0	0	0	d. Actual	0	0	0	0	0	0	0	280	160							e. Variance	0	0	0	0	0	(140)	(300)	268	160							f. Cum. Variance	0	0	0	0	0	(140)	(440)	(172)	(12)							
c. Planned	0	0	0	0	0	140	300	12	0	0	0	0	0	0	0																																																																
d. Actual	0	0	0	0	0	0	0	280	160																																																																						
e. Variance	0	0	0	0	0	(140)	(300)	268	160																																																																						
f. Cum. Variance	0	0	0	0	0	(140)	(440)	(172)	(12)																																																																						

10. Manpower Status (Direct Labor)															e. Manpower Plan Date
a.															f. Planned Manpower Prior FYs
															g. Actual Manpower Prior FYs
															h. Total Estimated Manpower for Contract
															i. Total Contract Manpower
b. Planned															
c. Actual															
d. Variance															

11. Major Milestone Status		
a. Drill 8000' Expl. Hole		Completed 5/79
b. Test		Completed 5/79
c. Seismic Survey		Completed 11/79
d. Drill 10,000' Expl. Hole	[] []	
e. Test	[]	
f. Report	[]	
g.		
h.		
i.		

12. Remarks

13. Signature of Contractor's Project Manager and Date 7-7-81	14. Signature of Government Technical Representative and Date
---	--

CONTRACT NO. DE-AC08-79ET-27012
GEOTHERMAL RESERVOIR ASSESSMENT
NORTHERN BASIN AND RANGE

TECHNICAL PROGRESS REPORT

JUNE 1981

Drilled an 8-3/4" hole through volcanic formations from 5095' to 10,014'. Ran electric logs over the 8-3/4" hole section.

A 7" slotted liner was run and hung from 4972' to 9995'. The drilling mud was displaced with clear water, liner slots were washed, and the well was shut in.

A casing caliper log indicated the 13-3/8" casing was in excellent condition, thereby obviating the need to tie back the 9-5/8" liner to surface.

Brinkerhoff-Signal Rig #2 was rigged down and released on June 30, 1981.

It is planned to leave the well shut in for approximately ten days to allow temperatures to approach static conditions. Temperature and pressure surveys will then be run and a flow test conducted.

CONTRACT MANAGEMENT SUMMARY REPORT

1. Contract Identification GEOTHERMAL RESERVOIR ASSESSMENT NORTHERN BASIN AND RANGE		2. Reporting Period 6/1/81 through 6/30/81		3. Contract Number DE-AC08-79ET-27012	
4. Contractor (Name and Address) UNION OIL COMPANY OF CALIFORNIA 461 S. BOYLSTON STREET LOS ANGELES, CALIFORNIA 90017				5. Contract Start Date 10/1/78	
				6. Contract Completion Date 8/30/81	


7. Months	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	a. FY 1981
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9. Cost Status															g. Cost Plan Date 10/80		
a. (\$'000)															h. Planned Costs Prior FYs \$886,000		
Planned															i. Actual Costs Prior FYs \$389,000		
Actual															j. Total Estimated Costs for Contract \$841,000		
Estimated															k. Total Contract Value \$886,000		
500															l. Unfilled Orders Outstanding		
b. B&R Numbers															m. Estimate for Subsequent Reporting Period -0-		
0																	
Accrued Costs		c. Planned	0	0	0	0	0	140	300	12	0	0	0	0	0	0	0
		d. Actual	0	0	0	0	0	0	0	280	160						
		e. Variance	0	0	0	0	0	(140)	(300)	268	160						
		f. Cum. Variance	0	0	0	0	0	(140)	(440)	(172)	(12)						

10. Manpower Status (Direct Labor)															e. Manpower Plan Date		
a.															f. Planned Manpower Prior FYs		
															g. Actual Manpower Prior FYs		
															h. Total Estimated Manpower for Contract		
															i. Total Contract Manpower		
Manpower		b. Planned															
		c. Actual															
		d. Variance															

11. Major Milestone Status		
a. Drill 8000' Expl. Hole		Completed 5/79
b. Test		Completed 5/79
c. Seismic Survey		Completed 11/79
d. Drill 10,000' Expl. Hole	<input type="checkbox"/>	
e. Test	<input type="checkbox"/>	
f. Report	<input type="checkbox"/>	
g.		
h.		
i.		

12. Remarks

13. Signature of Contractor's Project Manager and Date
 7-7-81

14. Signature of Government Technical Representative and Date



P.O. Box 15225
Rio Rancho, New Mexico 87174
Telephone (505) 897-1776

August 7, 1981

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

Earth Sciences Laboratory
Univ. of Utah Research Institute
391 Chipeta Way
Salt Lake City, Utah 84108

Attn: Mr. J.B. Cotter, Director
Engineering and Energy
Applications Division

Attn: Dr. Howard P. Ross

Contract DE-AC08-79ET-27012
Geothermal Reservoir Assessment
Northern Basin and Range

Gentlemen:

Attached are the Technical Progress Report and Form DOE 536,
Contract Management Summary Report, for the month of July, 1981.

Very truly yours,

A handwritten signature in dark ink, appearing to read "C. Frank Corbin".

C. Frank Corbin
Supervisor of Administration
and Accounting

CFC:dp
Attachments

cc: Accounting Reports Branch
Department of Energy
P.O. Box 14100
Las Vegas, Nevada 89114

Contract No. DE-AC08-79ET-27012
Geothermal Reservoir Assessment
Northern Basin and Range

TECHNICAL PROGRESS REPORT

JULY, 1981

Brinkerhoff-Signal Rig #2 was moved off the location in early July.

Rigged up to survey and test well Richard Weishaupt No. 1 on July 7. A pressure/temperature survey run on July 9 indicated a maximum temperature of 353F and maximum pressure of 3,845 psi at a depth of 9,950'.

Rigged up NOWSCO on July 15 in an attempt to flow the well with nitrogen. Blew hole dry to below 9,000'. Lost 589' of NOWSCO tubing in hole. Started flow test at 11:45 hours. At 13:15 hours had first flow to surface. Blew hole dry at 14:47 hours. At 17:45 hours found fluid level at 9,200' using sinker bar.

On July 16 fluid level was back to surface. Ran pressure/temperature survey to 9,410'. Maximum temperature was 350F and maximum pressure 3,645 psi.

Rigged down and moved out equipment. Location clean-up was underway at month's end.

CONTRACT MANAGEMENT SUMMARY REPORT

1. Contract Identification GEOTHERMAL RESERVOIR ASSESSMENT NORTHERN BASIN AND RANGE		2. Reporting Period 7/1/81 through 7/31/81		3. Contract Number DE-AC08-79ET-27012	
4. Contractor (Name and Address) UNION OIL COMPANY OF CALIFORNIA 461 S. BOYLSTON STREET LOS ANGELES, CALIFORNIA 90017				5. Contract Start Date 10/1/78	
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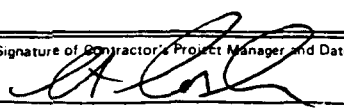
7. Months	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	8. FY 1981
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9. Cost Status															g. Cost Plan Date 10/80		
a. (\$000)															h. Planned Costs Prior FYs \$886,000		
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Estimated															k. Total Contract Value \$886,000		
500															l. Unfilled Orders Outstanding		
b. B&R Numbers															m. Estimate for Subsequent Reporting Period -0-		
0																	
Accrued Costs		c. Planned	0	0	0	0	0	140	300	12	0	0	0	0	0	0	
		d. Actual	0	0	0	0	0	0	0	280	160	0					
		e. Variance	0	0	0	0	0	(140)	(300)	268	160	0					
		f. Cum. Variance	0	0	0	0	0	(140)	(440)	(172)	(12)	(12)					

10. Manpower Status (Direct Labor)															e. Manpower Plan Date		
a.															f. Planned Manpower Prior FYs		
															g. Actual Manpower Prior FYs		
															h. Total Estimated Manpower for Contract		
															i. Total Contract Manpower		
Manpower		b. Planned															
		c. Actual															
		d. Variance															

11. Major Milestone Status:		
a. Drill 8000' Expl. Hole		Completed 5/79
b. Test		Completed 5/79
c. Seismic Survey		Completed 11/79
d. Drill 10,000' Expl. Hole	<input type="checkbox"/>	
e. Test	<input type="checkbox"/>	
f. Report	<input type="checkbox"/>	
g.		
h.		
i.		

12. Remarks

13. Signature of Contractor's Project Manager and Date
 8-7-81

14. Signature of Government Technical Representative and Date

Contract No. DE-AC08-79ET-27012
Geothermal Reservoir Assessment
Northern Basin and Range

TECHNICAL PROGRESS REPORT

JULY, 1981

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CONTRACT MANAGEMENT SUMMARY REPORT

1. Contract Identification GEOHERMAL RESERVOIR ASSESSMENT NORTHERN BASIN AND RANGE		2. Reporting Period 7/1/81 through 7/31/81		3. Contract Number DE-AC08-79ET-27012	
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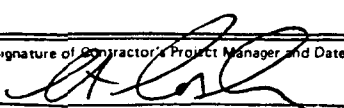
7. Months	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	8. FY 1981
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9. Cost Status															g. Cost Plan Date 10/80		
a. (\$000)															h. Planned Costs Prior FYs \$886,000		
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Estimated															k. Total Contract Value \$886,000		
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b. B&R Numbers															m. Estimate for Subsequent Reporting Period -0-		
0																	
Accrued Costs		c. Planned	0	0	0	0	0	140	300	12	0	0	0	0	0	0	
		d. Actual	0	0	0	0	0	0	0	280	160	0					
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															h. Total Estimated Manpower for Contract		
															i. Total Contract Manpower		
Manpower		b. Planned															
		c. Actual															
		d. Variance															

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a. Drill 8000' Expl. Hole		Completed	5/79
b. Test		Completed	5/79
c. Seismic Survey		Completed	11/79
d. Drill 10,000' Expl. Hole	<input type="checkbox"/>		
e. Test	<input type="checkbox"/>		
f. Report	<input type="checkbox"/>		
g.			
h.			
i.			

12. Remarks

13. Signature of Contractor's Project Manager and Date  8-7-81	14. Signature of Government Technical Representative and Date
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Contract No. DE-AC08-79ET-27012
Geothermal Reservoir Assessment
Northern Basin and Range

TECHNICAL PROGRESS REPORT

JULY, 1981

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7. Months	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	8. FY 1981
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9. Cost Status															g. Cost Plan Date 10/80		
a. (\$000)															h. Planned Costs Prior FYs \$886,000		
Planned															i. Actual Costs Prior FYs \$389,000		
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Estimated															k. Total Contract Value \$886,000		
500															l. Unfilled Orders Outstanding		
b. B&R Numbers															m. Estimate for Subsequent Reporting Period -0-		
0																	
Accrued Costs		c. Planned	0	0	0	0	0	140	300	12	0	0	0	0	0	0	
		d. Actual	0	0	0	0	0	0	0	280	160	0					
		e. Variance	0	0	0	0	0	(140)	(300)	268	160	0					
		f. Cum. Variance	0	0	0	0	0	(140)	(440)	(172)	(12)	(12)					

10. Manpower Status (Direct Labor)															e. Manpower Plan Date		
a.															f. Planned Manpower Prior FYs		
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															h. Total Estimated Manpower for Contract		
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Manpower		b. Planned															
		c. Actual															
		d. Variance															

11. Major Milestone Status:			
a. Drill 8000' Expl. Hole		Completed	5/79
b. Test		Completed	5/79
c. Seismic Survey		Completed	11/79
d. Drill 10,000' Expl. Hole	<input type="checkbox"/>		
e. Test	<input type="checkbox"/>		
f. Report	<input type="checkbox"/>		
g.			
h.			
i.			

12. Remarks

13. Signature of Contractor's Project Manager and Date  8-7-81	14. Signature of Government Technical Representative and Date
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P. O. Box 15225
Rio Rancho, New Mexico 87174
Telephone (505) 897-1776

June 2, 1981

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

Earth Sciences Laboratory
Univ. of Utah Research Institute
391 Chipeta Way
Salt Lake City, Utah 84108

Attn: Mr. J. B. Cotter, Director
Engineering and Energy
Applications Division

Attn: Dr. Howard P. Ross

CONTRACT DE-AC08-79ET-27012
GEOHERMAL RESERVOIR ASSESSMENT
NORTHERN BASIN AND RANGE

Gentlemen:

Attached are the Technical Progress Report and Form DOE 536, Contract Management Summary Report, for the month of May 1981.

Very truly yours,

A handwritten signature in cursive script that reads "C. Frank Corbin/bk".

C. Frank Corbin
Supervisor of Administration
and Accounting

BB/rr

Attachments

cc: Accounting Reports Branch
Department of Energy
P. O. Box 14100
Las Vegas, Nevada 89114
bcc: D. L. Ash
S. C. Lipman
J. E. Mack
Dr. Carel Otte
L. E. Poli
D. E. Pyle
N. J. Stefanides
V. E. Suter

CONTRACT NO. DE-AC08-79ET-27012
GEOHERMAL RESERVOIR ASSESSMENT
NORTHERN BASIN AND RANGE

TECHNICAL PROGRESS REPORT

MAY 1981

Moved in Brinkerhoff-Signal Rig #2, on day rate of 0800 hours, 5/14/81. Drilled cement out of previously set 30" casing with shoe at 76'.

Drilled 17-1/2" hole to 315' and opened 17-1/2" hole to 26" hole. Ran and cemented 20", 94#, H40 buttress casing with shoe at 299'. Cemented with 1000 cubic feet "G" slurry with good returns to surface.

Installed and tested 20" B.O.P.'s. Drilled out cement and drilled 17-1/2" hole from 315' to 1404'. Logged, raised mud weight to 72#/cubic foot due to water flow and ran 13-3/8", 61#, K55 buttress casing from surface to 1390'. Cemented with 1620 cubic feet slurry with good cement returns to surface.

Installed 13-3/8" B.O.P.'s and tested. Drilled out cement in 13-3/8" casing and drilled 12-1/4" hole from 1404' to 5095' with Eastman turbodrill runs to direct the hole westerly (direction and angle at 4977' = 22° S83°W). Logged hole and ran 9-5/8", 40#, N80 buttress and 9-5/8", 40#, K55 buttress casing as a liner, hung at 1182' with shoe at 5078'. Cooled hole, prepared to cement casing at 2400 hours, 5/31/81.

CONTRACT MANAGEMENT SUMMARY REPORT

1. Contract Identification	GEOHERMAL RESERVOIR ASSESSMENT NORTHERN BASIN AND RANGE	2. Reporting Period	5/1/81 through 5/31/81	3. Contract Number	DE-AC08-79ET-27012
4. Contractor (Name and Address)	UNION OIL COMPANY OF CALIFORNIA 461 S. BOYLSTON STREET LOS ANGELES, CALIFORNIA 90017			5. Contract Start Date	10/1/78
				6. Contract Completion Date	6/30/81

7. Months	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	8. FY 1981
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9. Cost Status																g. Cost Plan Date	10/80
a. (\$000)																h. Planned Costs Prior FYs	\$886,000
Planned																i. Actual Costs Prior FYs	\$389,000
Actual																j. Total Estimated Costs for Contract	\$841,000
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.....																l. Unfilled Orders Outstanding	
500																m. Estimate for Subsequent Reporting Period	-0-
b. B&R Numbers																	
0																	
Accrued Costs		c. Planned	0	0	0	0	0	140	300	12	0	0	0	0	0	0	
		d. Actual	0	0	0	0	0	0	0	280							
		e. Variance	0	0	0	0	0	(140)	(300)	268							
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10. Manpower Status (Direct Labor)																e. Manpower Plan Date	
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Manpower		b. Planned															
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d. Drill 10,000' Expl. Hole	[]															
e. Test	[]															
f. Report	[]															
g.																
h.																
i.																

12. Remarks

13. Signature of Contractor's Project Manager and Date
C. J. Corbin/H 6-2-81

14. Signature of Government Technical Representative and Date



P. O. Box 15225
Rio Rancho, New Mexico 87174
Telephone (505) 897-1776

June 2, 1981

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

Earth Sciences Laboratory
Univ. of Utah Research Institute
391 Chipeta Way
Salt Lake City, Utah 84108

Attn: Mr. J. B. Cotter, Director
Engineering and Energy
Applications Division

Attn: Dr. Howard P. Ross

CONTRACT DE-AC08-79ET-27012
GEOHERMAL RESERVOIR ASSESSMENT
NORTHERN BASIN AND RANGE

Gentlemen:

Attached are the Technical Progress Report and Form DOE 536, Contract Management Summary Report, for the month of May 1981.

Very truly yours,

A handwritten signature in cursive script that reads "C. Frank Corbin/hh".

C. Frank Corbin
Supervisor of Administration
and Accounting

BB/rr

Attachments

cc: Accounting Reports Branch
Department of Energy
P. O. Box 14100
Las Vegas, Nevada 89114

bcc: D. L. Ash
S. C. Lipman
J. E. Mack
Dr. Carel Otte
L. E. Poli
D. E. Pyle
N. J. Stefanides
V. E. Suter

CONTRACT NO. DE-AC08-79ET-27012
GEOHERMAL RESERVOIR ASSESSMENT
NORTHERN BASIN AND RANGE

TECHNICAL PROGRESS REPORT

MAY 1981

Moved in Brinkerhoff-Signal Rig #2, on day rate of 0800 hours, 5/14/81. Drilled cement out of previously set 30" casing with shoe at 76'.

Drilled 17-1/2" hole to 315' and opened 17-1/2" hole to 26" hole. Ran and cemented 20", 94#, H40 buttress casing with shoe at 299'. Cemented with 1000 cubic feet "G" slurry with good returns to surface.

Installed and tested 20" B.O.P.'s. Drilled out cement and drilled 17-1/2" hole from 315' to 1404'. Logged, raised mud weight to 72#/cubic foot due to water flow and ran 13-3/8", 61#, K55 buttress casing from surface to 1390'. Cemented with 1620 cubic feet slurry with good cement returns to surface.

Installed 13-3/8" B.O.P.'s and tested. Drilled out cement in 13-3/8" casing and drilled 12-1/4" hole from 1404' to 5095' with Eastman turbodrill runs to direct the hole westerly (direction and angle at 4977' = 22° S83°W). Logged hole and ran 9-5/8", 40#, N80 buttress and 9-5/8", 40#, K55 buttress casing as a liner, hung at 1182' with shoe at 5078'. Cooled hole, prepared to cement casing at 2400 hours, 5/31/81.

U.S. DEPARTMENT OF ENERGY

FORM DOE 536
(1/78)

CONTRACT MANAGEMENT SUMMARY REPORT

FORM APPROVED
OMB NO. 38R-0190

1. Contract Identification	GEOHERMAL RESERVOIR ASSESSMENT NORTHERN BASIN AND RANGE	2. Reporting Period	5/1/81 through 5/31/81	3. Contract Number	DE-AC08-79ET-27012
4. Contractor (Name and Address)	UNION OIL COMPANY OF CALIFORNIA 461 S. BOYLSTON STREET LOS ANGELES, CALIFORNIA 90017	5. Contract Start Date	10/1/78	6. Contract Completion Date	6/30/81

7. Months	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	8. FY 1981
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9. Cost Status															g. Cost Plan Date	10/80	
a. (\$000)															h. Planned Costs Prior FYs	\$886,000	
Planned															i. Actual Costs Prior FYs	\$389,000	
Actual															j. Total Estimated Costs for Contract	\$841,000	
Estimated															k. Total Contract Value	\$886,000	
500															l. Unfilled Orders Outstanding		
b. B&R Numbers															m. Estimate for Subsequent Reporting Period	-0-	
0																	
Accrued Costs		c. Planned	0	0	0	0	0	140	300	12	0	0	0	0	0	0	
		d. Actual	0	0	0	0	0	0	0	280							
		e. Variance	0	0	0	0	0	(140)	(300)	268							
		f. Cum. Variance	0	0	0	0	0	(140)	(440)	(172)							

10. Manpower Status (Direct Labor)															e. Manpower Plan Date		
a.															f. Planned Manpower Prior FYs		
															g. Actual Manpower Prior FYs		
															h. Total Estimated Manpower for Contract		
															i. Total Contract Manpower		
Manpower		b. Planned															
		c. Actual															
		d. Variance															

11. Major Milestone Status:																
a. Drill 8000' Expl. Hole															Completed	5/79
b. Test															Completed	5/79
c. Seismic Survey															Completed	11/79
d. Drill 10,000' Expl. Hole	[]															
e. Test	[]															
f. Report	[]															
g.																
h.																
i.																

12. Remarks

13. Signature of Contractor's Project Manager and Date
C. J. Corbin/H 6-2-81

14. Signature of Government Technical Representative and Date

Union Geothermal Company of New Mexico

4100 Southern Blvd. SE - Suite 180C

P.O. Box 15225

Rio Rancho, New Mexico 87174

Telephone (505) 897-1776



May 4, 1981

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

Earth Sciences Laboratory
Univ. of Utah Research Institute
391 Chipeta Way
Salt Lake City, Utah 84108

Attn: Mr. J. B. Cotter, Director
Engineering and Energy
Applications Division

Attn: Dr. Howard P. Ross

Contract DE-AC08-79ET-27012
Geothermal Reservoir Assessment
Northern Basin and Range

Gentlemen:

Attached are the Technical Progress Report and Form DOE 536, Contract Management Summary Report, for the month of April 1981.

Very truly yours,

A handwritten signature in black ink, appearing to read "C. Frank Corbin".

C. Frank Corbin
Supervisor of Administration
and Accounting

CFC/rr

Attachment

cc: Accounting Reports Branch
Department of Energy
P. O. Box 14100
Las Vegas, Nevada 89114

Contract No. DE-AC08-79ET-27012
Geothermal Reservoir Assessment
Northern Basin and Range

TECHNICAL PROGRESS REPORT

APRIL 1981

It is anticipated that the well Richard Weishaupt No. 1 will be spudded during the second week of May 1981.

CONTRACT MANAGEMENT SUMMARY REPORT

1. Contract Identification GEOHERMAL RESERVOIR ASSESSMENT NORTHERN BASIN AND RANGE		2. Reporting Period 4/1/81 through 4/30/81		3. Contract Number DE-AC08-79ET-27012	
4. Contractor (Name and Address) UNION OIL COMPANY OF CALIFORNIA 461 S. BOYLSTON STREET LOS ANGELES, CALIFORNIA 90017				5. Contract Start Date 10/1/78	
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7. Months	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	8. FY 1981
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9. Cost Status														g. Cost Plan Date 10/80			
a. (\$000)														h. Planned Costs Prior FYs \$886,000			
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Estimated														k. Total Contract Value \$886,000			
b. B&R Numbers														l. Unfilled Orders Outstanding			
m. Estimate for Subsequent Reporting Period -0-																	
Accrued Costs		c. Planned	0	0	0	0	0	140	300	12	0	0	0	0	0	0	0
		d. Actual	0	0	0	0	0	0	0								
		e. Variance	0	0	0	0	0	(140)	(300)								
		f. Cum. Variance	0	0	0	0	0	(140)	(440)								

10. Manpower Status (Direct Labor)														e. Manpower Plan Date			
a.														f. Planned Manpower Prior FYs			
														g. Actual Manpower Prior FYs			
														h. Total Estimated Manpower for Contract			
														i. Total Contract Manpower			
Manpower		b. Planned															
		c. Actual															
		d. Variance															

11. Major Milestone Status		Completed	
a. Drill 8000' Expl. Hole		5/79	
b. Test		5/79	
c. Seismic Survey		11/79	
d. Drill 10,000' Expl. Hole			
e. Test			
f. Report			
g.			
h.			
i.			

12. Remarks

13. Signature of Contractor's Project Manager and Date
[Signature] 5-4-81

14. Signature of Government Technical Representative and Date

Contract No. DE-AC08-79ET-27012
Geothermal Reservoir Assessment
Northern Basin and Range

TECHNICAL PROGRESS REPORT

APRIL 1981

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b. B&R Numbers																		
Accrued Costs		c. Planned	0	0	0	0	0	140	300	12	0	0	0	0	0	0		
		d. Actual	0	0	0	0	0	0	0									
		e. Variance	0	0	0	0	0	(140)	(300)									
		f. Cum. Variance	0	0	0	0	0	(140)	(440)									

10. Manpower Status (Direct Labor)																e. Manpower Plan Date		
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Manpower		b. Planned																
		c. Actual																
		d. Variance																

11. Major Milestone Status		
a. Drill 8000' Expl. Hole	Completed	5/79
b. Test	Completed	5/79
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d. Drill 10,000' Expl. Hole		
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12. Remarks

13. Signature of Contractor's Project Manager and Date
 14. Signature of Government Technical Representative and Date
 S-4-81

Contract No. DE-AC08-79ET-27012
Geothermal Reservoir Assessment
Northern Basin and Range

TECHNICAL PROGRESS REPORT

APRIL 1981

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1. Contract Identification GEOHERMAL RESERVOIR ASSESSMENT NORTHERN BASIN AND RANGE		2. Reporting Period 4/1/81 through 4/30/81		3. Contract Number DE-AC08-79ET-27012	
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7. Months	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	8. FY 1981
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c. Planned	0	0	0	0	0	140	300	12	0	0	0	0	0	0	0																																																															
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h. Total Estimated Manpower for Contract															i. Total Contract Manpower																																															
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11. Major Milestone Status		
a. Drill 8000' Expl. Hole	Completed	5/79
b. Test	Completed	5/79
c. Seismic Survey	Completed	11/79
d. Drill 10,000' Expl. Hole		
e. Test		
f. Report		
g.		
h.		
i.		

12. Remarks

13. Signature of Contractor's Project Manager and Date
[Signature] 5-4-81

14. Signature of Government Technical Representative and Date



P.O. Box 15225
Rio Rancho, New Mexico 87174
Telephone (505) 897-1776

April 1, 1981

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

Earth Sciences Laboratory
Univ. of Utah Research Institute
391 Chipeta Way
Salt Lake City, Utah 84108

Attn: Mr. J.B. Cotter, Director
Engineering and Energy
Applications Division

Attn: Dr. Howard P. Ross

Contract DE-AC08-79ET-27012
Geothermal Reservoir Assessment
Northern Basin and Range

Gentlemen:

Attached are the Technical Progress Report and Form DOE 536,
Contract Management Summary Report, for the month of March, 1981.

Very truly yours,

A handwritten signature in cursive script, appearing to read "C. Frank Corbin".

C. Frank Corbin
Supervisor of Administration
and Accounting

CFC:dp
Attachment

cc: Accounting Reports Branch
Department of Energy
P.O. Box 14100
Las Vegas, Nevada 89114

Contract No. DE-AC08-79ET-27012
Geothermal Reservoir Assessment
Northern Basin and Range

TECHNICAL PROGRESS REPORT

MARCH, 1981

It is anticipated that the well Richard Weishaupt No. 1 will be spudded around April 15, 1981.

CONTRACT MANAGEMENT SUMMARY REPORT

1. Contract Identification GEOHERMAL RESERVOIR ASSESSMENT NORTHERN BASIN AND RANGE		2. Reporting Period 3/1/81 through 3/31/81		3. Contract Number DE-AC08-79ET-27012	
4. Contractor (Name and Address): UNION OIL COMPANY OF CALIFORNIA 461 S. BOYLSTON STREET LOS ANGELES, CALIFORNIA 90017				5. Contract Start Date 10/1/78	
				6. Contract Completion Date 6/30/81	

7. Months	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	8. FY 1981
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9. Cost Status															g. Cost Plan Date 10/80		
a. (\$000)															h. Planned Costs Prior FYs \$886,000		
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Accrued Costs		c. Planned	0	0	0	0	0	140	300	12	0	0	0	0	0	0	
		d. Actual	0														
		e. Variance	0														
		f. Cum. Variance	0														

10. Manpower Status (Direct Labor)															e. Manpower Plan Date		
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Manpower		b. Planned															
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11. Major Milestone Status		
a. Drill 8000' Expl. Hole		Completed 5/79
b. Test		Completed 5/79
c. Seismic Survey		Completed 11/79
d. Drill 10,000' Expl. Hole		
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g.		
h.		
i.		

12. Remarks

13. Signature of Contractor's Project Manager and Date
[Signature] 4/2/81

14. Signature of Government Technical Representative and Date

Contract No. DE-AC08-79ET-27012
Geothermal Reservoir Assessment
Northern Basin and Range

TECHNICAL PROGRESS REPORT

MARCH, 1981

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CONTRACT MANAGEMENT SUMMARY REPORT

1. Contract Identification GEOHERMAL RESERVOIR ASSESSMENT NORTHERN BASIN AND RANGE		2. Reporting Period 3/1/81 through 3/31/81		3. Contract Number DE-AC08-79ET-27012	
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Contract No. DE-AC08-79ET-27012
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Northern Basin and Range

TECHNICAL PROGRESS REPORT

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CONTRACT MANAGEMENT SUMMARY REPORT

1. Contract Identification GEOHERMAL RESERVOIR ASSESSMENT NORTHERN BASIN AND RANGE		2. Reporting Period 3/1/81 through 3/31/81		3. Contract Number DE-AC08-79ET-27012	
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[Signature] 4/2/81

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P.O. Box 15225
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Telephone (505) 897-1776

March 2, 1981

Department of Energy
Nevada Operations Office
P.O. Box 14100
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Earth Sciences Laboratory
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Attn: Mr. J.B. Cotter, Director
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Geothermal Reservoir Assessment
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Gentlemen:

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Contract Management Summary Report, for the month of February,
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Very truly yours,

A handwritten signature in dark ink, appearing to read "C. Frank Corbin", written over a horizontal line.

C. Frank Corbin
Supervisor of Administration
and Accounting

CFC:dp
Attachment

cc: Accounting Reports Branch
Department of Energy
P.O. Box 14100
Las Vegas, Nevada 89114

Contract No. DE-AC08-79ET-27012
Geothermal Reservoir Assessment
Northern Basin and Range

TECHNICAL PROGRESS REPORT

FEBRUARY, 1981

The new site access road was completed during February. Negotiations to obtain a drilling rig have been completed. It is anticipated that the well Richard Weishaupt No. 1 will be spudded in early April, 1981.

1. Contract Identification GEOHERMAL RESERVOIR ASSESSMENT NORTHERN BASIN AND RANGE		2. Reporting Period 2/1/81 through 2/28/81		3. Contract Number DE-AC08-79ET-27012	
4. Contractor (Name and Address) UNION OIL COMPANY OF CALIFORNIA 461 S. BOYLSTON STREET LOS ANGELES, CALIFORNIA 90017				5. Contract Start Date 10/1/78	
				6. Contract Completion Date 6/30/81	

7. Months	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	8. FY 1981
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9. Cost Status																g. Cost Plan Date 10/80	
a. (\$000)																h. Planned Costs Prior FYs \$886,000	
Planned																i. Actual Costs Prior FYs \$389,000	
Actual																j. Total Estimated Costs for Contract \$841,000	
Estimated																k. Total Contract Value \$886,000	
500																l. Unfilled Orders Outstanding	
b. B&R Numbers																m. Estimate for Subsequent Reporting Period -0-	
0																	
Accrued Costs		c. Planned	0	0	0	0	0	140	300	12	0	0	0	0	0	0	
		d. Actual	0														
		e. Variance	0														
		f. Cum. Variance	0														

10. Manpower Status (Direct Labor)																e. Manpower Plan Date	
a.																f. Planned Manpower Prior FYs	
																g. Actual Manpower Prior FYs	
																h. Total Estimated Manpower for Contract	
																i. Total Contract Manpower	
Manpower		b. Planned															
		c. Actual															
		d. Variance															

11. Major Milestone Status		
a. Drill 8000' Expl. Hole	Completed	5/79
b. Test	Completed	5/79
c. Seismic Survey	Completed	11/79
d. Drill 10,000' Expl. Hole		
e. Test		
f. Report		
g.		
h.		
i.		

12. Remarks

13. Signature of Contractor's Project Manager and Date
[Signature] 3-4-81

14. Signature of Government Technical Representative and Date

Contract No. DE-AC08-79ET-27012
Geothermal Reservoir Assessment
Northern Basin and Range

TECHNICAL PROGRESS REPORT

FEBRUARY, 1981

The new site access road was completed during February. Negotiations to obtain a drilling rig have been completed. It is anticipated that the well Richard Weishaupt No. 1 will be spudded in early April, 1981.

1. Contract Identification GEOHERMAL RESERVOIR ASSESSMENT NORTHERN BASIN AND RANGE		2. Reporting Period 2/1/81 through 2/28/81		3. Contract Number DE-AC08-79ET-27012	
4. Contractor (Name and Address) UNION OIL COMPANY OF CALIFORNIA 461 S. BOYLSTON STREET LOS ANGELES, CALIFORNIA 90017				5. Contract Start Date 10/1/78	
				6. Contract Completion Date 6/30/81	

7. Months	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	8. FY 1981
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9. Cost Status															g. Cost Plan Date 10/80		
a. (\$000)															h. Planned Costs Prior FYs \$886,000		
Planned															i. Actual Costs Prior FYs \$389,000		
Actual															j. Total Estimated Costs for Contract \$841,000		
Estimated															k. Total Contract Value \$886,000		
500															l. Unfilled Orders Outstanding		
b. B&R Numbers															m. Estimate for Subsequent Reporting Period -0-		
0																	
Accrued Costs		c. Planned	0	0	0	0	0	140	300	12	0	0	0	0	0	0	
		d. Actual	0														
		e. Variance	0														
		f. Cum. Variance	0														

10. Manpower Status (Direct Labor)															e. Manpower Plan Date		
a.															f. Planned Manpower Prior FYs		
															g. Actual Manpower Prior FYs		
															h. Total Estimated Manpower for Contract		
															i. Total Contract Manpower		
Manpower		b. Planned															
		c. Actual															
		d. Variance															

11. Major Milestone Status		
a. Drill 8000' Expl. Hole	Completed	5/79
b. Test	Completed	5/79
c. Seismic Survey	Completed	11/79
d. Drill 10,000' Expl. Hole		
e. Test		
f. Report		
g.		
h.		
i.		

12. Remarks

13. Signature of Contractor's Project Manager and Date
[Signature] 3-4-81

14. Signature of Government Technical Representative and Date

Contract No. DE-AC08-79ET-27012
Geothermal Reservoir Assessment
Northern Basin and Range

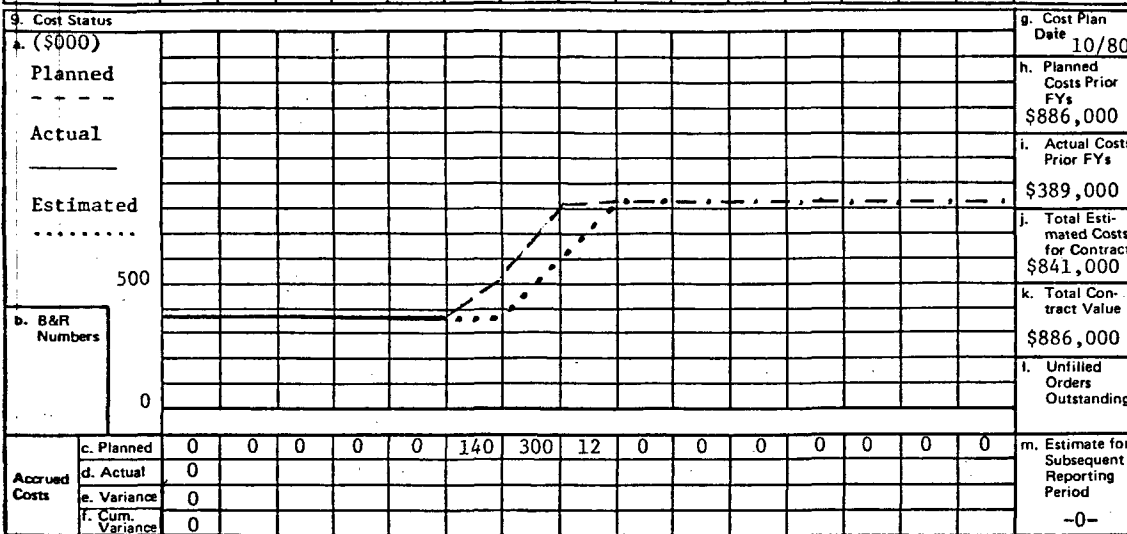
TECHNICAL PROGRESS REPORT

FEBRUARY, 1981

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				6. Contract Completion Date 6/30/81	

7. Months	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	8. FY 1981
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10. Manpower Status (Direct Labor)															e. Manpower Plan Date		
a.															f. Planned Manpower Prior FYs		
															g. Actual Manpower Prior FYs		
															h. Total Estimated Manpower for Contract		
															i. Total Contract Manpower		
Manpower		b. Planned															
		c. Actual															
		d. Variance															

11. Major Milestone Status		
a. Drill 8000' Expl. Hole	Completed	5/79
b. Test	Completed	5/79
c. Seismic Survey	Completed	11/79
d. Drill 10,000' Expl. Hole		
e. Test		
f. Report		
g.		
h.		
i.		

12. Remarks

13. Signature of Contractor's Project Manager and Date
[Signature] 3-4-81

14. Signature of Government Technical Representative and Date



P.O. Box 15225
Rio Rancho, New Mexico 87174
Telephone (505) 897-1776

February 2, 1981

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

Earth Sciences Laboratory
Univ. of Utah Research Institute
391 Chipeta Way
Salt Lake City, Utah 84108

Attn: Mr. J.B. Cotter, Director
Engineering and Energy
Applications Division

Attn: Dr. Howard P. Ross

Contract DE-AC08-79ET-27012
Geothermal Reservoir Assessment
Northern Basin and Range

Gentlemen:

Attached are the Technical Progress Report and Form DOE 536,
Contract Management Summary Report, for the month of January, 1981.

Very truly yours,

A handwritten signature in dark ink, appearing to read "C. Frank Corbin".

C. Frank Corbin
Supervisor of Administration
and Accounting

CFC:dp
Attachment

cc: Accounting Reports Branch
Department of Energy
P.O. Box 14100
Las Vegas, Nevada 89114

Contract No. DE-AC08-79ET-27012
Geothermal Reservoir Assessment
Northern Basin and Range

TECHNICAL PROGRESS REPORT

JANUARY, 1981

The drilling pad was completed and conductor pipe set during January. The new site access road was 80% complete at month end. Negotiations to obtain a drilling rig are currently in progress.

CONTRACT MANAGEMENT SUMMARY REPORT

1. Contract Identification GEOTHERMAL RESERVOIR ASSESSMENT NORTHERN BASIN AND RANGE		2. Reporting Period 1/1/81 through 1/31/81		3. Contract Number DE-AC08-79ET-27012	
4. Contractor (Name and Address) UNION OIL COMPANY OF CALIFORNIA 461 S. BOYLSTON STREET LOS ANGELES, CALIFORNIA 90017				5. Contract Start Date 10/1/78	
				6. Contract Completion Date 6/30/81	

7. Months	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	8. FY 1981
-----------	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	------------

9. Cost Status															g. Cost Plan Date 10/80		
a. (\$000)															h. Planned Costs Prior FYs \$886,000		
Planned															i. Actual Costs Prior FYs \$389,000		
Actual															j. Total Estimated Costs for Contract \$841,000		
Estimated															k. Total Contract Value \$886,000		
500															l. Unfilled Orders Outstanding		
b. B&R Numbers															m. Estimate for Subsequent Reporting Period -0-		
0																	
Accrued Costs		c. Planned	0	0	0	0	0	140	300	12	0	0	0	0	0	0	
		d. Actual	0														
		e. Variance	0														
		f. Cum. Variance	0														

10. Manpower Status (Direct Labor)															e. Manpower Plan Date		
a.															f. Planned Manpower Prior FYs		
															g. Actual Manpower Prior FYs		
															h. Total Estimated Manpower for Contract		
															i. Total Contract Manpower		
Manpower		b. Planned															
		c. Actual															
		d. Variance															

11. Major Milestone Status:		
a. Drill 8000' Expl. Hole		Completed 5/79
b. Test		Completed 5/79
c. Seismic Survey		Completed 11/79
d. Drill 10,000' Expl. Hole		
e. Test		
f. Report		
g.		
h.		
i.		

12. Remarks

13. Signature of Contractor's Project Manager and Date
[Signature] 2/2/81

14. Signature of Government Technical Representative and Date

Contract No. DE-AC08-79ET-27012
Geothermal Reservoir Assessment
Northern Basin and Range

TECHNICAL PROGRESS REPORT

JANUARY, 1981

The drilling pad was completed and conductor pipe set during January. The new site access road was 80% complete at month end. Negotiations to obtain a drilling rig are currently in progress.

CONTRACT MANAGEMENT SUMMARY REPORT

1. Contract Identification GEOTHERMAL RESERVOIR ASSESSMENT NORTHERN BASIN AND RANGE		2. Reporting Period 1/1/81 through 1/31/81		3. Contract Number DE-AC08-79ET-27012	
4. Contractor (Name and Address) UNION OIL COMPANY OF CALIFORNIA 461 S. BOYLSTON STREET LOS ANGELES, CALIFORNIA 90017				5. Contract Start Date 10/1/78	
				6. Contract Completion Date 6/30/81	

7. Months	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	8. FY 1981
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9. Cost Status															g. Cost Plan Date 10/80		
a. (\$000)															h. Planned Costs Prior FYs \$886,000		
Planned															i. Actual Costs Prior FYs \$389,000		
Actual															j. Total Estimated Costs for Contract \$841,000		
Estimated															k. Total Contract Value \$886,000		
500															l. Unfilled Orders Outstanding		
b. B&R Numbers															m. Estimate for Subsequent Reporting Period -0-		
0																	
Accrued Costs		c. Planned	0	0	0	0	0	140	300	12	0	0	0	0	0	0	
		d. Actual	0														
		e. Variance	0														
		f. Cum. Variance	0														

10. Manpower Status (Direct Labor)															e. Manpower Plan Date		
a.															f. Planned Manpower Prior FYs		
															g. Actual Manpower Prior FYs		
															h. Total Estimated Manpower for Contract		
															i. Total Contract Manpower		
Manpower		b. Planned															
		c. Actual															
		d. Variance															

11. Major Milestone Status		
a. Drill 8000' Expl. Hole		Completed 5/79
b. Test		Completed 5/79
c. Seismic Survey		Completed 11/79
d. Drill 10,000' Expl. Hole	<input type="checkbox"/>	
e. Test	<input type="checkbox"/>	
f. Report	<input type="checkbox"/>	
g.		
h.		
i.		

12. Remarks

13. Signature of Contractor's Project Manager and Date *[Signature]* 2/2/81

14. Signature of Government Technical Representative and Date

Contract No. DE-AC08-79ET-27012
Geothermal Reservoir Assessment
Northern Basin and Range

TECHNICAL PROGRESS REPORT

JANUARY, 1981

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1. Contract Identification GEOHERMAL RESERVOIR ASSESSMENT NORTHERN BASIN AND RANGE		2. Reporting Period 1/1/81 through 1/31/81		3. Contract Number DE-AC08-79ET-27012	
4. Contractor (Name and Address) UNION OIL COMPANY OF CALIFORNIA 461 S. BOYLSTON STREET LOS ANGELES, CALIFORNIA 90017				5. Contract Start Date 10/1/78	
				6. Contract Completion Date 6/30/81	

7. Months	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	8. FY 1981
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9. Cost Status															g. Cost Plan Date 10/80		
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b. B&R Numbers															m. Estimate for Subsequent Reporting Period -0-		
0																	
Accrued Costs		c. Planned	0	0	0	0	0	140	300	12	0	0	0	0	0	0	
		d. Actual	0														
		e. Variance	0														
		f. Cum. Variance	0														

10. Manpower Status (Direct Labor)															e. Manpower Plan Date		
a.															f. Planned Manpower Prior FYs		
															g. Actual Manpower Prior FYs		
															h. Total Estimated Manpower for Contract		
															i. Total Contract Manpower		
Manpower		b. Planned															
		c. Actual															
		d. Variance															

11. Major Milestone Status		
a. Drill 8000' Expl. Hole		Completed 5/79
b. Test		Completed 5/79
c. Seismic Survey		Completed 11/79
d. Drill 10,000' Expl. Hole		
e. Test		
f. Report		
g.		
h.		
i.		

12. Remarks

13. Signature of Contractor's Project Manager and Date 2/2/81	14. Signature of Government Technical Representative and Date
--	---



P.O. Box 15225
Rio Rancho, New Mexico 87174
Telephone (505) 897-1776

January 9, 1981

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

Earth Sciences Laboratory
Univ. of Utah Research Institute
391 Chipeta Way
Salt Lake City, Utah 84108

Attn: Mr. J.B. Cotter, Director
Engineering and Energy
Applications Division

Attn: Dr. Howard P. Ross

Contract DE-AC08-79ET-27012
Geothermal Reservoir Assessment
Northern Basin and Range

Gentlemen:

Attached are the Technical Progress Report and Form DOE 536,
Contract Management Summary Report, for the month of December,
1980.

Very truly yours,

A handwritten signature in dark ink, appearing to read "C. Frank Corbin", written over a horizontal line.

C. Frank Corbin
Supervisor of Administration
and Accounting

CFC:dp
Attachment

cc: Accounting Reports Branch
Department of Energy
P.O. Box 14100
Las Vegas, Nevada 89114

Contract No. DE-AC08-79ET-27012
Geothermal Reservoir Assessment
Northern Basin and Range

TECHNICAL PROGRESS REPORT

DECEMBER, 1980


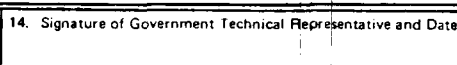
Preparations were made during December to commence construction of the site access road and drill pad in January, 1981.

U.S. DEPARTMENT OF ENERGY

FORM DOE 536
(1/78)

CONTRACT MANAGEMENT SUMMARY REPORT

FORM APPROVED
OMB NO. 38R-0190

1. Contract Identification		GEOHERMAL RESERVOIR ASSESSMENT NORTHERN BASIN AND RANGE										2. Reporting Period 12/1/80 through 12/31/80		3. Contract Number DE-AC08-79ET-27012			
4. Contractor (Name and Address):		UNION OIL COMPANY OF CALIFORNIA 461 S. BOYLSTON STREET LOS ANGELES, CALIFORNIA 90017										5. Contract Start Date 10/1/78		6. Contract Completion Date 6/30/81			
7. Months		O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	8. FY 1981
9. Cost Status																g. Cost Plan Date 10/80	
a. (\$000)																h. Planned Costs Prior FYs \$886,000	
Planned																i. Actual Costs Prior FYs \$389,000	
Actual																j. Total Estimated Costs for Contract \$841,000	
Estimated																k. Total Contract Value \$886,000	
.....																l. Unfilled Orders Outstanding	
500																m. Estimate for Subsequent Reporting Period -0-	
b. B&R Numbers																	
0																	
Accrued Costs		c. Planned	0	0	0	0	0	140	300	12	0	0	0	0	0	0	
		d. Actual	0														
		e. Variance	0														
		f. Cum. Variance	0														
10. Manpower Status (Direct Labor):																	
a.																e. Manpower Plan Date	
																f. Planned Manpower Prior FYs	
																g. Actual Manpower Prior FYs	
																h. Total Estimated Manpower for Contract	
																i. Total Contract Manpower	
Manpower		b. Planned															
		c. Actual															
		d. Variance															
11. Major Milestone Status:																	
a. Drill 8000' Expl. Hole																Completed 5/79	
b. Test																Completed 5/79	
c. Seismic Survey																Completed 11/79	
d. Drill 10,000' Expl. Hole																	
e. Test																	
f. Report																	
g.																	
h.																	
i.																	
12. Remarks																	
13. Signature of Contractor's Project Manager and Date																14. Signature of Government Technical Representative and Date	
																	
1-9-81																	

Contract No. DE-AC08-79ET-27012
Geothermal Reservoir Assessment
Northern Basin and Range

TECHNICAL PROGRESS REPORT

DECEMBER, 1980

Preparations were made during December to commence construction of the site access road and drill pad in January, 1981.

CONTRACT MANAGEMENT SUMMARY REPORT

1. Contract Identification GEOTHERMAL RESERVOIR ASSESSMENT NORTHERN BASIN AND RANGE	2. Reporting Period 12/1/80 through 12/31/80	3. Contract Number DE-AC08-79ET-27012
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7. Months	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	8. FY 1981
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9. Cost Status															g. Cost Plan Date 10/80	
a. (\$000)	Planned															h. Planned Costs Prior FYs \$886,000
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	B&R Numbers															k. Total Contract Value \$886,000
Accrued Costs	c. Planned	0	0	0	0	0	140	300	12	0	0	0	0	0	0	m. Estimate for Subsequent Reporting Period -0-
	d. Actual	0														
	e. Variance	0														
	f. Cum. Variance	0														

10. Manpower Status (Direct Labor)															e. Manpower Plan Date	
Manpower	b. Planned															f. Planned Manpower Prior FYs
	c. Actual															g. Actual Manpower Prior FYs
	d. Variance															h. Total Estimated Manpower for Contract
																i. Total Contract Manpower

11. Major Milestone Status:	
a. Drill 8000' Expl. Hole	Completed 5/79
b. Test	Completed 5/79
c. Seismic Survey	Completed 11/79
d. Drill 10,000' Expl. Hole	
e. Test	
f. Report	
g.	
h.	
i.	

12. Remarks

13. Signature of Contractor's Project Manager and Date <i>[Signature]</i> 1-9-81	14. Signature of Government Technical Representative and Date
---	---

Contract No. DE-AC08-79ET-27012
Geothermal Reservoir Assessment
Northern Basin and Range

TECHNICAL PROGRESS REPORT

DECEMBER, 1980

Preparations were made during December to commence construction of the site access road and drill pad in January, 1981.

U.S. DEPARTMENT OF ENERGY

FORM DOE 536
(1/78)

CONTRACT MANAGEMENT SUMMARY REPORT

FORM APPROVED
OMB NO. 38R-0190

1. Contract Identification GEOHERMAL RESERVOIR ASSESSMENT NORTHERN BASIN AND RANGE	2. Reporting Period 12/1/80 through 12/31/80	3. Contract Number DE-AC08-79ET-27012
4. Contractor (Name and Address) UNION OIL COMPANY OF CALIFORNIA 461 S. BOYLSTON STREET LOS ANGELES, CALIFORNIA 90017		5. Contract Start Date 10/1/78
		6. Contract Completion Date 6/30/81

7. Months	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	8. FY 1981
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9. Cost Status															g. Cost Plan Date 10/80	
a. (\$000)	Planned															h. Planned Costs Prior FYs \$886,000
	Actual															i. Actual Costs Prior FYs \$389,000
	Estimated															j. Total Estimated Costs for Contract \$841,000
	B&R Numbers															k. Total Contract Value \$886,000
Accrued Costs	c. Planned	0	0	0	0	0	140	300	12	0	0	0	0	0	0	m. Estimate for Subsequent Reporting Period -0-
	d. Actual	0														
	e. Variance	0														
	f. Cum. Variance	0														

10. Manpower Status (Direct Labor)															e. Manpower Plan Date	
a.																f. Planned Manpower Prior FYs
																g. Actual Manpower Prior FYs
																h. Total Estimated Manpower for Contract
																i. Total Contract Manpower
Manpower	b. Planned															
	c. Actual															
	d. Variance															

11. Major Milestone Status	
a. Drill 8000' Expl. Hole	Completed 5/79
b. Test	Completed 5/79
c. Seismic Survey	Completed 11/79
d. Drill 10,000' Expl. Hole	
e. Test	
f. Report	
g.	
h.	
i.	

12. Remarks

13. Signature of Contractor's Project Manager and Date <i>[Signature]</i> 1-9-81	14. Signature of Government Technical Representative and Date
---	---

Union Oil Company of California



In Reply Give No.

P.O. Box 15225
Rio Rancho, New Mexico 87174
Telephone (505) 897-1776

December 2, 1980

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

Earth Sciences Laboratory
Univ. of Utah Research Institute
391 Chipeta Way
Salt Lake City, Utah 84108

Attn: Mr. J.B. Cotter, Director
Engineering and Energy
Applications Division

Attn: Dr. Howard P. Ross

Contract DE-AC08-79ET-27012
Geothermal Reservoir Assessment
Northern Basin and Range

Gentlemen:

Attached are the Technical Progress Report and Form DOE
536, Contract Management Summary Report, for the month of
November, 1980.

Very truly yours,

A handwritten signature in black ink, appearing to read "C. Frank Corbin".

C. Frank Corbin
Supervisor of Administration
and Accounting

CFC:dp
Attachment

cc: Accounting Reports Branch
Department of Energy
P.O. Box 14100
Las Vegas, Nevada 89114

Contract No. DE-AC08-79ET-27012
Geothermal Reservoir Assessment
Northern Basin and Range

TECHNICAL PROGRESS REPORT

NOVEMBER, 1980

No significant activities occurred during November, 1980.

CONTRACT MANAGEMENT SUMMARY REPORT

1. Contract Identification	GEOHERMAL RESERVOIR ASSESSMENT NORTHERN BASIN AND RANGE	2. Reporting Period	11/1/80 through 11/30/80	3. Contract Number	DE-AC08-79ET-27012
4. Contractor (Name and Address)	UNION OIL COMPANY OF CALIFORNIA 461 S. BOYLSTON STREET LOS ANGELES, CALIFORNIA 90017			5. Contract Start Date	10/1/78
				6. Contract Completion Date	6/30/81

7. Months	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	8. FY	1981
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9. Cost Status																g. Cost Plan Date	10/80															
a. (\$000)	Planned																h. Planned Costs Prior FYs	\$886,000														
	Actual																i. Actual Costs Prior FYs	\$389,000														
	Estimated																j. Total Estimated Costs for Contract	\$841,000														
																k. Total Contract Value	\$886,000														
b. B&R Numbers																l. Unfilled Orders Outstanding																
c. Planned																0	0	0	0	0	140	300	12	0	0	0	0	0	0	0	m. Estimate for Subsequent Reporting Period	-0-
d. Actual																0																
e. Variance																0																
f. Cum. Variance																0																

10. Manpower Status (Direct Labor)																e. Manpower Plan Date		
a.																	f. Planned Manpower Prior FYs	
																	g. Actual Manpower Prior FYs	
																	h. Total Estimated Manpower for Contract	
																	i. Total Contract Manpower	
Manpower	b. Planned																	
	c. Actual																	
	d. Variance																	

11. Major Milestone Status																
a. Drill 8000' Expl. Hole															Completed	5/79
b. Test															Completed	5/79
c. Seismic Survey															Completed	11/79
d. Drill 10,000' Expl. Hole	[]															
e. Test	[]															
f. Report	[]															
g.																
h.																
i.																

12. Remarks

13. Signature of Contractor's Project Manager and Date	14. Signature of Government Technical Representative and Date
<i>[Signature]</i> 12/3/80	

Contract No. DE-AC08-79ET-27012
Geothermal Reservoir Assessment
Northern Basin and Range

TECHNICAL PROGRESS REPORT

NOVEMBER, 1980

No significant activities occurred during November, 1980.

CONTRACT MANAGEMENT SUMMARY REPORT

1. Contract Identification GEOHERMAL RESERVOIR ASSESSMENT NORTHERN BASIN AND RANGE	2. Reporting Period 11/1/80 through 11/30/80	3. Contract Number DE-AC08-79ET-27012
4. Contractor (Name and Address) UNION OIL COMPANY OF CALIFORNIA 461 S. BOYLSTON STREET LOS ANGELES, CALIFORNIA 90017		5. Contract Start Date 10/1/78
		6. Contract Completion Date 6/30/81

7. Months	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	8. FY 1981
-----------	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	------------

9. Cost Status															g. Cost Plan Date 10/80	
a. (\$000)	Planned															h. Planned Costs Prior FYs \$886,000
	Actual															i. Actual Costs Prior FYs \$389,000
	Estimated															j. Total Estimated Costs for Contract \$841,000
	500															k. Total Contract Value \$886,000
d. B&R Numbers																l. Unfilled Orders Outstanding
																m. Estimate for Subsequent Reporting Period -0-
Accrued Costs	c. Planned	0	0	0	0	0	140	300	12	0	0	0	0	0	0	
	d. Actual	0														
	e. Variance	0														
	f. Cum. Variance	0														

10. Manpower Status (Direct Labor)															e. Manpower Plan Date	
Manpower	b. Planned															f. Planned Manpower Prior FYs
	c. Actual															g. Actual Manpower Prior FYs
	d. Variance															h. Total Estimated Manpower for Contract
																i. Total Contract Manpower

11. Major Milestone Status		
a. Drill 8000' Expl. Hole		Completed 5/79
b. Test		Completed 5/79
c. Seismic Survey		Completed 11/79
d. Drill 10,000' Expl. Hole		
e. Test		
f. Report		
g.		
h.		
i.		

12. Remarks

13. Signature of Contractor's Project Manager and Date <i>[Signature]</i> 12/3/80	14. Signature of Government Technical Representative and Date
--	---

Contract No. DE-AC08-79ET-27012
Geothermal Reservoir Assessment
Northern Basin and Range

TECHNICAL PROGRESS REPORT

NOVEMBER, 1980

No significant activities occurred during November, 1980.

CONTRACT MANAGEMENT SUMMARY REPORT

1. Contract Identification GEOHERMAL RESERVOIR ASSESSMENT NORTHERN BASIN AND RANGE	2. Reporting Period 11/1/80 through 11/30/80	3. Contract Number DE-AC08-79ET-27012
4. Contractor (Name and Address) UNION OIL COMPANY OF CALIFORNIA 461 S. BOYLSTON STREET LOS ANGELES, CALIFORNIA 90017		5. Contract Start Date 10/1/78
		6. Contract Completion Date 6/30/81

7. Months	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	8. FY 1981
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9. Cost Status															g. Cost Plan Date	10/80													
a. (\$000)															h. Planned Costs Prior FYs	\$886,000													
Planned															i. Actual Costs Prior FYs	\$389,000													
Actual															j. Total Estimated Costs for Contract	\$841,000													
Estimated															k. Total Contract Value	\$886,000													
500															l. Unfilled Orders Outstanding														
b. B&R Numbers															0														
Accrued Costs															m. Estimate for Subsequent Reporting Period	-0-													
c. Planned															0	0	0	0	0	0	140	300	12	0	0	0	0	0	0
d. Actual															0														
e. Variance															0														
f. Cum. Variance															0														

10. Manpower Status (Direct Labor)															e. Manpower Plan Date	
a.															f. Planned Manpower Prior FYs	
															g. Actual Manpower Prior FYs	
															h. Total Estimated Manpower for Contract	
															i. Total Contract Manpower	
b. Planned																
c. Actual																
d. Variance																

11. Major Milestone Status		
a. Drill 8000' Expl. Hole		Completed 5/79
b. Test		Completed 5/79
c. Seismic Survey		Completed 11/79
d. Drill 10,000' Expl. Hole		
e. Test		
f. Report		
g.		
h.		
i.		

12. Remarks

13. Signature of Contractor's Project Manager and Date <i>[Signature]</i> 12/3/80	14. Signature of Government Technical Representative and Date
--	---



P.O. Box 15225
Rio Rancho, New Mexico 87174
Telephone (505) 897-1776

November 4, 1980

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

Earth Sciences Laboratory
Univ. of Utah Research Institute
391 Chipeta Way
Salt Lake City, Utah 84108

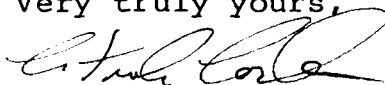
Attn: Mr. J.B. Cotter, Director
Engineering and Energy
Applications Division

Attn: Dr. Howard P. Ross

Contract DE-AC08-79ET-27012
Geothermal Reservoir Assessment
Northern Basin and Range

Gentlemen:

Attached are the Technical Progress Report and Form DOE
536, Contract Management Summary Report, for the month of
October, 1980.

Very truly yours,

C. Frank Corbin
Supervisor of Administration
and Accounting

CFC:dp
Attachment

cc: Accounting Reports Branch
Department of Energy
P.O. Box 14100
Las Vegas, Nevada 89114

Contract No. DE-AC08-79ET-27012
Geothermal Reservoir Assessment
Northern Basin and Range

TECHNICAL PROGRESS REPORT

OCTOBER, 1980

No significant activities occurred during October, 1980.

CONTRACT MANAGEMENT SUMMARY REPORT

1. Contract Identification GEOTHERMAL RESERVOIR ASSESSMENT NORTHERN BASIN AND RANGE	2. Reporting Period 10/1/80 through 10/31/80	3. Contract Number DE-AC08-79ET-27012
4. Contractor (Name and Address) UNION OIL COMPANY OF CALIFORNIA 461 S. BOYLSTON STREET LOS ANGELES, CALIFORNIA 90017	5. Contract Start Date 10/1/78	6. Contract Completion Date 6/30/81

7. Months	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	FY 1981
-----------	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---------

8. Cost Status																9. Cost Plan Date 10/8	
a. (\$000)																10. Planned Costs Prior FYs \$886,000	
Planned																11. Actual Cost Prior FYs \$389,000	
Actual																12. Total Estimated Cost for Contract \$841,000	
Estimated																13. Total Contract Value \$886,000	
500																14. Unfilled Orders Outstanding	
b. B&R Numbers																15. Estimate to Subsequent Reporting Period -0-	
0																	
Accrued Costs		c. Planned	0	0	0	0	0	160	300	12	0	0	0	0	0	0	
		d. Actual	0														
		e. Variance	0														
		f. Cum. Variance	0														

10. Manpower Status (Direct Labor)																16. Manpower Plan Date	
a.																17. Planned Manpower Prior FYs	
																18. Actual Manpower Prior FYs	
																19. Total Estimated Manpower for Contract	
																20. Total Contract Manpower	
Manpower		b. Planned															
		c. Actual															
		d. Variance															

11. Major Milestone Status		
a. Drill 8000' Expl. Hole		Completed 5/79
b. Test		Completed 5/79
c. Seismic Survey		Completed 11/79
d. Drill 10,000' Expl. Hole		
e. Test		
f. Report		
g.		
h.		
i.		

12. Remarks

13. Signature of Contractor's Project Manager and Date
[Signature] 11-4-80

14. Signature of Government Technical Representative and Date

Contract No. DE-AC08-79ET-27012
Geothermal Reservoir Assessment
Northern Basin and Range

TECHNICAL PROGRESS REPORT

OCTOBER, 1980

No significant activities occurred during October, 1980.

1. Contract Identification GEOTHERMAL RESERVOIR ASSESSMENT NORTHERN BASIN AND RANGE	2. Reporting Period 10/1/80 through 10/31/80	3. Contract Number DE-AC08-79ET-27012
4. Contractor (Name and Address) UNION OIL COMPANY OF CALIFORNIA 461 S. BOYLSTON STREET LOS ANGELES, CALIFORNIA 90017	5. Contract Start Date 10/1/78	6. Contract Completion Date 6/30/81

7. Months	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	FY 1981
-----------	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---------

8. Cost Status																9. Cost Plan Date 10/8	
a. (\$000)																h. Planned Costs Prior FYs \$556,000	
Planned																i. Actual Cost Prior FYs \$389,000	
Actual																j. Total Estimated Cost for Contract \$841,000	
Estimated																k. Total Contract Value \$886,000	
500																l. Unfilled Orders Outstanding	
b. SAR Numbers																m. Estimate to Support Reporting Period -0-	
0																	
Accrued Costs		n. Planned	0	0	0	0	0	140	300	12	0	0	0	0	0	0	
		o. Actual	0														
		p. Variance	0														
		q. Cum. Variance	0														

10. Manpower Status (Direct Labor)																1. Manpower Plan Date	
a.																2. Planned Manpower Prior FYs	
																3. Actual Manpower Prior FYs	
																4. Total Estimated Manpower for Contract	
																5. Total Contract Manpower	
Manpower		b. Planned															
		c. Actual															
		d. Variance															

11. Major Milestone Status		
a. Drill 8000' Expl. Hole		Completed 5/79
b. Test		Completed 5/79
c. Seismic Survey		Completed 11/79
d. Drill 10,000' Expl. Hole		
e. Test		
f. Report		
g.		
h.		
i.		

12. Remarks

13. Signature of Contractor's Project Manager and Date
[Signature] 11-4-80

14. Signature of Government Technical Representative and Date

Contract No. DE-AC08-79ET-27012
Geothermal Reservoir Assessment
Northern Basin and Range

TECHNICAL PROGRESS REPORT

OCTOBER, 1980

No significant activities occurred during October, 1980.

1. Contract Identification	GEOTHERMAL RESERVOIR ASSESSMENT NORTHERN BASIN AND RANGE	2. Reporting Period	10/1/80 through 10/31/80	3. Contract Number	DE-AC08-79ET-27012
4. Contractor (Name and Address)	UNION OIL COMPANY OF CALIFORNIA 461 S. BOYLSTON STREET LOS ANGELES, CALIFORNIA 90017	5. Contract Start Date	10/1/78	6. Contract Completion Date	6/30/81

7. Months	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	8. FY 1981
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9. Cost Status																9. Cost Plan Date
a. (\$000)																10/8
Planned																h. Planned Costs Prior FYs
Actual																\$866,000
Estimated																i. Actual Cost Prior FYs
																\$389,000
																j. Total Estimated Cost for Contract
																\$841,000
																k. Total Contract Value
																\$886,000
																l. Unfilled Orders Outstanding
b. SBR Numbers																m. Estimate for Subsequent Reporting Period
																-0-
Accrued Costs	c. Planned	0	0	0	0	0	140	300	12	0	0	0	0	0	0	
	d. Actual	0														
	e. Variance	0														
	f. Cum. Variance	0														

10. Manpower Status (Direct Labor)																9. Manpower Plan Date
a.																
b. Planned																f. Planned Manpower Prior FYs
c. Actual																g. Actual Manpower Prior FYs
d. Variance																h. Total Estimated Manpower for Contract
e.																i. Total Contract Manpower
Manpower																
b. Planned																
c. Actual																
d. Variance																

11. Major Milestone Status																
a. Drill 8000' Expl. Hole																Completed 5/79
b. Test																Completed 5/79
c. Seismic Survey																Completed 11/79
d. Drill 10,000' Expl. Hole																
e. Test																
f. Report																
g.																
h.																
i.																

12. Remarks

13. Signature of Contractor's Project Manager and Date
[Signature] 11-4-80

14. Signature of Government Technical Representative and Date



P.O. Box 15225
Rio Rancho, New Mexico 87174
Telephone (505) 897-1776

October 2, 1980

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

Earth Sciences Laboratory
Univ. of Utah Research Institute
391 Chipeta Way
Salt Lake City, Utah 84108

Attn: Mr. J.B. Cotter, Director
Engineering and Energy
Applications Division

Attn: Dr. Howard P. Ross

Contract DE-AC08-79ET-27012
Geothermal Reservoir Assessment
Northern Basin and Range

Gentlemen:

Attached are the Technical Progress Report and Form DOE 536, Contract Management Summary Report, for the month of September, 1980.

Very truly yours,

A handwritten signature in cursive script, appearing to read "C. Frank Corbin".

C. Frank Corbin
Supervisor of Administration
and Accounting

CFC:dp
Attachment

cc: Accounting Reports Branch
Department of Energy
P.O. Box 14100
Las Vegas, Nevada 89114

Contract No. DE-AC08-79ET-27012
Geothermal Reservoir Assessment
Northern Basin and Range

TECHNICAL PROGRESS REPORT

SEPTEMBER, 1980

No significant activities occurred during September, 1980.

CONTRACT MANAGEMENT SUMMARY REPORT

1. Contract Identification Geothermal Reservoir Assessment Northern Basin and Range	2. Reporting Period 9/1/80 through 9/30/80	3. Contract Number DE-AC08-79ET-27012
4. Contractor (Name and Address) Union Oil Company of California 461 S. Boylston Street Los Angeles, CA 90017		5. Contract Start Date 10/1/78 6. Contract Completion Date 6/30/81

7. Months	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	8. FY 1980
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9. Cost Status																g. Cost Plan Date 10/79		
a. (\$000) Planned Actual Estimated 500 0																h. Planned Costs Prior FYs \$886,000		
																i. Actual Costs Prior FYs \$304,000		
																j. Total Estimated Costs for Contract \$842,000		
																k. Total Contract Value \$886,000		
b. B&R Numbers AE-10-02-02																l. Unfilled Orders Outstanding		
Accrued Costs	c. Planned	85	0	0	0	0	0	0	0	0	0	0	0	0	220	220	12	m. Estimate for Subsequent Reporting Period
	d. Actual	85	0	0	0	0	0	0	0	0	0	0	0	0				n. Estimate for Subsequent Reporting Period
	e. Variance	0	0	0	0	0	0	0	0	0	0	0	0	0				o. Estimate for Subsequent Reporting Period
	f. Cum. Variance	0	0	0	0	0	0	0	0	0	0	0	0	0				o. Estimate for Subsequent Reporting Period

10. Manpower Status (Direct Labor)																e. Manpower Plan Date	
a.																f. Planned Manpower Prior FYs	
																g. Actual Manpower Prior FYs	
																h. Total Estimated Manpower for Contract	
																i. Total Contract Manpower	
Manpower	b. Planned																i. Total Contract Manpower
	c. Actual																i. Total Contract Manpower
	d. Variance																i. Total Contract Manpower

11. Major Milestone Status	
a. Drill 8000 Expl. Hole	Completed 5/79
b. Test	Completed 5/79
c. Seismic Survey	
d. Drill 8000 Expl. Hole	
e. Test	
f. Report	
g.	
h.	
i.	

12. Remarks

13. Signature of Contractor's Project Manager and Date 10-2-80	14. Signature of Government Technical Representative and Date
--	--

Contract No. DE-AC08-79ET-27012
Geothermal Reservoir Assessment
Northern Basin and Range

TECHNICAL PROGRESS REPORT

SEPTEMBER, 1980

No significant activities occurred during September, 1980.

CONTRACT MANAGEMENT SUMMARY REPORT

1. Contract Identification Geothermal Reservoir Assessment Northern Basin and Range	2. Reporting Period 9/1/80 through 9/30/80	3. Contract Number DE-AC08-79ET-27012
4. Contractor (Name and Address) Union Oil Company of California 461 S. Boylston Street Los Angeles, CA 90017		5. Contract Start Date 10/1/78
		6. Contract Completion Date 6/30/81

7. Months	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	8. FY	1980
-----------	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	-------	------

9. Cost Status																g. Cost Plan Date 10/79	
a. (\$000)	Planned															h. Planned Costs Prior FYs \$886,000	
		Actual															i. Actual Costs Prior FYs \$304,000
			Estimated														
																k. Total Contract Value \$886,000	
b. B&R Numbers																l. Unfilled Orders Outstanding	
AE-10-02-02																0	
Accrued Costs	c. Planned	85	0	0	0	0	0	0	0	0	0	0	0	220	220	12	m. Estimate for Subsequent Reporting Period -0-
	d. Actual	85	0	0	0	0	0	0	0	0	0	0	0				
	e. Variance	0	0	0	0	0	0	0	0	0	0	0	0				
	f. Cum. Variance	0	0	0	0	0	0	0	0	0	0	0	0				

10. Manpower Status (Direct Labor)																e. Manpower Plan Date
a.															f. Planned Manpower Prior FYs	
															g. Actual Manpower Prior FYs	
															h. Total Estimated Manpower for Contract	
															i. Total Contract Manpower	
Manpower	b. Planned															
	c. Actual															
	d. Variance															

11. Major Milestone Status															
a. Drill 8000 Expl. Hole															Completed 5/79
b. Test															Completed 5/79
c. Seismic Survey															
d. Drill 8000 Expl. Hole															[]
e. Test															[]
f. Report															[]
g.															
h.															
i.															

12. Remarks

13. Signature of Contractor's Project Manager and Date 10-2-80	14. Signature of Government Technical Representative and Date
--	--

Contract No. DE-AC08-79ET-27012
Geothermal Reservoir Assessment
Northern Basin and Range

TECHNICAL PROGRESS REPORT

SEPTEMBER, 1980

No significant activities occurred during September, 1980.

CONTRACT MANAGEMENT SUMMARY REPORT

1. Contract Identification Geothermal Reservoir Assessment Northern Basin and Range	2. Reporting Period 9/1/80 through 9/30/80	3. Contract Number DE-AC08-79ET-27012
4. Contractor (Name and Address) Union Oil Company of California 461 S. Boylston Street Los Angeles, CA 90017		5. Contract Start Date 10/1/78 6. Contract Completion Date 6/30/81

7. Months	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	8. FY	1980
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9. Cost Status																g. Cost Plan Date	10/79		
a. (\$000)	Planned															h. Planned Costs Prior FYs	\$886,000		
	Actual															i. Actual Costs Prior FYs	\$304,000		
	Estimated															j. Total Estimated Costs for Contract	\$842,000		
	b. B&R Numbers AE-10-02-02															k. Total Contract Value	\$886,000		
Accrued Costs	c. Planned	85	0	0	0	0	0	0	0	0	0	0	0	0	220	220	12	m. Estimate for Subsequent Reporting Period	-0-
	d. Actual	85	0	0	0	0	0	0	0	0	0	0	0	0					
	e. Variance	0	0	0	0	0	0	0	0	0	0	0	0	0					
	f. Cum. Variance	0	0	0	0	0	0	0	0	0	0	0	0	0					

10. Manpower Status (Direct Labor)																e. Manpower Plan Date	
a.															f. Planned Manpower Prior FYs		
															g. Actual Manpower Prior FYs		
															h. Total Estimated Manpower for Contract		
															i. Total Contract Manpower		
Manpower	b. Planned																
	c. Actual																
	d. Variance																

11. Major Milestone Status																
a. Drill 8000 Expl. Hole															Completed	5/79
b. Test															Completed	5/79
c. Seismic Survey																
d. Drill 8000 Expl. Hole																
e. Test																
f. Report																
g.																
h.																
i.																

12. Remarks

13. Signature of Contractor's Project Manager and Date 10-2-80	14. Signature of Government Technical Representative and Date
--	--



P.O. Box 15225
Rio Rancho, New Mexico 87174
Telephone (505) 897-1776

September 3, 1980

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

Earth Sciences Laboratory
Univ. of Utah Research Institute
391 Chipeta Way
Salt Lake City, Utah 84108

Attn: Mr. J.B. Cotter, Director
Engineering and Energy
Applications Division

Attn: Dr. Howard P. Ross

Contract DE-AC08-79ET-27012
Geothermal Reservoir Assessment
Northern Basin and Range

Gentlemen:

Attached are the Technical Progress Report and Form DOE
536, Contract Management Summary Report, for the month of
August, 1980.

Very truly yours,

A handwritten signature in cursive script, appearing to read "C. Frank Corbin".

C. Frank Corbin
Supervisor of Administration
and Accounting

CFC:dp
Attachment

cc: Accounting Reports Branch
Department of Energy
P.O. Box 14100
Las Vegas, Nevada 89114

Contract No. DE-AC08-79ET-27012
Geothermal Reservoir Assessment
Northern Basin and Range

TECHNICAL PROGRESS REPORT

AUGUST, 1980

No significant activities occurred during August, 1980.

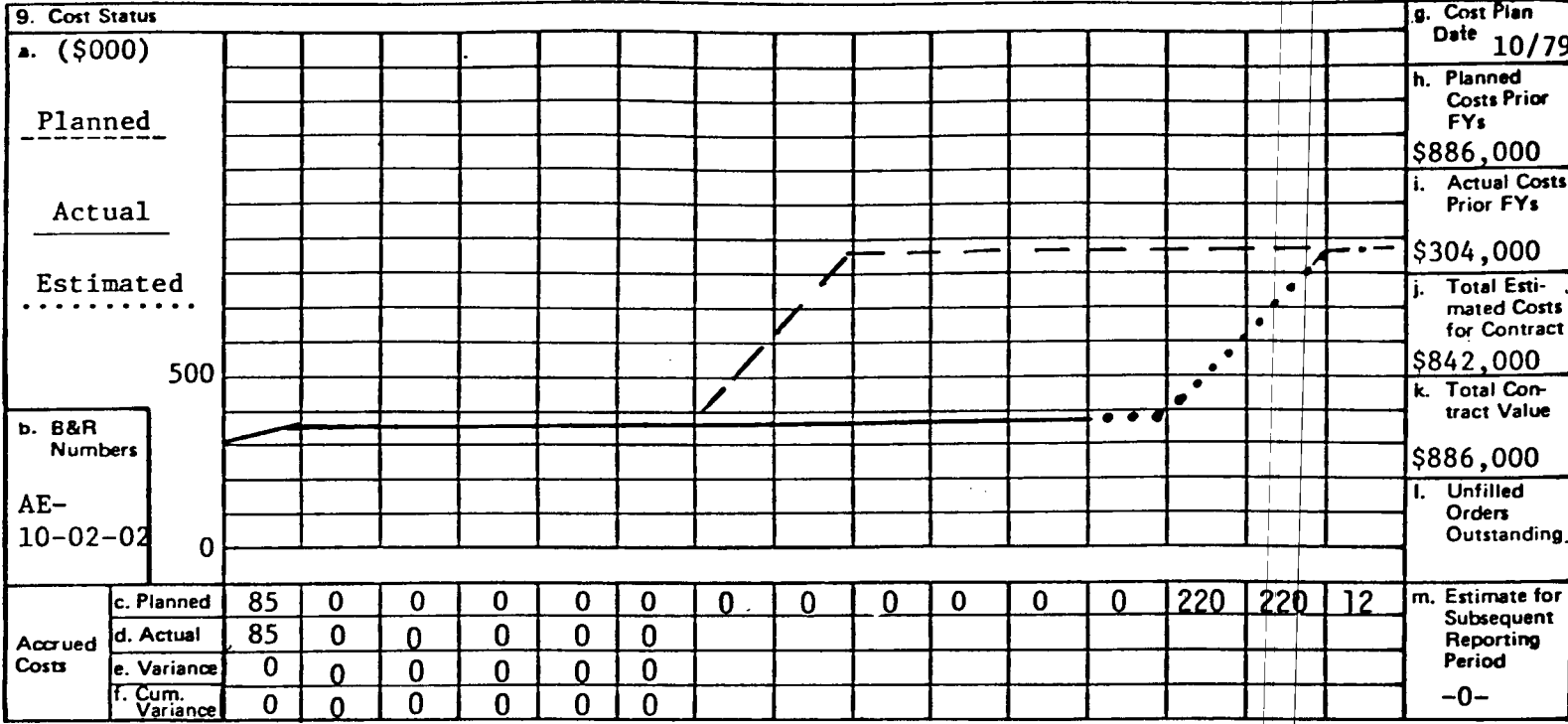
CONTRACT MANAGEMENT SUMMARY REPORT

FORM DOE-536
(1/78)

FORM APPROVED
OMB NO. 38R-0190

1. Contract Identification Geothermal Reservoir Assessment Northern Basin and Range	2. Reporting Period 3/1/80 through 8/31/80	3. Contract Number DE-AC08-79ET-27012
4. Contractor (Name and Address) Union Oil Company of California 461 S. Boylston Street Los Angeles, CA 90017		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	& FY 1980
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10. Manpower Status (Direct Labor)															e. Manpower Plan Date		
a.															f. Planned Manpower Prior FYs		
															g. Actual Manpower Prior FYs		
															h. Total Estimated Manpower for Contract		
															i. Total Contract Manpower		
Manpower	b. Planned																
c. Actual																	
d. Variance																	

11. Major Milestone Status														
a. Drill 8000 Expl. Hole														Completed 5/79
b. Test														Completed 5/79
c. Seismic Survey	[REDACTED]													
d. Drill 8000 Expl. Hole	[REDACTED]													
e. Test	[REDACTED]													
f. Report	[REDACTED]													
g.														
h.														
i.														

12. Remarks

13. Signature of Contractor's Project Manager and Date 9-3-80	14. Signature of Government Technical Representative and Date
---	--

Contract No. DE-AC08-79ET-27012
Geothermal Reservoir Assessment
Northern Basin and Range

TECHNICAL PROGRESS REPORT

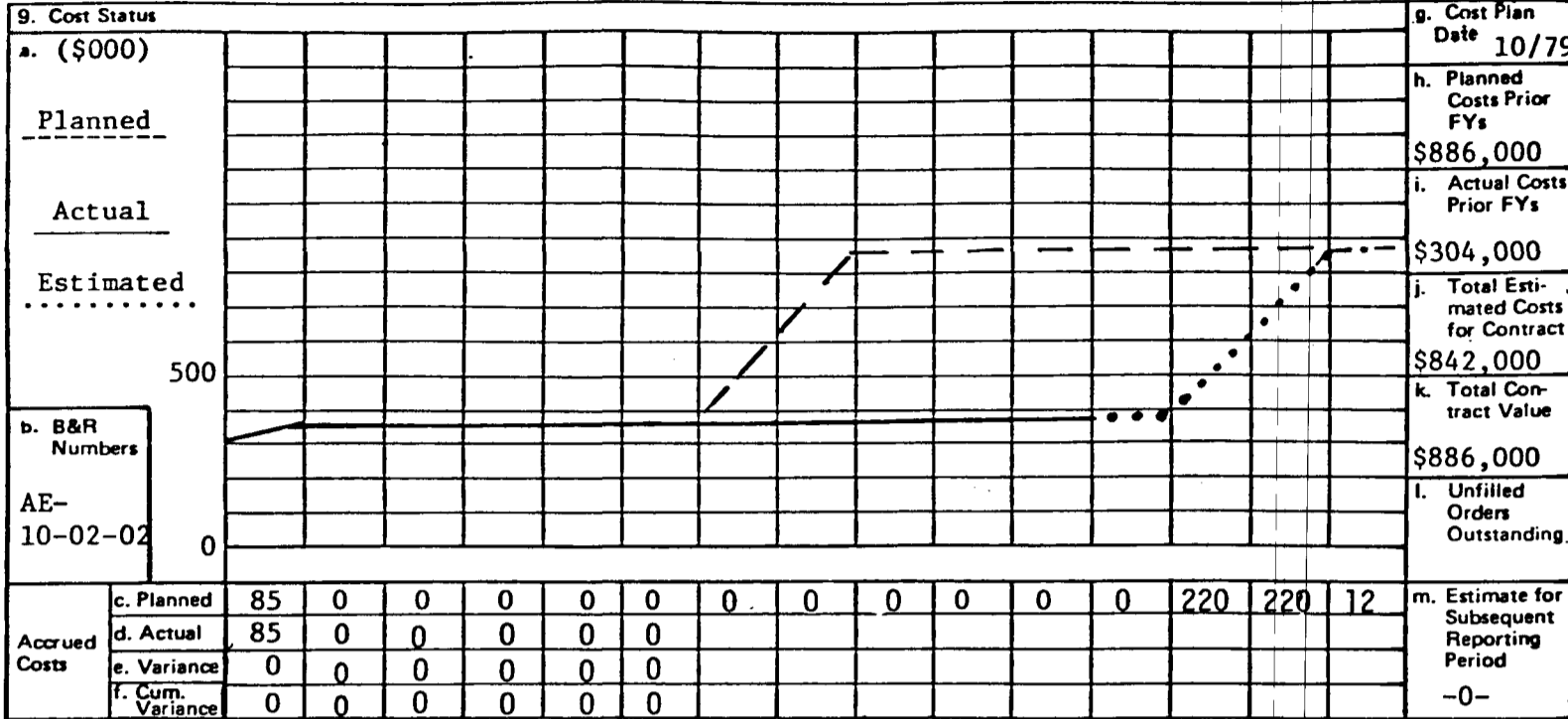
AUGUST, 1980

No significant activities occurred during August, 1980.

CONTRACT MANAGEMENT SUMMARY REPORT

1. Contract Identification Geothermal Reservoir Assessment Northern Basin and Range	2. Reporting Period 3/1/80 through 8/31/80	3. Contract Number DE-AC08-79ET-27012
4. Contractor (Name and Address) Union Oil Company of California 461 S. Boylston Street Los Angeles, CA 90017		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	& FY 1980
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10. Manpower Status (Direct Labor) a.															e. Manpower Plan Date f. Planned Manpower Prior FYs g. Actual Manpower Prior FYs h. Total Estimated Manpower for Contract i. Total Contract Manpower		
Manpower	b. Planned																
	c. Actual																
	d. Variance																

11. Major Milestone Status: a. Drill 8000 Expl. Hole		Completed 5/79
b. Test		Completed 5/79
c. Seismic Survey		
d. Drill 8000 Expl. Hole		<input type="checkbox"/>
e. Test		<input type="checkbox"/>
f. Report		<input type="checkbox"/>
g.		
h.		
i.		

12. Remarks

13. Signature of Contractor's Project Manager and Date 9-3-80	14. Signature of Government Technical Representative and Date
---	--

Contract No. DE-AC08-79ET-27012
Geothermal Reservoir Assessment
Northern Basin and Range

TECHNICAL PROGRESS REPORT

AUGUST, 1980

No significant activities occurred during August, 1980.

Union Geothermal Company of New Mexico
4100 Southern Blvd. SE
P. O. Box 15225
Rio Rancho, New Mexico 87174
Telephone (505) 897-1776



August 4, 1980

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

Attn: Mr. J. B. Cotter, Director
Engineering and Energy
Applications Division

Earth Sciences Laboratory
Univ. of Utah Research Institute
391 Chipeta Way
Salt Lake City, UT 84108

Attn: Dr. Howard P. Ross

Contract DE-AC08-79ET-27012
Geothermal Reservoir Assessment
Northern Basin and Range

Gentlemen:

Attached are the Technical Progress Report and Form DOE 536, Contract Management Summary Report, for the month of July, 1980.

Very truly yours,

A handwritten signature in black ink, appearing to read "C. Frank Corbin".

C. Frank Corbin
Supervisor of Administration
and Accounting

CFC:ra
Attachment

cc: Accounting Reports Branch
Department of Energy
P. O. Box 14100
Las Vegas, NV 89114

Contract No. DE-AC08-79ET-27012
Geothermal Reservoir Assessment
Northern Basin and Range

TECHNICAL PROGRESS REPORT

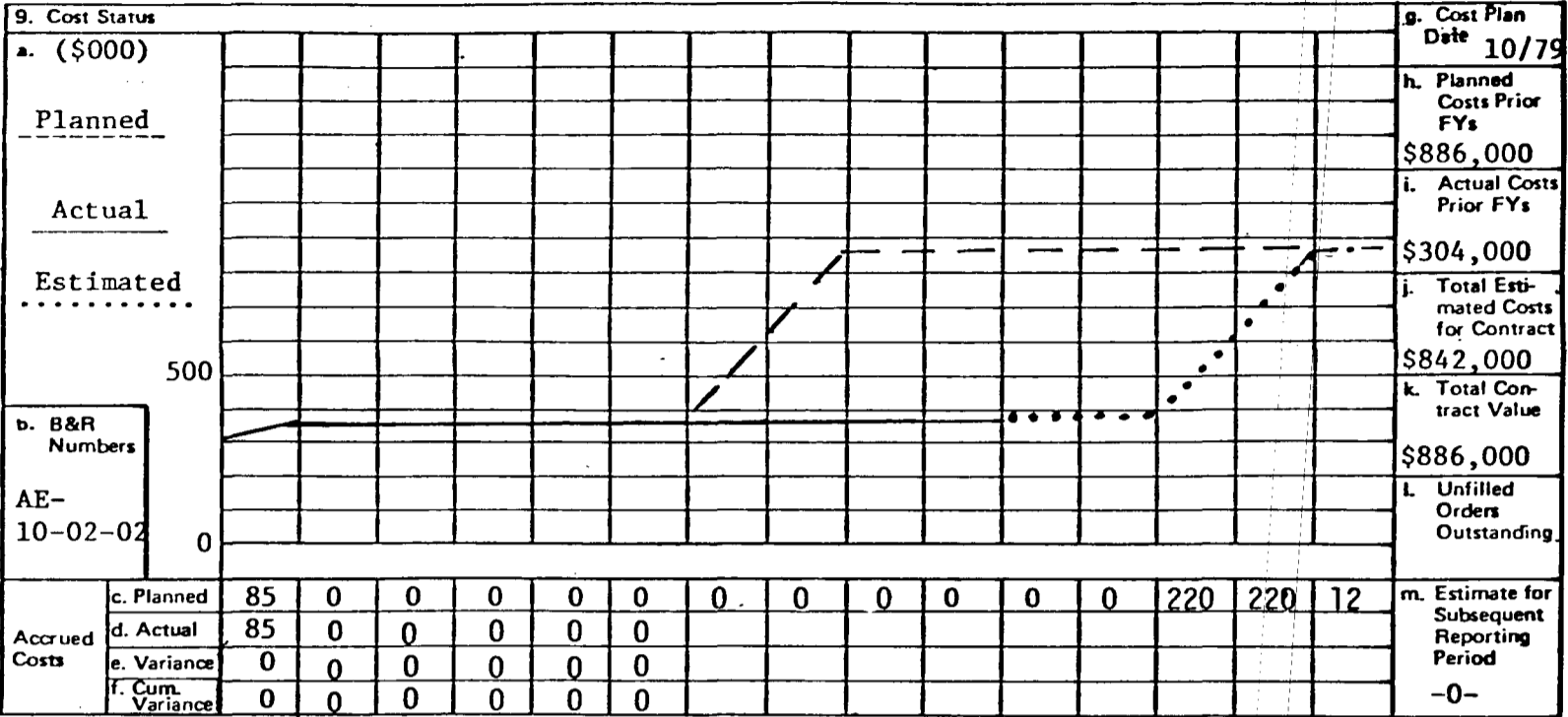
July, 1980

No significant activities occurred during July, 1980.

CONTRACT MANAGEMENT SUMMARY REPORT

1. Contract Identification Geothermal Reservoir Assessment Northern Basin and Range		2. Reporting Period 7/1/80 through 7/31/80		3. Contract Number DE-AC08-79ET-27012	
4. Contractor (Name and Address) Union Oil Company of California 461 S. Boylston Street Los Angeles, CA 90017				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 1980
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10. Manpower Status (Direct Labor)																e. Manpower Plan Date			
a.																f. Planned Manpower Prior FYs			
																g. Actual Manpower Prior FYs			
																h. Total Estimated Manpower for Contract			
																i. Total Contract Manpower			
Manpower		b. Planned																	
		c. Actual																	
		d. Variance																	

11. Major Milestone Status															
a. Drill 8000 Expl. Hole		COMPLETED												Completed 5/79	
b. Test														Completed 5/79	
c. Seismic Survey															
d. Drill 8000 Expl. Hole															
e. Test															
f. Report															
g.															
h.															
i.															

12. Remarks

13. Signature of Contractor's Project Manager and Date 8-4-80	14. Signature of Government Technical Representative and Date
--	---

Union Geothermal Company of New Mexico

4100 Southern Blvd. SE
P. O. Box 15225
Rio Rancho, New Mexico 87174
Telephone (505) 897-1776



July 8, 1980

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

Earth Sciences Laboratory
Univ. of Utah Research Institute
391 Chipeta Way
Salt Lake City, UT 84108

Attn: Mr. J. B. Cotter, Director
Engineering and Energy
Applications Division

Attn: Dr. Howard P. Ross

Contract DE-AC08-79ET-27012
Geothermal Reservoir Assessment
Northern Basin and Range

Gentlemen:

Attached are the Technical Progress Report and Form DOE 536, Contract Management Summary Report, for the month of June, 1980.

Very truly yours,

A handwritten signature in cursive script, appearing to read "C. Frank Corbin".

C. Frank Corbin
Supervisor of Administration
and Accounting

CFC:ra
Attachment

cc: Accounting Reports Branch
Department of Energy
P. O. Box 14100
Las Vegas, NV 89114

Contract No. DE-AC08-79ET-27012
Geothermal Reservoir Assessment
Northern Basin and Range

TECHNICAL PROGRESS REPORT

June, 1980

No significant activities occurred during June, 1980.

CONTRACT MANAGEMENT SUMMARY REPORT

1. Contract Identification Geothermal Reservoir Assessment Northern Basin and Range	2. Reporting Period 6/1/80 through 6/30/80	3. Contract Number DE-AC08-79ET-27012
4. Contractor (Name and Address) Union Oil Company of California 461 S. Boylston Street Los Angeles, CA 90017	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 1980
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9. Cost Status																g. Cost Plan Date 10/79	
a. (\$000)	Planned																h. Planned Costs Prior FYs \$886,000
	Actual																i. Actual Costs Prior FYs \$304,000
	Estimated																j. Total Estimated Costs for Contract \$842,000
																	k. Total Contract Value \$886,000
b. B&R Numbers AE-10-02-02																l. Unfilled Orders Outstanding	
Accrued Costs	c. Planned	85	0	0	0	0	0	0	0	0	0	0	0	220	220	12	m. Estimate for Subsequent Reporting Period -0-
	d. Actual	85	0	0	0	0	0										
	e. Variance	0	0	0	0	0	0										
	f. Cum. Variance	0	0	0	0	0	0										

10. Manpower Status (Direct Labor)																e. Manpower Plan Date		
a.																	f. Planned Manpower Prior FYs	
																	g. Actual Manpower Prior FYs	
																	h. Total Estimated Manpower for Contract	
																	i. Total Contract Manpower	
	Manpower	b. Planned																
		c. Actual																
		d. Variance																

11. Major Milestone Status																
a. Drill 8000 Expl. Hole																Completed 5/79
b. Test																Completed 5/79
c. Seismic Survey																
d. Drill 8000 Expl. Hole																
e. Test																
f. Report																
g.																
h.																
i.																

12. Remarks

13. Signature of Contractor's Project Manager and Date
 7/8/80

14. Signature of Government Technical Representative and Date

Contract No. DE-AC08-79ET-27012
Geothermal Reservoir Assessment
Northern Basin and Range

TECHNICAL PROGRESS REPORT

June, 1980

No significant activities occurred during June, 1980.

CONTRACT MANAGEMENT SUMMARY REPORT

1. Contract Identification Geothermal Reservoir Assessment Northern Basin and Range		2. Reporting Period 6/1/80 through 6/30/80		3. Contract Number DE-AC08-79ET-27012	
4. Contractor (Name and Address) Union Oil Company of California 461 S. Boylston Street Los Angeles, CA 90017				5. Contract Start Date 10/1/78	
				6. Contract Completion Date 9/30/80	

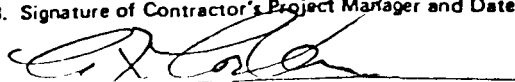
7. Months	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	8. FY 1980
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9. Cost Status																g. Cost Plan Date 10/79																																																																					
a. (\$000)																h. Planned Costs Prior FYs \$886,000																																																																					
Planned																i. Actual Costs Prior FYs \$304,000																																																																					
Actual																j. Total Estimated Costs for Contract \$842,000																																																																					
Estimated																k. Total Contract Value \$886,000																																																																					
500																l. Unfilled Orders Outstanding																																																																					
0																m. Estimate for Subsequent Reporting Period -0-																																																																					
b. B&R Numbers AE-10-02-02		<table border="1"> <tr> <td>c. Planned</td> <td>85</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>220</td> <td>220</td> <td>12</td> </tr> <tr> <td>d. Actual</td> <td>85</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>e. Variance</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>f. Cum. Variance</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>														c. Planned	85	0	0	0	0	0	0	0	0	0	0	0	0	220	220	12	d. Actual	85	0	0	0	0	0											e. Variance	0	0	0	0	0	0											f. Cum. Variance	0	0	0	0	0	0												
c. Planned	85	0	0	0	0	0	0	0	0	0	0	0	0	220	220	12																																																																					
d. Actual	85	0	0	0	0	0																																																																															
e. Variance	0	0	0	0	0	0																																																																															
f. Cum. Variance	0	0	0	0	0	0																																																																															

10. Manpower Status (Direct Labor)																e. Manpower Plan Date																																																				
a.																f. Planned Manpower Prior FYs																																																				
																g. Actual Manpower Prior FYs																																																				
																h. Total Estimated Manpower for Contract																																																				
																i. Total Contract Manpower																																																				
Manpower		<table border="1"> <tr> <td>b. Planned</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>c. Actual</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>d. Variance</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>														b. Planned																	c. Actual																	d. Variance																		
b. Planned																																																																				
c. Actual																																																																				
d. Variance																																																																				

11. Major Milestone Status															
a. Drill 8000 Expl. Hole														Completed 5/79	
b. Test		BEGIN												Completed 5/79	
c. Seismic Survey		[REDACTED]													
d. Drill 8000 Expl. Hole															
e. Test															
f. Report															
g.															
h.															
i.															

12. Remarks

13. Signature of Contractor's Project Manager and Date
 7/8/80

14. Signature of Government Technical Representative and Date

Contract No. DE-AC08-79ET-27012
Geothermal Reservoir Assessment
Northern Basin and Range

TECHNICAL PROGRESS REPORT

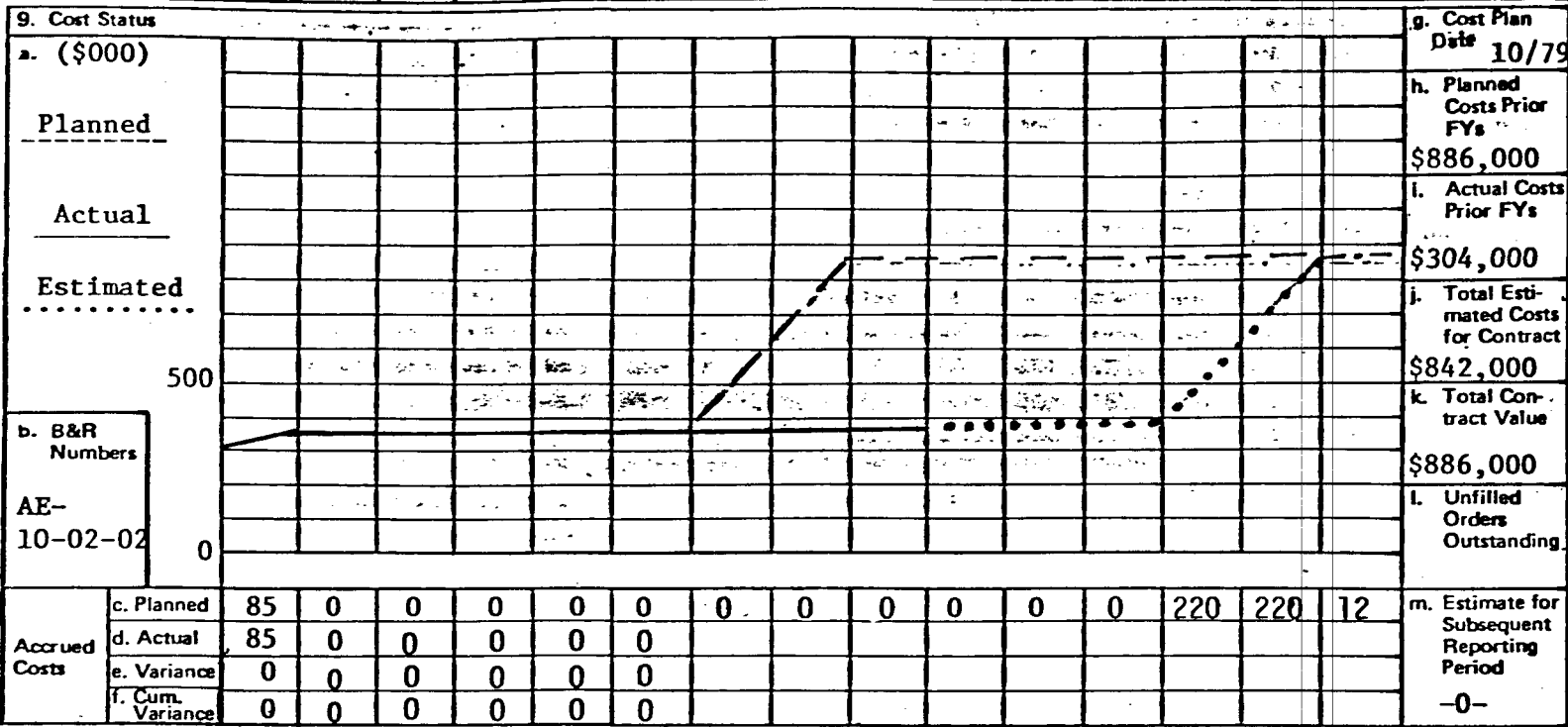
June, 1980

No significant activities occurred during June, 1980.

CONTRACT MANAGEMENT SUMMARY REPORT

1. Contract Identification Geothermal Reservoir Assessment Northern Basin and Range	2. Reporting Period 6/1/80 through 6/30/80	3. Contract Number DE-AC08-79ET-27012
4. Contractor (Name and Address): Union Oil Company of California 461 S. Boylston Street Los Angeles, CA 90017	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 1980
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10. Manpower Status (Direct Labor)																e. Manpower Plan Date	
a.																	f. Planned Manpower Prior FYs
																	g. Actual Manpower Prior FYs
																	h. Total Estimated Manpower for Contract
																	i. Total Contract Manpower
Manpower	b. Planned																
	c. Actual																
	d. Variance																

11. Major Milestone Status															
a. Drill 8000 Expl. Hole															Completed 5/79
b. Test															Completed 5/79
c. Seismic Survey															
d. Drill 8000 Expl. Hole															
e. Test															
f. Report															
g.															
h.															
i.															

12. Remarks

13. Signature of Contractor's Project Manager and Date 7/8/80	14. Signature of Government Technical Representative and Date
--	---

Union Geothermal Company of New Mexico

4100 Southern Blvd. SE
P. O. Box 15225
Rio Rancho, New Mexico 87174
Telephone (505) 897-1776



June 4, 1980

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

Earth Sciences Laboratory
Univ. of Utah Research Institute
391 Chipeta Way
Salt Lake City, Utah 84108

Attn: Mr. J.B. Cotter, Director
Engineering and Energy
Applications Division

Attn: Dr. Howard P. Ross

Contract DE-AC08-79ET-27012
Geothermal Reservoir Assessment
Northern Basin and Range

Gentlemen:

Attached are the Technical Progress Report and Form DOE 536, Contract Management Summary Report, for the month of May, 1980.

Very truly yours,

A handwritten signature in cursive script, appearing to read "C. Frank Corbin".

C. Frank Corbin
Supervisor of Administration
and Accounting

CFC:dp
Attachment

cc: Accounting Reports Branch
Department of Energy
P.O. Box 14100
Las Vegas, Nevada 89114

Contract No. DE-AC08-79ET-27012
Geothermal Reservoir Assessment
Northern Basin and Range

TECHNICAL PROGRESS REPORT

MAY, 1980

No significant activities occurred during May, 1980.

CONTRACT MANAGEMENT SUMMARY REPORT

1. Contract Identification Geothermal Reservoir Assessment Northern Basin and Range		2. Reporting Period 5/1/80 through 5/31/80		3. Contract Number DE-AC08-79ET-Z701													
4. Contractor (Name and Address) Union Oil Company of California 461 S. Boylston Street Los Angeles, CA 90017				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 198
9. Cost Status																	9. Cost Plan Date 10/
a. (\$000)																	h. Planned Cost Prior FYs \$886,000
Planned																	i. Actual Co Prior FYs \$304,000
Actual																	j. Total Esti- mated Cos for Contri \$842,000
Estimated																	k. Total Con- tract Valu \$886,000
500																	l. Unfilled Orders Outstandi
b. B&R Numbers AE- 10-02-02																	m. Estimate of Subsequen Reporting Period -D-
Accrued Costs		c. Planned	85	0	0	0	0	0	0	0	0	0	0	0	220	220	12
		d. Actual	85	0	0	0	0	0	0	0	0	0	0	0			
		e. Variance	0	0	0	0	0	0	0	0	0	0	0	0			
		f. Cum. Variance	0	0	0	0	0	0	0	0	0	0	0	0			
10. Manpower Status (Direct Labor)																	n. Manpower Plan Date
a.																	o. Planned Manpower Prior FYs
																	p. Actual Manpower Prior FYs
																	q. Total Esti- mated Ma- npower for Contract
																	r. Total Con- tract Ma- npower
Man- power		b. Planned															
		c. Actual															
		d. Variance															
11. Major Milestone Status																	
a. Drill 8000 Expl. Hole																Completed 5/79	
b. Test																Completed 5/79	
c. Seismic Survey																	
d. Drill 8000 Expl. Hole																	
e. Test																	
f. Report																	
g.																	
h.																	
i.																	
12. Remarks																	
13. Signature of Contractor's Project Manager and Date <i>[Signature]</i> 6-4-80																	14. Signature of Government Technical Representative and Date

Contract No. DE-AC08-79ET-27012
Geothermal Reservoir Assessment
Northern Basin and Range

TECHNICAL PROGRESS REPORT

MAY, 1980

No significant activities occurred during May, 1980.

CONTRACT MANAGEMENT SUMMARY REPORT

1. Contract Identification Geothermal Reservoir Assessment Northern Basin and Range	2. Reporting Period 5/1/80 through 5/31/80	3. Contract Number DE-AC08-79ET-2701
4. Contractor (Name and Address) Union Oil Company of California 461 S. Boylston Street Los Angeles, CA 90017		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
																1981

9. Cost Status																g. Contract Plan Date 10/																																																																				
a. (\$000)																h. Planned Costs Prior FYs \$886,000																																																																				
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Actual																j. Total Estimated Costs for Contract \$842,000																																																																				
Estimated																k. Total Contract Value \$886,000																																																																				
																l. Unfilled Orders Outstanding																																																																				
<table border="1"> <tr> <td>m. Estimate of Subsequent Reporting Period</td> <td>85</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>220</td> <td>220</td> <td>12</td> </tr> <tr> <td>n. Estimated Subsequent Reporting Period</td> <td>85</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>220</td> <td>220</td> <td>12</td> </tr> <tr> <td>o. Variance</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> </tr> <tr> <td>p. Cum. Variance</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> </tr> </table>																m. Estimate of Subsequent Reporting Period	85	0	0	0	0	0	0	0	0	0	0	0	0	220	220	12	n. Estimated Subsequent Reporting Period	85	0	0	0	0	0	0	0	0	0	0	0	0	220	220	12	o. Variance	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	p. Cum. Variance	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-D-
m. Estimate of Subsequent Reporting Period	85	0	0	0	0	0	0	0	0	0	0	0	0	220	220	12																																																																				
n. Estimated Subsequent Reporting Period	85	0	0	0	0	0	0	0	0	0	0	0	0	220	220	12																																																																				
o. Variance	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0																																																																				
p. Cum. Variance	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0																																																																				

10. Manpower Status (Direct Labor)																q. Manpower Plan Date
a.																r. Planned Manpower Prior FYs
b. Planned																s. Actual Manpower Prior FYs
c. Actual																t. Total Estimated Manpower for Contract
d. Variance																u. Total Contract Manpower

11. Major Milestone Status															
a. Drill 8000 Expl. Hole															Completed 5/79
b. Test															Completed 5/79
c. Seismic Survey															
d. Drill 8000 Expl. Hole															
e. Test															
f. Report															
g.															
h.															
i.															

12. Remarks

13. Signature of Contractor's Project Manager and Date
[Signature] 6-4-80

14. Signature of Government Technical Representative and Date

Contract No. DE-AC08-79ET-27012
Geothermal Reservoir Assessment
Northern Basin and Range

TECHNICAL PROGRESS REPORT

MAY, 1980

No significant activities occurred during May, 1980.

U.S. DEPARTMENT OF ENERGY

FORM DOE 838
(1/78)

CONTRACT MANAGEMENT SUMMARY REPORT

FORM APPROVED
OMB NO. 32RF-011

1. Contract Identification Geothermal Reservoir Assessment Northern Basin and Range	2. Reporting Period 5/1/80 through 5/31/80	3. Contract Number DE-AC08-79ET-2701
4. Contractor (Name and Address) Union Oil Company of California 461 S. Boylston Street Los Angeles, CA 90017		5. Contract Start Date 10/1/78
		6. Contract Completion Date 9/30/80

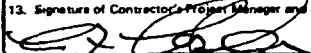
7. Months	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	8. FY
																1981

9. Cost Status																g. Cost Plan Date 10/79	
a. (\$000)																h. Planned Cost Prior FYs \$886,000	
Planned																i. Actual Cost Prior FYs \$304,000	
Actual																j. Total Estimated Cost for Contract \$842,000	
Estimated																k. Total Contract Value \$886,000	
500																l. Unfilled Orders Outstanding	
b. BAR Numbers																m. Estimate for Subsequent Reporting Period -D-	
AE-10-02-02																	
n. Planned		85	0	0	0	0	0	0	0	0	0	0	0	220	220	12	
o. Actual		85	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
p. Variance		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
q. Cum. Variance		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

10. Manpower Status (Direct Labor)																r. Manpower Plan Date
a.																s. Planned Manpower Prior FYs
b. Planned																t. Actual Manpower Prior FYs
c. Actual																u. Total Estimated Manpower for Contract
d. Variance																v. Total Contract Manpower

11. Major Milestone Status															
a. Drill 8000 Expl. Hole															Completed 5/79
b. Test															Completed 5/79
c. Seismic Survey															
d. Drill 8000 Expl. Hole															
e. Test															
f. Report															
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i.															

12. Remarks

13. Signature of Contractor's Project Manager and Date
 6-4-80

14. Signature of Government Technical Representative and Date

Union Geothermal Company of New Mexico

4100 Southern Blvd. SE
P. O. Box 15225
Rio Rancho, New Mexico 87174
Telephone (505) 897-1776



May 6, 1980

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

Earth Sciences Laboratory
Univ. of Utah Research Institute
391 Chipeta Way
Salt Lake City, Utah 84108

Attn: Mr. J.B. Cotter, Director
Engineering and Energy
Applications Division

Attn: Dr. Howard P. Ross

Contract DE-AC08-79ET-27012
Geothermal Reservoir Assessment
Northern Basin and Range

Gentlemen:

Attached are the Technical Progress Report and Form DOE 536, Contract Management Summary Report, for the month of April, 1980.

Very truly yours,

A handwritten signature in cursive script, appearing to read "C. Frank Corbin".

C. Frank Corbin
Supervisor of Administration
and Accounting

CFC:dp
Attachment

cc: Accounting Reports Branch
Department of Energy
P.O. Box 14100
Las Vegas, Nevada 89114

Contract No. DE-AC08-79ET-27012
Geothermal Reservoir Assessment
Northern Basin and Range

TECHNICAL PROGRESS REPORT

APRIL, 1980

No significant activities occurred during April, 1980.

U.S. DEPARTMENT OF ENERGY

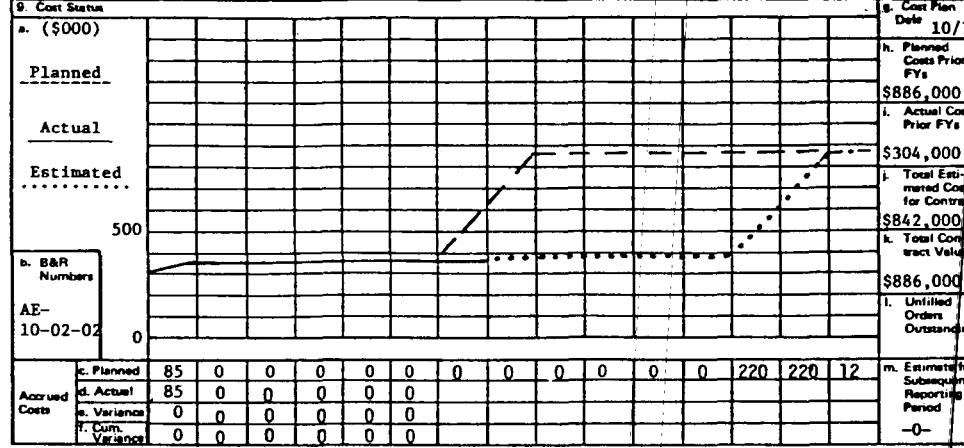
FORM DOE 808
(1/78)

CONTRACT MANAGEMENT SUMMARY REPORT

FORM APPROVED
OMB NO. 399-01

1. Contract Identification	Geothermal Reservoir Assessment Northern Basin and Range	2. Reporting Period	4/1/80 through 4/30/80	3. Contract Number	DE-AC08-79ET-2701
4. Contractor (Name and Address)	Union Oil Company of California 461 S. Boylston Street Los Angeles, CA 90017			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	1981
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10. Manpower Status (Direct Labor)

Manpower	b. Planned																
	c. Actual																
	d. Variance																

e. Manpower Plan Date

f. Planned Manpower Prior FYs

g. Actual Manpower Prior FYs

h. Total Estimated Manpower for Contract

i. Total Contract Manpower

11. Major Milestone Status

a. Drill 8000 Expl. Hole		Completed	5/79
b. Test		Completed	5/79
c. Seismic Survey			
d. Drill 8000 Expl. Hole			
e. Test			
f. Report			
g.			
h.			
i.			

12. Remarks

13. Signature of Contractor's Project Manager and Date
[Signature] 5-6-80

14. Signature of Government Technical Representative and Date

Contract No. DE-AC08-79ET-27012
Geothermal Reservoir Assessment
Northern Basin and Range

TECHNICAL PROGRESS REPORT

APRIL, 1980

No significant activities occurred during April, 1980.

U.S. DEPARTMENT OF ENERGY

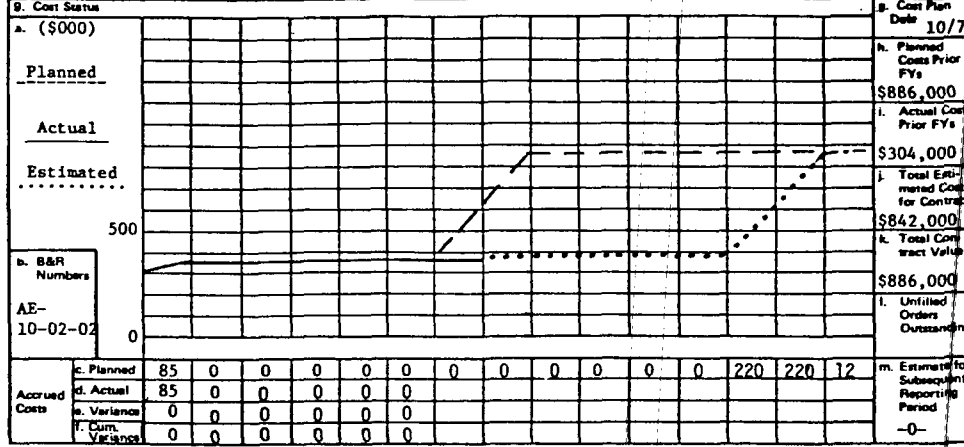
FORM DOE 808
(1/78)

CONTRACT MANAGEMENT SUMMARY REPORT

FORM APPROVED
OMB NO. 38R-011

1. Contract Identification Geothermal Reservoir Assessment Northern Basin and Range	2. Reporting Period 4/1/80 through 4/30/80	3. Contract Number DE-AC08-79ET-27012
4. Contractor (Name and Address) Union Oil Company of California 461 S. Boylston Street Los Angeles, CA 90017		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	FY	1980
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10. Manpower Status (Direct Labor)

a. Manpower Plan Date	
b. Planned Manpower Prior FYs	
c. Actual Manpower Prior FYs	
d. Total Estimated Manpower for Contract	
e. Total Contract Manpower	

Manpower	b. Planned																
	c. Actual																
	d. Variance																

11. Major Milestone Status

a. Drill 8000 Expl. Hole	Completed 5/79
b. Test	Completed 5/79
c. Seismic Survey	
d. Drill 8000 Expl. Hole	
e. Test	
f. Report	
g.	
h.	
i.	

12. Remarks

13. Signature of Contractor Technical Manager and Date
[Signature] 5-6-80

14. Signature of Government Technical Representative and Date

Contract No. DE-AC08-79ET-27012
Geothermal Reservoir Assessment
Northern Basin and Range

TECHNICAL PROGRESS REPORT

APRIL, 1980

No significant activities occurred during April, 1980.

U.S. DEPARTMENT OF ENERGY

FORM DOE 888
(1/78)

CONTRACT MANAGEMENT SUMMARY REPORT

FORM APPROVED
DMS NO. 28R-011

1. Contract Identification Geothermal Reservoir Assessment Northern Basin and Range	2. Reporting Period 4/1/80 through 4/30/80	3. Contract Number DE-AC08-79ET-27012
4. Contractor (Name and Address) Union Oil Company of California 461 S. Boylston Street Los Angeles, CA 90017		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	FY
																1980

9. Cost Status																a. Cost Plan Date 10/77		
a. (\$000)																b. Planned Costs Prior FYs \$886,000		
Planned																c. Actual Costs Prior FYs \$304,000		
Actual																d. Total Estimated Cost for Contract \$842,000		
Estimated																e. Total Contract Value \$886,000		
500																f. Unfilled Orders Outstanding		
b. B&R Numbers																g. Estimate to Subsequent Reporting Period -0-		
AE-10-02-02 0																		
Acquired Costs		c. Planned	85	0	0	0	0	0	0	0	0	0	0	0	220	220	12	m. Estimate to Subsequent Reporting Period -0-
		d. Actual	85	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
		e. Variance	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
		f. Curr. Variance	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

10. Manpower Status (Direct Labor)																a. Manpower Plan Date		
a.																b. Planned Manpower Prior FYs		
																c. Actual Manpower Prior FYs		
																d. Total Estimated Manpower for Contract		
																e. Total Contract Manpower		
Manpower		b. Planned																
		c. Actual																
		d. Variance																

11. Major Milestone Status																
a. Drill 8000 Expl. Hole																Completed 5/79
b. Test																Completed 5/79
c. Seismic Survey																
d. Drill 8000 Expl. Hole																
e. Test																
f. Report																
g.																
h.																
i.																

12. Remarks

13. Signature of Contractor (Project Manager) and Date
[Signature] 5-6-80

14. Signature of Government Technical Representative and Date

Union Geothermal Company of New Mexico

4100 Southern Blvd. SE
P. O. Box 15225
Rio Rancho, New Mexico 87174
Telephone (505) 897-1776



April 11, 1980

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

Earth Sciences Laboratory
Univ. of Utah Research Institute
391 Chipeta Way
Salt Lake City, Utah 84108

Attn: Mr. J.B. Cotter, Director
Engineering and Energy
Applications Division

Attn: Dr. Howard P. Ross

Contract DE-AC08-79ET-27012
Geothermal Reservoir Assessment
Northern Basin and Range

Gentlemen:

Attached are the Technical Progress Report and Form DOE
536, Contract Management Summary Report, for the month of
March, 1980.

Very truly yours,

A handwritten signature in cursive script, appearing to read "C. Frank Corbin".

C. Frank Corbin
Supervisor of Administration
and Accounting

CFC:dp
Attachment

cc: Accounting Reports Branch
Department of Energy
P.O. Box 14100
Las Vegas, Nevada 89114

Contract No. DE-AC08-79ET-27012
Geothermal Reservoir Assessment
Northern Basin and Range

TECHNICAL PROGRESS REPORT

MARCH, 1980

No significant activities occurred during March, 1980.

U.S. DEPARTMENT OF ENERGY

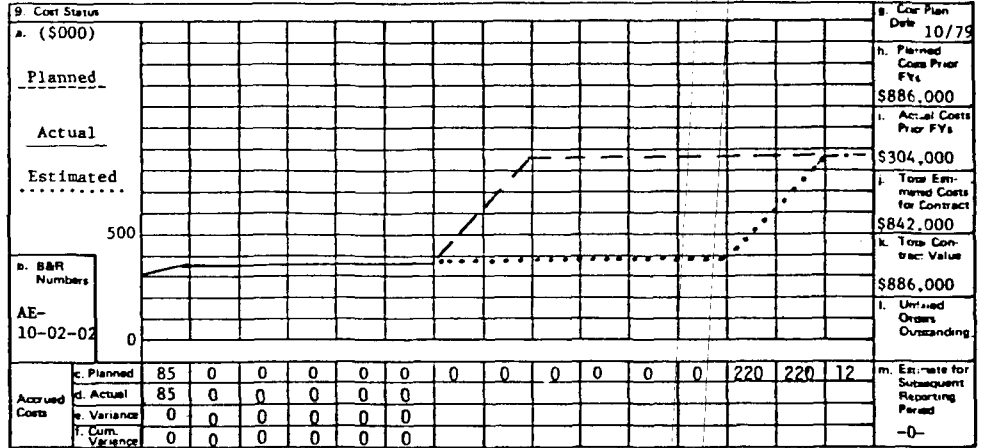
FORM DOE 838
(1/78)

CONTRACT MANAGEMENT SUMMARY REPORT

FORM APPROVED
OMB NO 38F-0190

1. Contract Identification Geothermal Reservoir Assessment Northern Basin and Range	2. Reporting Period 3/1/80 through 3/31/80	3. Contract Number DE-AC08-79ET-27012
4. Contractor (Name and Address) Union Oil Company of California 461 S. Boylston Street Los Angeles, CA 90017		5. Contract Start Date 10/1/78
		6. Contract Completion Date 3/30/80

7. Months	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	8. FY 1980
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10. Manpower Status (Direct Labor)

a.																
b. Planned																
c. Actual																
d. Variance																

e. Manpower Plan Date

f. Planned Manpower Prior FYs

g. Actual Manpower Prior FYs

h. Total Estimated Manpower for Contract

i. Total Contract Manpower

11. Major Milestone Status

a. Drill 8000 Expl. Hole		Completed 5/79
b. Test		Completed 5/79
c. Seismic Survey		
d. Drill 8000 Expl. Hole		
e. Test		
f. Report		
g.		
h.		
i.		

12. Remarks

13. Signature of Contractor's Project Manager and Date
[Signature] 4-10-80

14. Signature of Government Technical Representative and Date

Contract No. DE-AC08-79ET-27012
Geothermal Reservoir Assessment
Northern Basin and Range

TECHNICAL PROGRESS REPORT

MARCH, 1980

No significant activities occurred during March, 1980.

U.S. DEPARTMENT OF ENERGY

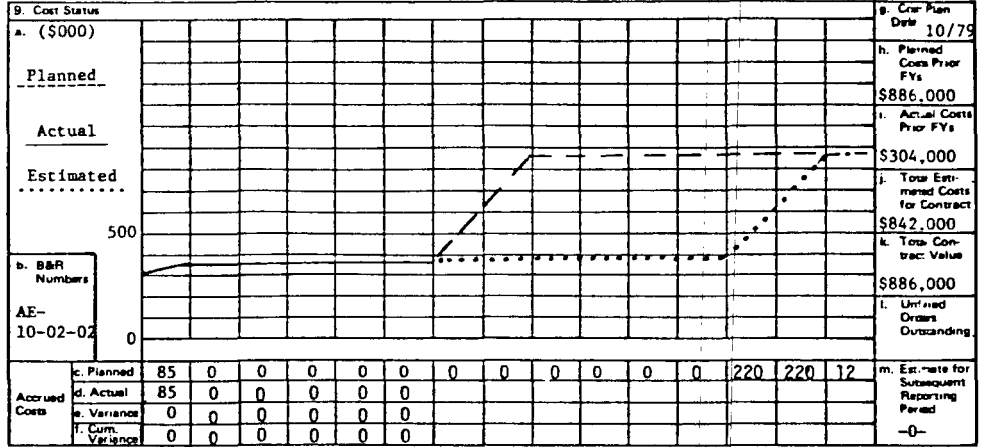
FORM DOE 535
(1/78)

CONTRACT MANAGEMENT SUMMARY REPORT

FORM APPROVED
OMB NO. 38R-0190

1. Contract Identification	Geothermal Reservoir Assessment Northern Basin and Range	2. Reporting Period	3/1/80 through 3/31/80	3. Contract Number	DE-AC08-79ET-27012
4. Contractor (Name and Address)	Union Oil Company of California 461 S. Boylston Street Los Angeles, CA 90017			5. Contract Start Date	10/1/78
				6. Contract Completion Date	3/30/80

7. Months	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	8. FY	1980
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10. Manpower Status (Direct Labor)																9. Manpower Plan Date	
a.																f. Planned Manpower Prior FYs	
																g. Actual Manpower Prior FYs	
																h. Total Estimated Manpower for Contract	
																i. Total Contract Manpower	
Manpower																b. Planned	
																c. Actual	
																d. Variance	

11. Major Milestone Status:																
a. Drill 8000 Expl. Hole															Completed	5/79
b. Test															Completed	5/79
c. Seismic Survey																
d. Drill 8000 Expl. Hole																
e. Test																
f. Report																
g.																
h.																
i.																

12. Remarks

13. Signature of Contractor's Project Manager and Date
[Signature] 4-10-80

14. Signature of Government Technical Representative and Date

Contract No. DE-AC08-79ET-27012
Geothermal Reservoir Assessment
Northern Basin and Range

TECHNICAL PROGRESS REPORT

MARCH, 1980

No significant activities occurred during March, 1980.

U.S. DEPARTMENT OF ENERGY

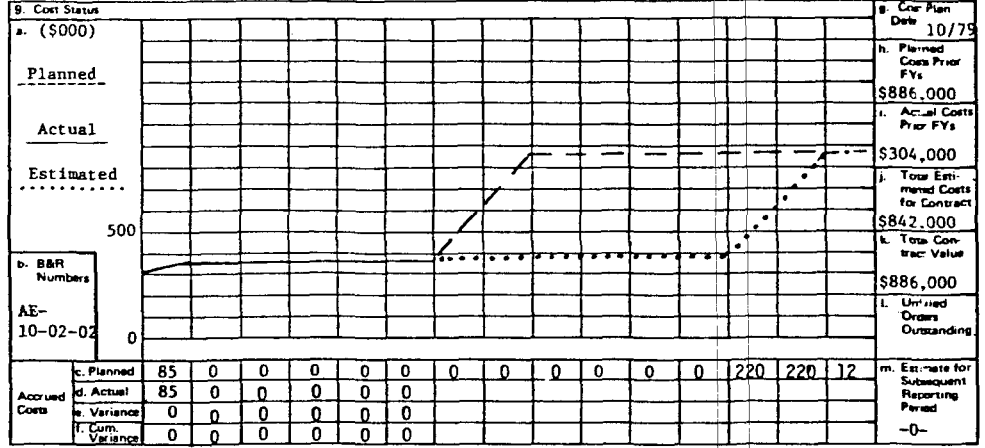
FORM DOE 536
(1/78)

CONTRACT MANAGEMENT SUMMARY REPORT

FORM APPROVED
OMB NO. 38R-0180

1. Contract Identification	Geothermal Reservoir Assessment Northern Basin and Range	2. Reporting Period	3/1/80 through 3/31/80	3. Contract Number	DE-AC08-79ET-27012
4. Contractor (Name and Address)	Union Oil Company of California 461 S. Boylston Street Los Angeles, CA 90017			5. Contract Start Date	10/1/78
				6. Contract Completion Date	3/30/80

7. Months	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	8. FY	1980
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10. Manpower Status (Direct Labor)

a.

b. Planned																
c. Actual																
d. Variance																

e. Manpower Plan Date

f. Planned Manpower Prior FYs

g. Actual Manpower Prior FYs

h. Total Estimated Manpower for Contract

i. Total Contract Manpower

11. Major Milestone Status

a. Drill 8000 Expl. Hole		Completed 5/79
b. Test		Completed 5/79
c. Seismic Survey		
d. Drill 8000 Expl. Hole		
e. Test		
f. Report		
g.		
h.		
i.		

12. Remarks

13. Signature of Contractor's Project Manager and Date: *[Signature]* 4-10-80

14. Signature of Government Technical Representative and Date

Union Geothermal Division

Union Oil Company of California
2099 Range Ave., P.O. Box 6854
Santa Rosa, California 95406
Telephone (707) 542-9543



June 6, 1979

Earth Sciences Laboratory
University of Utah Research Park
391 Chipeta Way
Salt Lake City, Utah 84108

Attention: Dr. Howard Ross

Re: Contract No. DE-AC08-79ET-27012
Geothermal Reservoir Assessment
Northern Basin and Range

Gentlemen:

Enclosed are three copies of the "Deliverable Data" prescribed by Appendix A, Section D(2)b(5-7) of the subject contract as it applies to well De Braga #2.

Very truly yours,

UNION OIL CO. OF CALIFORNIA

A handwritten signature in black ink, appearing to read "C. Frank Corbin".

C. Frank Corbin
Contract Administrator

CFC:rmw
Encls.

Union Geothermal Company of New Mexico

4100 Southern Blvd. SE
P. O. Box 15225
Rio Ranchó, New Mexico 87174
Telephone (505) 897-1776



March 11, 1980

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

Earth Sciences Laboratory
Univ. of Utah Research Institute
391 Chipeta Way
Salt Lake City, Utah 84108

Attn: Mr. J.B. Cotter, Director
Engineering and Energy
Applications Division

Attn: Dr. Howard P. Ross

Contract DE-AC08-79ET-27012
Geothermal Reservoir Assessment
Northern Basin and Range

Gentlemen:

Attached are the Technical Progress Report and Form DOE
536, Contract Management Summary Report, for the month of
February, 1980.

Very truly yours,

A handwritten signature in cursive script, appearing to read "C. Frank Corbin".

C. Frank Corbin
Supervisor of Administration
and Accounting

CFC:dp
Attachment

cc: Accounting Reports Branch
Department of Energy
P.O. Box 14100
Las Vegas, Nevada 89114

Contract No. DE-AC08-79ET-27012
Geothermal Reservoir Assessment
Northern Basin and Range

TECHNICAL PROGRESS REPORT

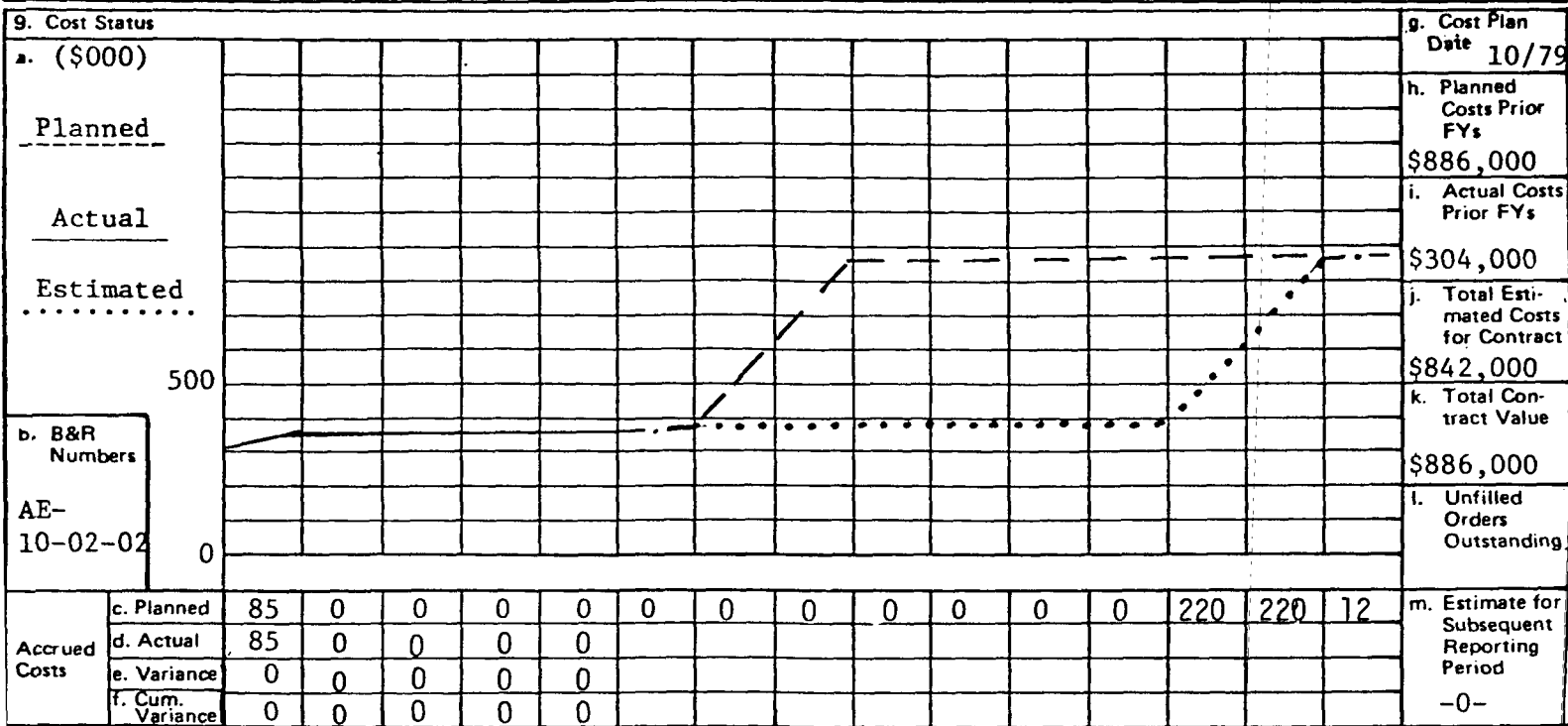
February, 1980

No significant activities occurred during February, 1980.

CONTRACT MANAGEMENT SUMMARY REPORT

1. Contract Identification Geothermal Reservoir Assessment Northern Basin and Range	2. Reporting Period 2/1/80 through 2/29/80	3. Contract Number DE-AC08-79ET-27012
4. Contractor (Name and Address) Union Oil Company of California 461 S. Boylston Street Los Angeles, CA 90017		5. Contract Start Date 10/1/78
		6. Contract Completion Date 3/30/80

7. Months	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	8. FY 1980
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10. Manpower Status (Direct Labor)																e. Manpower Plan Date	
a.																f. Planned Manpower Prior FYs	
																g. Actual Manpower Prior FYs	
																h. Total Estimated Manpower for Contract	
																i. Total Contract Manpower	
Manpower																	
	b. Planned																
	c. Actual																
	d. Variance																

1. Major Milestone Status:		
1. Drill 8000 Expl. Hole		Completed 5/79
2. Test		Completed 5/79
3. Seismic Survey	██████████	
4. Drill 8000 Expl. Hole	[]	
5. Test	[]	
6. Report	[]	

2. Remarks

1. Signature of Contractor's Project Manager and Date 3-11-80	14. Signature of Government Technical Representative and Date _____
---	---

Contract No. DE-AC08-79ET-27012
Geothermal Reservoir Assessment
Northern Basin and Range

TECHNICAL PROGRESS REPORT

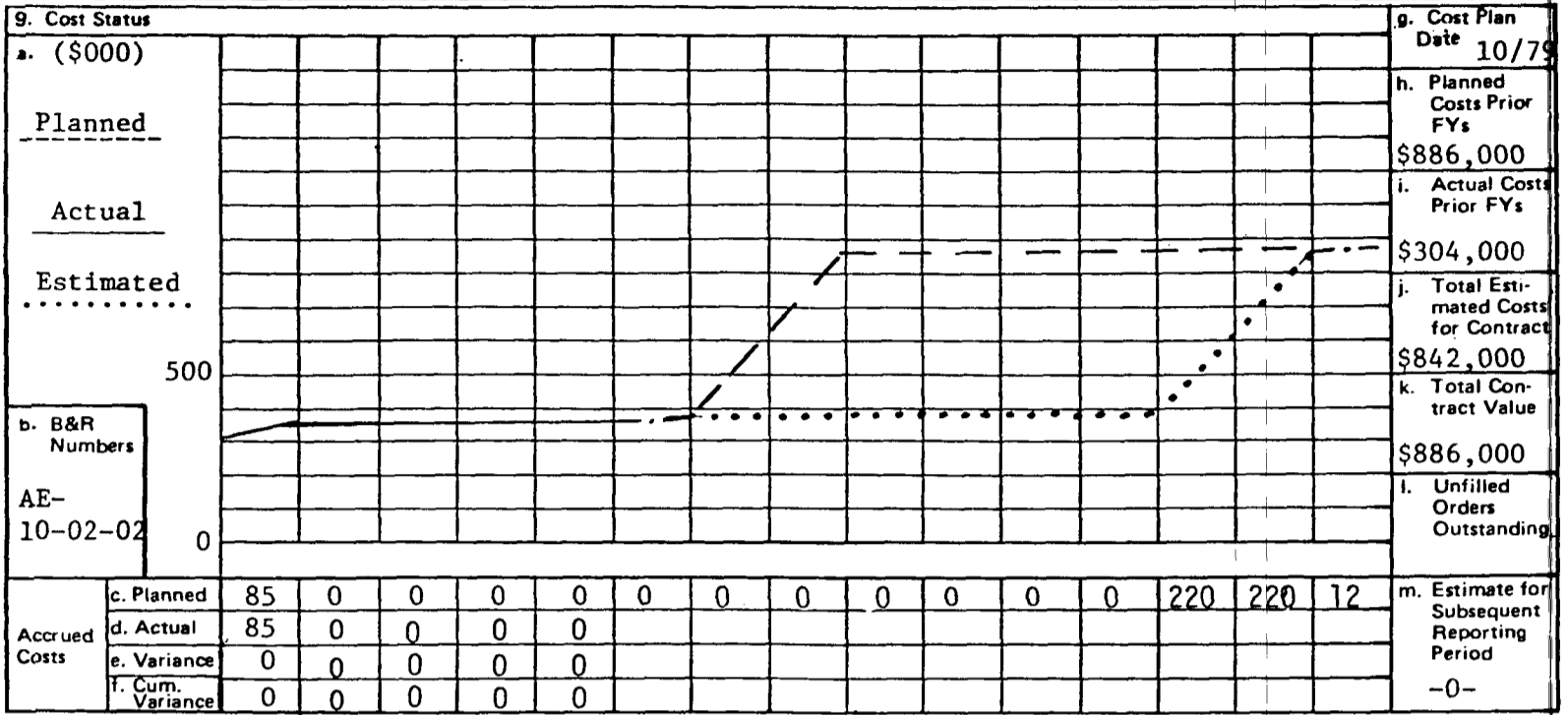
February, 1980

No significant activities occurred during February, 1980.

CONTRACT MANAGEMENT SUMMARY REPORT

1. Contract Identification Geothermal Reservoir Assessment Northern Basin and Range	2. Reporting Period 2/1/80 through 2/29/80	3. Contract Number DE-AC08-79ET-27012
4. Contractor (Name and Address) Union Oil Company of California 461 S. Boylston Street Los Angeles, CA 90017		5. Contract Start Date 10/1/78
		6. Contract Completion Date 3/30/80

7. Months	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	8. FY 1980
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10. Manpower Status (Direct Labor):																
a.															e. Manpower Plan Date	
															f. Planned Manpower Prior FYs	
															g. Actual Manpower Prior FYs	
															h. Total Estimated Manpower for Contract	
																i. Total Contract Manpower
Manpower	b. Planned															
	c. Actual															
	d. Variance															

11. Major Milestone Status:																
a. Drill 8000 Expl. Hole															Completed 5/79	
b. Test															Completed 5/79	
c. Seismic Survey																
d. Drill 8000 Expl. Hole																
e. Test																
f. Report																

2. Remarks

3. Signature of Contractor's Project Manager and Date 3-11-80	14. Signature of Government Technical Representative and Date 1
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Contract No. DE-AC08-79ET-27012
Geothermal Reservoir Assessment
Northern Basin and Range

TECHNICAL PROGRESS REPORT

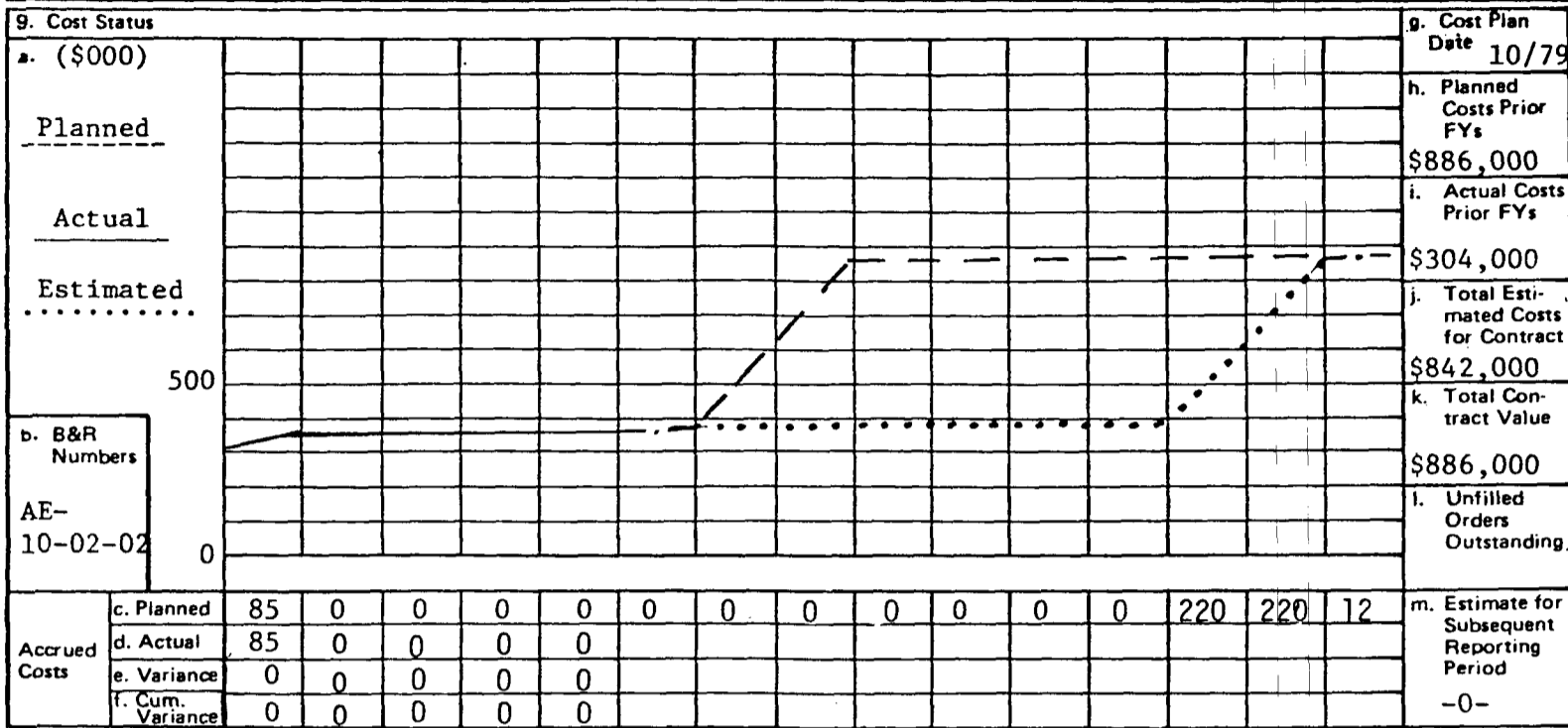
February, 1980

No significant activities occurred during February, 1980.

CONTRACT MANAGEMENT SUMMARY REPORT

1. Contract Identification Geothermal Reservoir Assessment Northern Basin and Range	2. Reporting Period 2/1/80 through 2/29/80	3. Contract Number DE-AC08-79ET-27012
4. Contractor (Name and Address) Union Oil Company of California 461 S. Boylston Street Los Angeles, CA 90017		5. Contract Start Date 10/1/78 6. Contract Completion Date 3/30/80

7. Months	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	8. FY 1980
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10. Manpower Status (Direct Labor):															e. Manpower Plan Date	
a.															f. Planned Manpower Prior FYs	
															g. Actual Manpower Prior FYs	
															h. Total Estimated Manpower for Contract	
															i. Total Contract Manpower	
Manpower	b. Planned															
	c. Actual															
	d. Variance															

11. Major Milestone Status:		
a. Drill 8000 Expl. Hole		Completed 5/79
b. Test		Completed 5/79
c. Seismic Survey	[REDACTED]	
d. Drill 8000 Expl. Hole	[]	
e. Test	[]	
f. Report	[]	
g.		
h.		
i.		

12. Remarks

13. Signature of Contractor's Project Manager and Date 3-11-80	14. Signature of Government Technical Representative and Date _____
--	---

Union Geothermal Division

Union Oil Company of California
2099 Range Ave., P.O. Box 6854
Santa Rosa, California 95406
Telephone (707) 542-9543



February 8, 1980

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

Attention: Dr. Howard Ross

Dear Dr. Ross:

Enclosed please find all the field records and two copies for our survey at Stillwater, Nevada. We are in the process of copying the tapes at our facilities in Los Angeles and they will be shipped to you as soon as they are completed.

If you have any questions regarding any of the data, please call me (707) 542-9543 ext. 238.

Sincerely,

UNION OIL COMPANY OF CALIFORNIA

A handwritten signature in cursive script, appearing to read "Louis Klonsky".

Louis Klonsky

LK/dl
Enclosures

Union Geothermal Company of New Mexico

4100 Southern Blvd. SE
P. O. Box 15225
Rio Rancho, New Mexico 87174
Telephone (505) 897-1776



February 8, 1980

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

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

Attn: Mr. J.B. Cotter, Director
Engineering and Energy
Applications Division

Attn: Dr. Howard P. Ross

Contract DE-AC08-79ET-27012
Geothermal Reservoir Assessment
Northern Basin and Range

Gentlemen:

Attached are the Technical Progress Report and Form DOE 536, Contract Management Summary Report, for the month of January, 1980.

Sincerely,

A handwritten signature in cursive script, appearing to read "C. Frank Corbin".

C. Frank Corbin
Supervisor of Administration
and Accounting

CFC:dp
Attachment

xc: Accounting Reports Branch
Department of Energy
P.O. Box 14100
Las Vegas, Nevada 89114

Contract No. DE-AC08-79ET-27012
Geothermal Reservoir Assessment
Northern Basin and Range

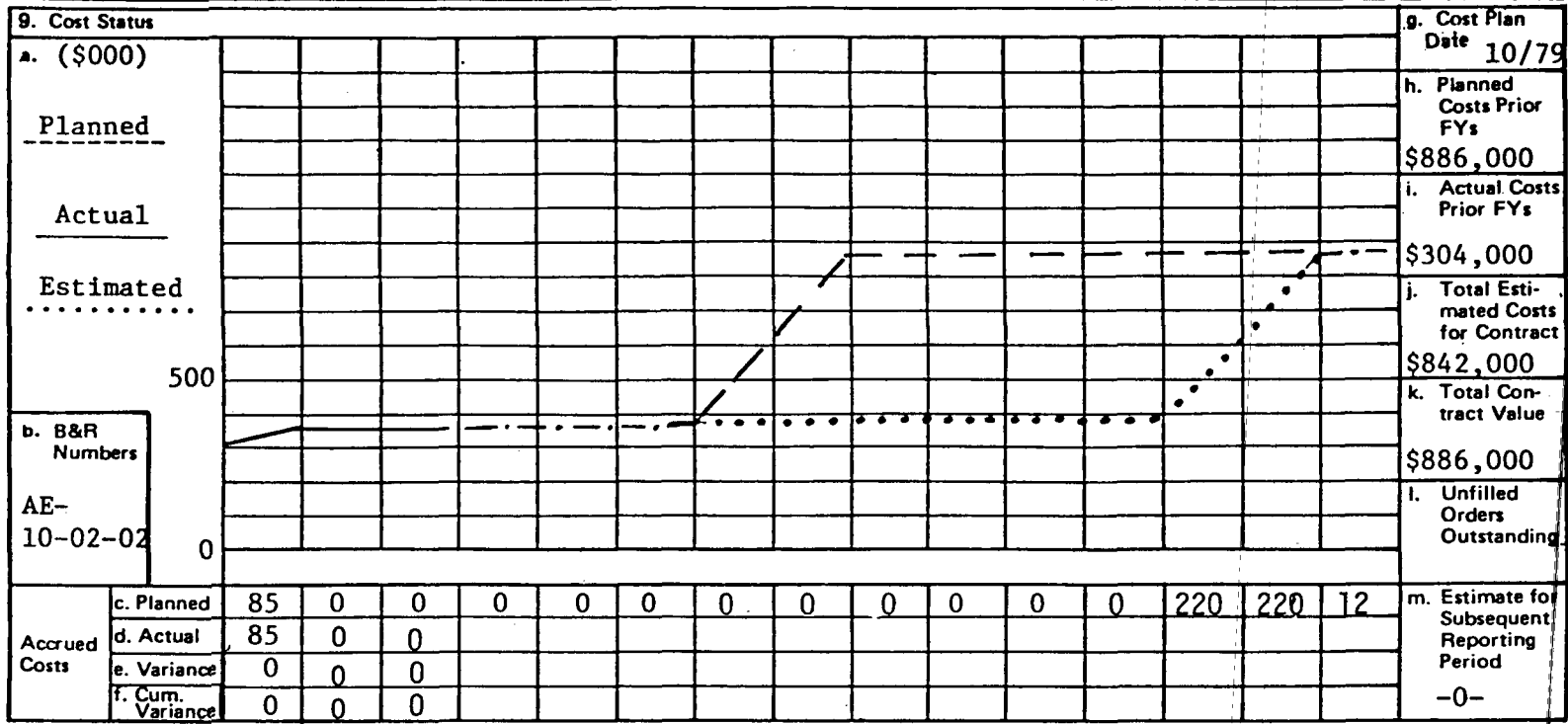
TECHNICAL PROGRESS REPORT

January, 1980

No significant activities occurred during January, 1980.

1. Contract Identification Geothermal Reservoir Assessment Northern Basin and Range		2. Reporting Period 1/1/80 through 1/31/80	3. Contract Number DE-AC08-79ET-27012
4. Contractor (Name and Address) Union Oil Company of California 461 S. Boylston Street Los Angeles, CA 90017		5. Contract Start Date 10/1/78	6. Contract Completion Date 3/30/80

7. Months	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	8. FY 1980
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10. Manpower Status (Direct Labor)																e. Manpower Plan Date	
a.																f. Planned Manpower Prior FYs	
																g. Actual Manpower Prior FYs	
																h. Total Estimated Manpower for Contract	
																i. Total Contract Manpower	
Manpower		b. Planned															
		c. Actual															
		d. Variance															

11. Major Milestone Status																	
a. Drill 8000 Expl. Hole																Completed 5/79	
b. Test																Completed 5/79	
c. Seismic Survey		[Redacted]														-	
d. Drill 8000 Expl. Hole																[]	
e. Test																[]	
f. Report																[]	
g.																	
h.																	
i.																	

12. Remarks

13. Signature of Contractor's Project Manager and Date <i>[Signature]</i> 2-8-80	14. Signature of Government Technical Representative and Date
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Contract No. DE-AC08-79ET-27012
Geothermal Reservoir Assessment
Northern Basin and Range

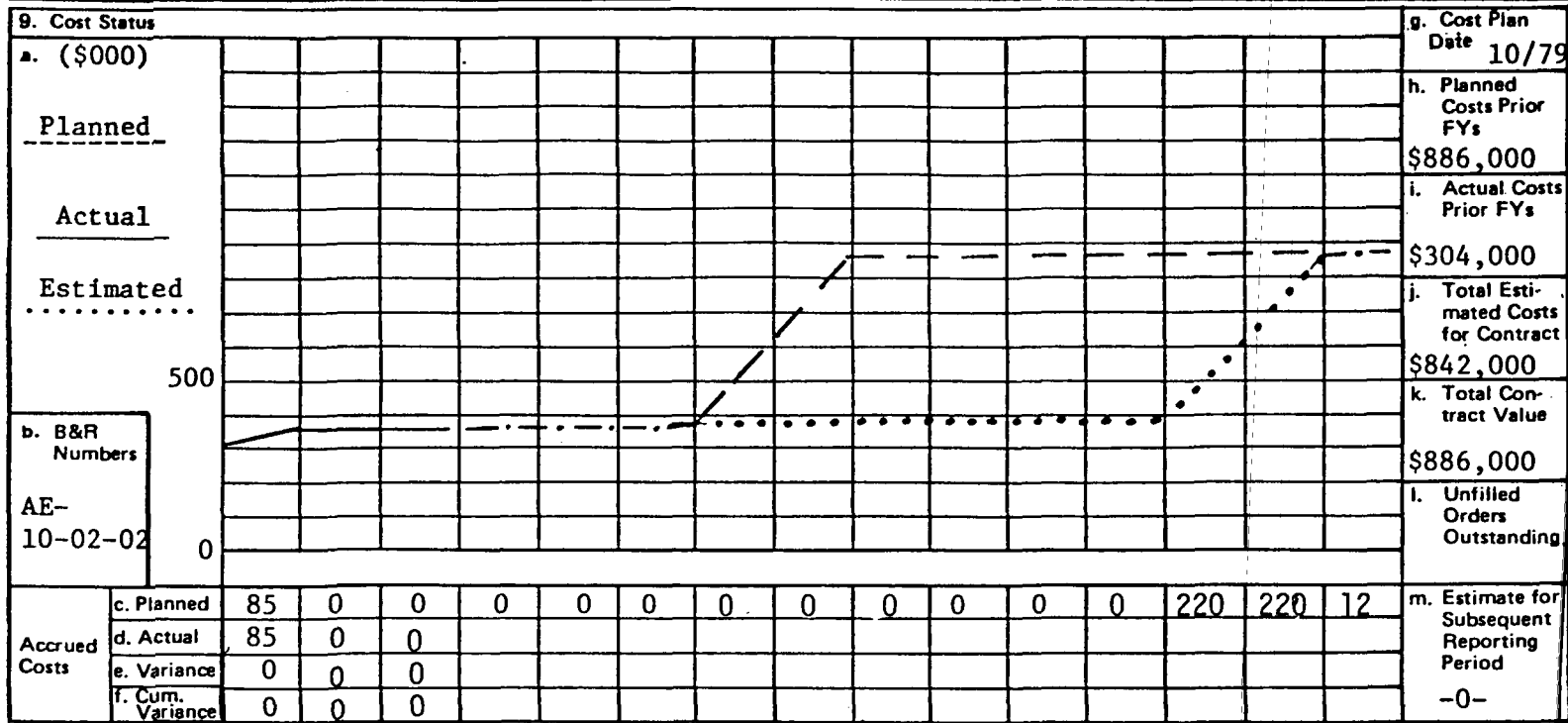
TECHNICAL PROGRESS REPORT

January, 1980

No significant activities occurred during January, 1980.

1. Contract Identification Geothermal Reservoir Assessment Northern Basin and Range	2. Reporting Period 1/1/80 through 1/31/80	3. Contract Number DE-AC08-79ET-27012
4. Contractor (Name and Address) Union Oil Company of California 461 S. Boylston Street Los Angeles, CA 90017		5. Contract Start Date 10/1/78 6. Contract Completion Date 3/30/80

7. Months	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	8. FY	1980
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10. Manpower Status (Direct Labor)															e. Manpower Plan Date	
a.														f. Planned Manpower Prior FYs		
														g. Actual Manpower Prior FYs		
														h. Total Estimated Manpower for Contract		
														i. Total Contract Manpower		
Manpower	b. Planned															
	c. Actual															
	d. Variance															

11. Major Milestone Status															
a. Drill 8000 Expl. Hole														Completed	5/79
b. Test														Completed	5/79
c. Seismic Survey															-
d. Drill 8000 Expl. Hole															
e. Test															
f. Report															
g.															
h.															
i.															

12. Remarks

13. Signature of Contractor's Project Manager and Date 2-8-80	14. Signature of Government Technical Representative and Date
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Contract No. DE-AC08-79ET-27012
Geothermal Reservoir Assessment
Northern Basin and Range

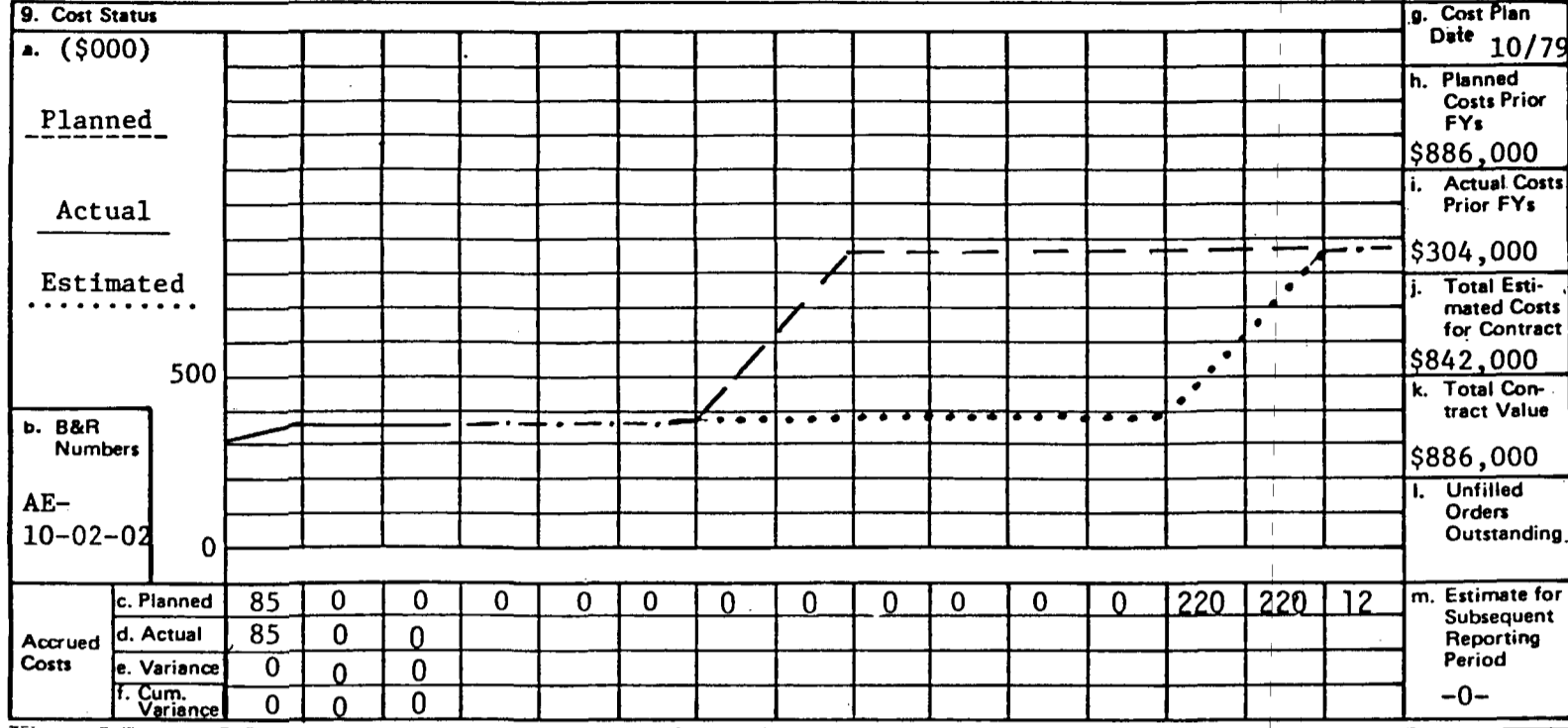
TECHNICAL PROGRESS REPORT

January, 1980

No significant activities occurred during January, 1980.

1. Contract Identification Geothermal Reservoir Assessment Northern Basin and Range	2. Reporting Period 1/1/80 through 1/31/80	3. Contract Number DE-AC08-79ET-27012
4. Contractor (Name and Address) Union Oil Company of California 461 S. Boylston Street Los Angeles, CA 90017		5. Contract Start Date 10/1/78 6. Contract Completion Date 3/30/80

7. Months	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	8. FY 1980
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10. Manpower Status (Direct Labor)															e. Manpower Plan Date																																																																
<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:10%;">a.</td> <td colspan="15"></td> <td style="width:15%;">f. Planned Manpower Prior FYs</td> </tr> <tr> <td colspan="15"></td> <td style="width:15%;">g. Actual Manpower Prior FYs</td> </tr> <tr> <td colspan="15"></td> <td style="width:15%;">h. Total Estimated Manpower for Contract</td> </tr> <tr> <td colspan="15"></td> <td style="width:15%;">i. Total Contract Manpower</td> </tr> </table>															a.																f. Planned Manpower Prior FYs																g. Actual Manpower Prior FYs																h. Total Estimated Manpower for Contract																i. Total Contract Manpower
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	d. Variance																																																																														

11. Major Milestone Status		
a. Drill 8000 Expl. Hole		Completed 5/79
b. Test		Completed 5/79
c. Seismic Survey	[REDACTED]	-
d. Drill 8000 Expl. Hole	[]	
e. Test	[]	
f. Report	[]	
g.		
h.		
i.		

12. Remarks

13. Signature of Contractor's Project Manager and Date 2-8-80	14. Signature of Government Technical Representative and Date
---	--

Union Geothermal Division

Union Oil Company of California
2099 Range Ave., P.O. Box 6854
Santa Rosa, California 95406
Telephone (707) 542-9543



January 30, 1980

Dr. Howard Ross
University of Utah Research Institute
Earth Science Laboratory
420 Chipeta Way - Suite 120
Salt Lake City, 84108

Dear Dr. Ross:

Enclosed please find the mylar "films" and 2 blue-line copies of the seismic survey carried out at Stillwater, Nevada by Union Oil for the D.O.E. (contract #DE-AC08-79ET27012).

As I mentioned to you in our conversation today we will also be sending you the magnetic tapes and field notes under separate packages. They should arrive in several weeks.

I hope you find the data as useful for your group as it was for our exploration effort.

If you have any questions about any procedures followed in obtaining or processing the data, please do not hesitate to call me ((707) 542-9543).

Sincerely,

UNION OIL COMPANY OF CALIFORNIA

A handwritten signature in cursive script, appearing to read "Louis Klonsky".

Louis Klonsky

LK/dl
Enclosures

Union Geothermal Company of New Mexico

4100 Southern Blvd. SE
P. O. Box 15225
Rio Rancho, New Mexico 87174
Telephone (505) 897-1776



January 4, 1980

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

Attn: Mr. J. B. Cotter, Director
Engineering and Energy
Applications Division

Dr. Howard P. Ross
Earth Sciences Laboratory
University of Utah Research
Institute
391 Chipeta Way
Salt Lake City, Utah 84108

Contract DE-AC08-79ET-27012
Geothermal Reservoir Assessment
Northern Basin and Range

Gentlemen:

Attached are the Technical Progress Report and Form DOE 536, Contract Management Summary Report, for the month of December, 1979.

Sincerely,

A handwritten signature in black ink, appearing to read "C. Frank Corbin".

C. Frank Corbin
Supervisor of Administration
and Accounting

CFC:dp
Attachment

xc: Accounting Reports Branch
Department of Energy
P.O. Box 14100
Las Vegas, Nevada 89114

Contract No. DE-AC08-79ET-27012
Geothermal Reservoir Assessment
Northern Basin and Range

TECHNICAL PROGRESS REPORT

December, 1979

Processing of the reflection seismic survey has been completed. The data will be sent to you the week of January 7, 1980.

1. Contract Identification Geothermal Reservoir Assessment Northern Basin and Range	2. Reporting Period 12/1/79 through 12/31/79	3. Contract Number DE-AC08-79ET-27012
4. Contractor (Name and Address): Union Oil Company of California 461 S. Boylston Street Los Angeles, CA 90017	5. Contract Start Date 10/1/78	6. Contract Completion Date 3/30/80

7. Months	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	8. FY 1980
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9. Cost Status																g. Cost Plan Date 10/79
a. (\$000) Planned Actual Estimated 500 0																h. Planned Costs Prior FYs \$886,000
																i. Actual Costs Prior FYs \$304,000
																j. Total Estimated Costs for Contract \$842,000
																k. Total Contract Value \$886,000
l. Unfilled Orders Outstanding																
10. Manpower Status (Direct Labor)																m. Estimate for Subsequent Reporting Period -0-
																n. Estimate for Subsequent Reporting Period -0-

10. Manpower Status (Direct Labor)																e. Manpower Plan Date
																f. Planned Manpower Prior FYs
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																i. Total Contract Manpower
11. Major Milestone Status																

a. Drill 8000 Expl. Hole		Completed 5/79
b. Test		Completed 5/79
c. Seismic Survey		
d. Drill 8000 Expl. Hole	[]	
e. Test	[]	
f. Report	[]	
g.		
h.		
i.		

12. Remarks

13. Signature of Contractor's Project Manager and Date 1-4-80	14. Signature of Government Technical Representative and Date
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Contract No. DE-AC08-79ET-27012
Geothermal Reservoir Assessment
Northern Basin and Range

TECHNICAL PROGRESS REPORT
December, 1979

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Actual															j. Total Estimated Costs for Contract			
															\$842,000			
Estimated															k. Total Contract Value			
															\$886,000			
d. B&R Numbers																l. Unfilled Orders Outstanding		
AE-10-02-02																0		
Accrued Costs		c. Planned	85	0	0	0	0	0	220	220	12	0	0	0	0	0	m. Estimate for Subsequent Reporting Period	
		d. Actual	85	0	0													-
		e. Variance	0	0	0													
		f. Cum. Variance	0	0	0													

10. Manpower Status (Direct Labor)																e. Manpower Plan Date		
																f. Planned Manpower Prior FYs		
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																h. Total Estimated Manpower for Contract		
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Manpower		b. Planned																
		c. Actual																
		d. Variance																

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b. Test															Completed 5/79
c. Seismic Survey															
d. Drill 8000 Expl. Hole															<input type="checkbox"/>
e. Test															<input type="checkbox"/>
f. Report															<input type="checkbox"/>
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12. Remarks

13. Signature of Contractor's Project Manager and Date 1-4-80	14. Signature of Government Technical Representative and Date
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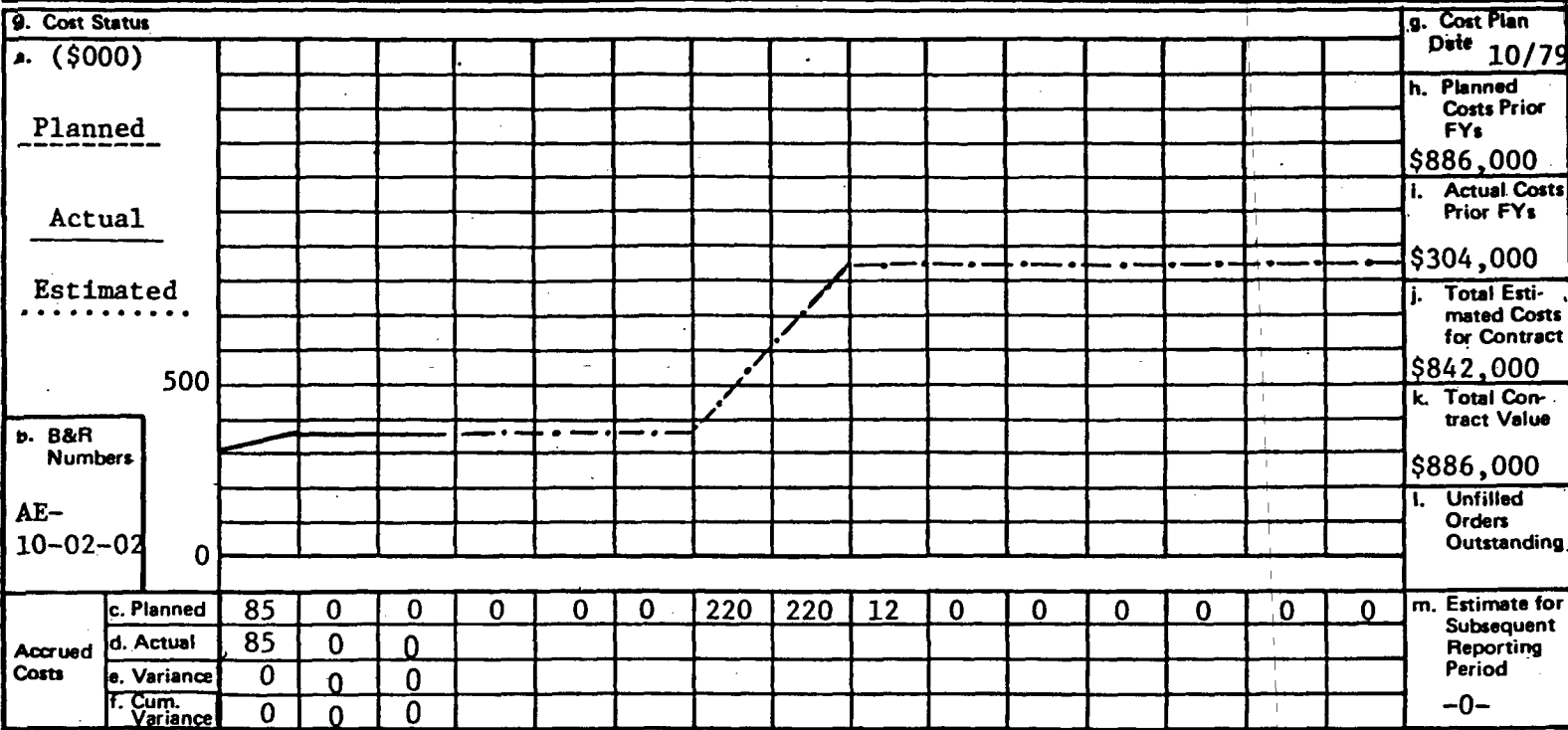
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10. Manpower Status (Direct Labor)																e. Manpower Plan Date
a.															f. Planned Manpower Prior FYs	
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12. Remarks

13. Signature of Contractor's Project Manager and Date 1-4-80	14. Signature of Government Technical Representative and Date
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Union Geothermal Company of New Mexico

4100 Southern Blvd. SE
P. O. Box 15225
Rio Rancho, New Mexico 87174
Telephone (505) 897-1776



December 11, 1979

Department of Energy
Nevada Operations Office
P.O. Box 14100
Las Vegas, Nevada 89114
Attn: Mr. J. B. Cotter, Director
Engineering and Energy
Applications Division

Dr. Howard P. Ross
Earth Sciences Laboratory
University of Utah Research
Institute
391 Chipeta Way
Salt Lake City, Utah 84108

Contract DE-AC08-79ET-27012
Geothermal Reservoir Assessment
Northern Basin and Range

Gentlemen:

Attached are the Technical Progress Report and Form DOE 536, Contract Management Summary Report, for the month of November, 1979.

Sincerely,

A handwritten signature in cursive script, appearing to read "C. Frank Corbin".

C. Frank Corbin
Supervisor of Administration
and Accounting

CFC:dp
Attachment

xc: Accounting Reports Branch
Department of Energy
P.O. Box 14100
Las Vegas, Nevada 89114

Contract No. DE-AC08-79ET-27012
Geothermal Reservoir Assessment
Northern Basin and Range

TECHNICAL PROGRESS REPORT

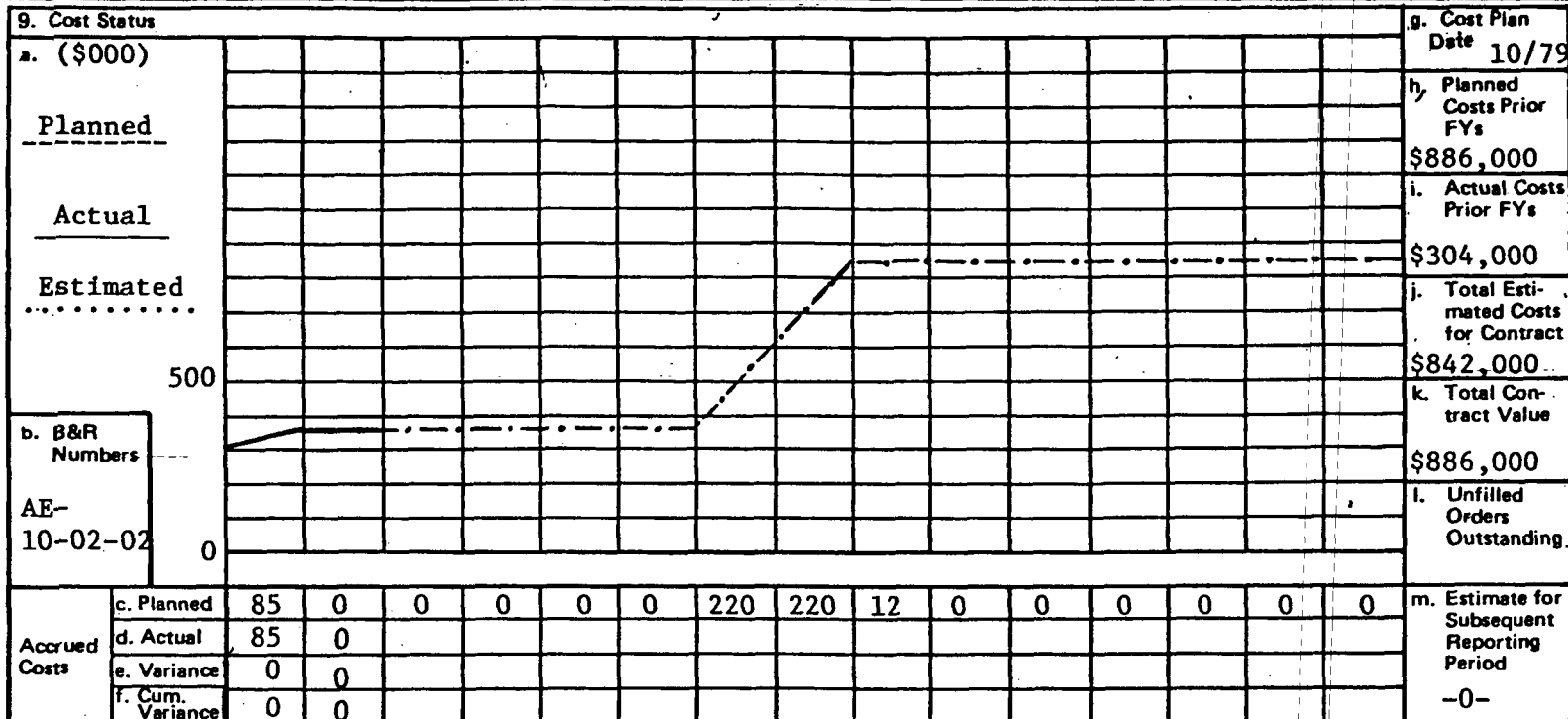
November, 1979

Processing of the reflection seismic survey commenced during November, 1979. We expect that the data will be available by late December, 1979.

CONTRACT MANAGEMENT SUMMARY REPORT

1. Contract Identification Geothermal Reservoir Assessment Northern Basin and Range		2. Reporting Period 11/1/79 through 11/30/79		3. Contract Number DE-AC08-79ET-27012	
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10. Manpower Status (Direct Labor)																e. Manpower Plan Date		
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11. Major Milestone Status																	
a. Drill 8000 Expl. Hole																Completed 5/79	
b. Test																Completed 5/79	
c. Seismic Survey		[REDACTED]															
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e. Test		[REDACTED]															
f. Report		[REDACTED]															
g.																	
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12. Remarks

13. Signature of Contractor's Project Manager and Date 12-11-79	14. Signature of Government Technical Representative and Date
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Contract No. DE-AC08-79ET-27012
Geothermal Reservoir Assessment
Northern Basin and Range

TECHNICAL PROGRESS REPORT

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9. Cost Status a. (\$000) Planned Actual Estimated 500 b. B&R Numbers AE-10-02-02 0																g. Cost Plan Date 10/79 h. Planned Costs Prior FYs \$886,000 i. Actual Costs Prior FYs \$304,000 j. Total Estimated Costs for Contract \$842,000 k. Total Contract Value \$886,000 l. Unfilled Orders Outstanding	
Accrued Costs	c. Planned	85	0	0	0	0	0	220	220	12	0	0	0	0	0	0	m. Estimate for Subsequent Reporting Period -0-
	d. Actual	85	0														
	e. Variance	0	0														
	f. Cum. Variance	0	0														

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Manpower	b. Planned	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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Contract No. DE-AC08-79ET-27012
Geothermal Reservoir Assessment
Northern Basin and Range

TECHNICAL PROGRESS REPORT

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12. Remarks

3. Signature of Contractor's Project Manager and Date 12-11-79	14. Signature of Government Technical Representative and Date
--	--

Union Geothermal Division

Union Oil Company of California
2099 Range Ave., P.O. Box 6854
Santa Rosa, California 95406
Telephone (707) 542-9543



August 10, 1979

Earth Sciences Laboratory
University of Utah Research Park
391 Chipeta Way
Salt Lake City, Utah 84108

Attn: Dr. Howard Ross

Contract No. DE-AC08-79ET-27012
Geothermal Reservoir Assessment
Northern Basin and Range

Gentlemen:

Enclosed are three copies of the addendum to the technical report on Well De Braga No. 2, "Flow Test and Fluid Sample Data."

Very truly yours,
UNION OIL COMPANY OF CALIFORNIA

A handwritten signature in black ink, appearing to read "C. Frank Corbin".

C. Frank Corbin
Contract Administrator

CFC/cc
Att

Union Geothermal Company of New Mexico

4100 Southern Blvd. SE
P. O. Box 15225
Rio Rancho, New Mexico 87174
Telephone (505) 897-1776



November 9, 1979

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

Attn: Mr. J. B. Cotter, Director
Engineering and Energy
Applications Division

Dr. Howard P. Ross
Earth Sciences Laboratory
University of Utah Research
Institute
391 Chipeta Way
Salt Lake City, Utah 84108

Contract DE-AC08-79ET-27012
Geothermal Reservoir Assessment
Northern Basin and Range

Gentlemen:

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Sincerely,

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C. Frank Corbin
Supervisor of Administration
and Accounting

CFC:dp
Attachment

xc: Accounting Reports Branch
Department of Energy
P.O. Box 14100
Las Vegas, Nevada 89114

Contract No. DE-AC08-79ET-27012
Geothermal Reservoir Assessment
Northern Basin and Range

TECHNICAL PROGRESS REPORT

October, 1979

The shooting of approximately 12 miles of reflection seismic survey was completed October 25, 1979. We anticipate that the processing will be completed and the data forwarded to you by early December, 1979.

CONTRACT MANAGEMENT SUMMARY REPORT

1. Contract Identification Geothermal Reservoir Assessment Northern Basin and Range		2. Reporting Period 10/1/79 through 10/31/79		3. Contract Number DE-AC08-79ET-27012	
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10. Manpower Status (Direct Labor)																e. Manpower Plan Date		
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12. Remarks Note: Schedule extends beyond contract expiration date due to inclusion of D.O.E. requested seismic survey and necessary interpretation time. Therefore, a contract extension to 9/30/80 is requested.

13. Signature of Contractor's Project Manager and Date 11-9-79								14. Signature of Government Technical Representative and Date							
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Contract No. DE-AC08-79ET-27012
Geothermal Reservoir Assessment
Northern Basin and Range

TECHNICAL PROGRESS REPORT

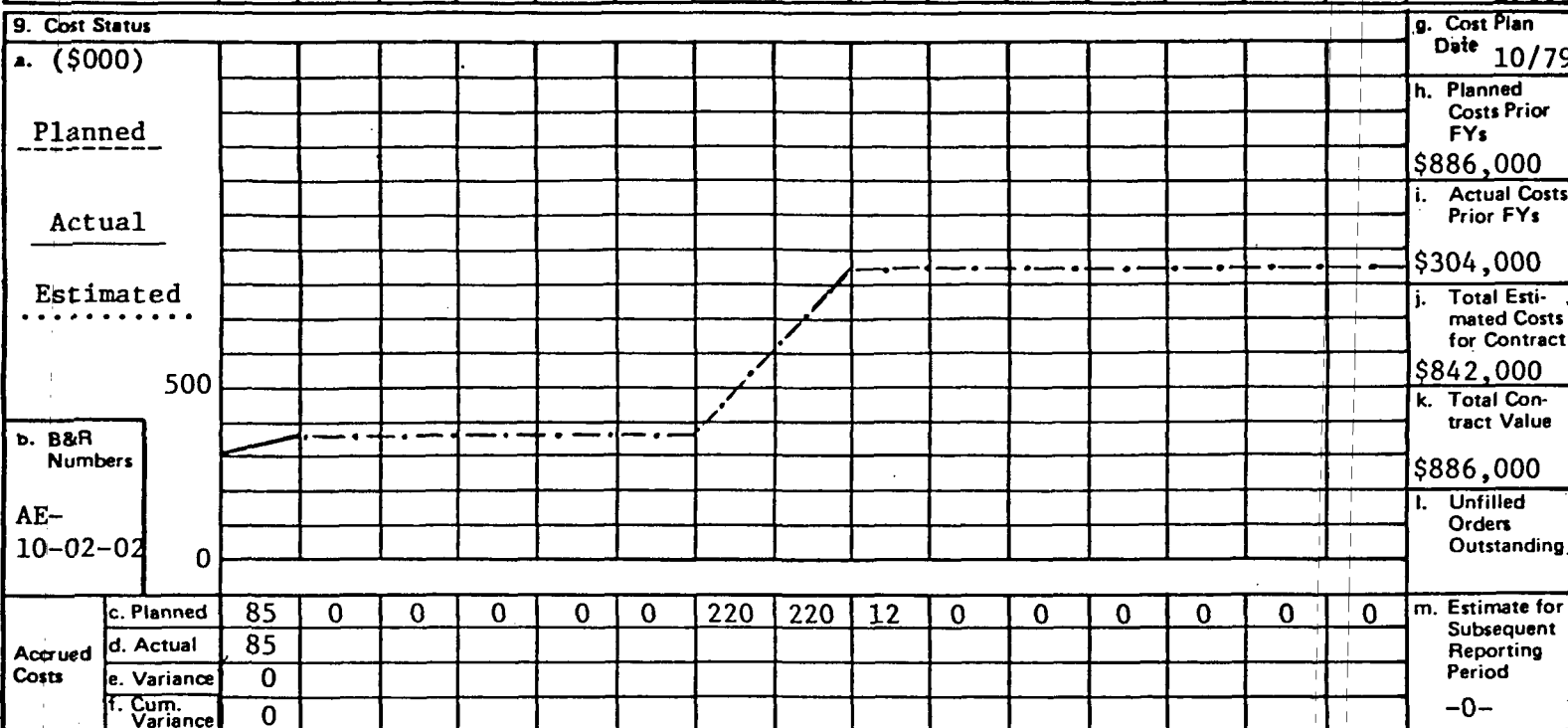
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Contract No. DE-AC08-79ET-27012
Geothermal Reservoir Assessment
Northern Basin and Range

TECHNICAL PROGRESS REPORT

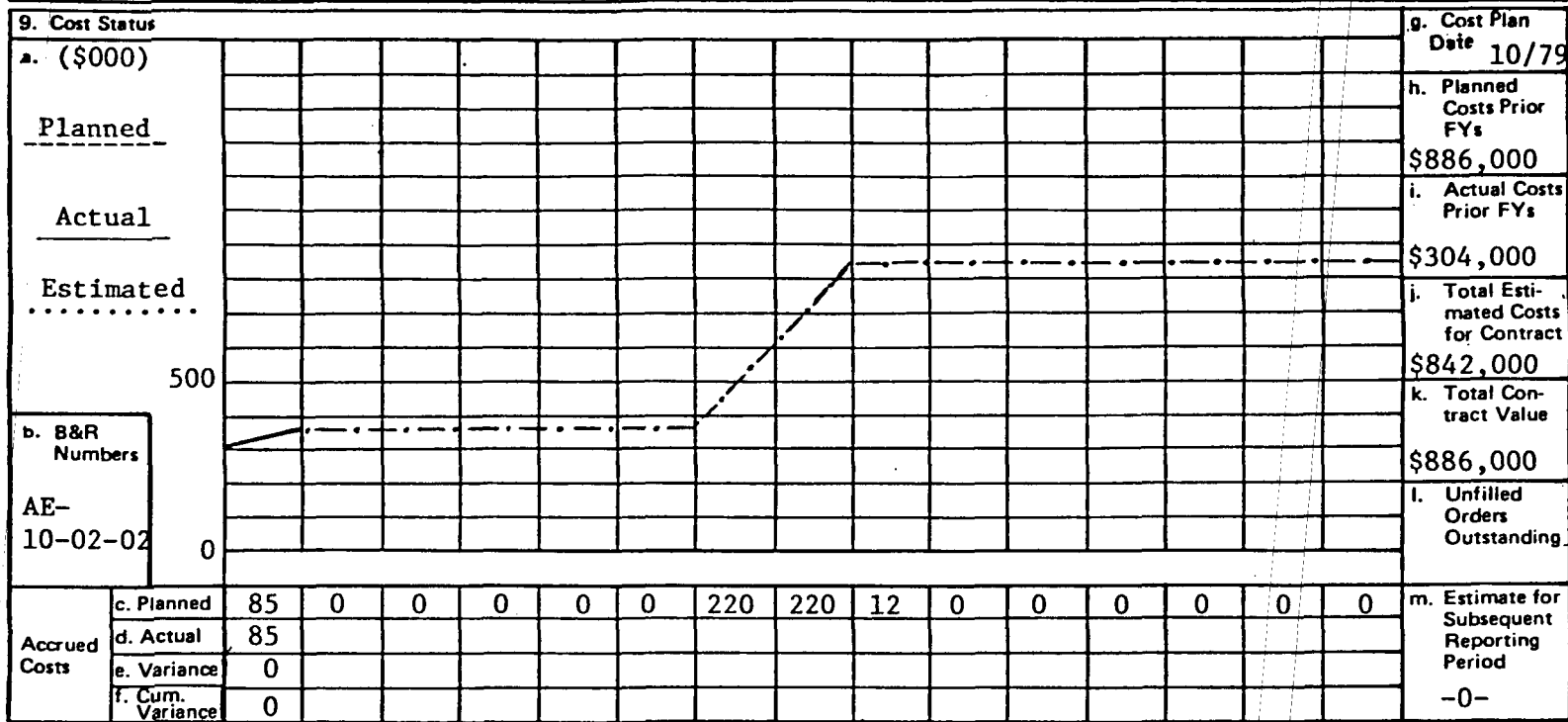
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10. Manpower Status (Direct Labor)																e. Manpower Plan Date		
a.																f. Planned Manpower Prior FYs		
																g. Actual Manpower Prior FYs		
																h. Total Estimated Manpower for Contract		
																i. Total Contract Manpower		
b. Planned																		
c. Actual																		
d. Variance																		

11. Major Milestone Status																	
a. Drill 8000 Expl. Hole																	Completed 5/79
b. Test																	Completed 5/79
c. Seismic Survey																	
d. Drill 8000 Expl. Hole																	
e. Test																	
f. Report																	
g.																	
h.																	
i.																	

12. Remarks Note: Schedule extends beyond contract expiration date due to inclusion of D.O.E. requested seismic survey and necessary interpretation time. Therefore, a contract extension to 9/30/80 is requested.

13. Signature of Contractor's Project Manager and Date  11-9-79								14. Signature of Government Technical Representative and Date							
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Union Geothermal Company of New Mexico

4100 Southern Blvd SE
P. O. Box 15225
Rio Rancho, New Mexico 87174
Telephone (505) 897-1776



October 3, 1979

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

Attn: Mr. J. B. Cotter, Director
Engineering and Energy
Applications Division

Dr. Howard P. Ross
Earth Sciences Laboratory
University of Utah Research Institute
391 Chipeta Way
Salt Lake City, Utah 84108

Contract DE-AC08-79ET-27012
Geothermal Reservoir Assessment
Northern Basin and Range

Gentlemen:

Attached are the Technical Progress Report and Form DOE 536, Contract Management Summary Report, for the month of September, 1979.

Sincerely,

A handwritten signature in cursive script, appearing to read "C. Frank Corbin".

C. Frank Corbin
Supervisor of Administration
and Accounting

CFC:dp
Attachment

xc: Accounting Reports Branch
Department of Energy
P.O. Box 14100
Las Vegas, Nevada 89114

Contract No. DE-AC08-79ET-27012
Geothermal Reservoir Assessment
Northern Basin and Range

TECHNICAL PROGRESS REPORT
September, 1979

No significant activities occurred during September, 1979.

CONTRACT MANAGEMENT SUMMARY REPORT

1. Contract Identification Geothermal Reservoir Assessment Northern Basin and Range		2. Reporting Period 9/1/79 through 9/30/79		3. Contract Number DE-AC08-79ET-27012	
4. Contractor (Name and Address) Union Oil Co. of California 461 S. Boylston Street Los Angeles, CA 90017				5. Contract Start Date 10/1/78	
				6. Contract Completion Date 3/30/80	

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	
a. (\$000) Planned																h. Planned Costs Prior FYs	
																0	
----- 1,000 Actual																i. Actual Costs Prior FYs	
																0	
Estimated																j. Total Estimated Costs for Contract	
..... 500																\$842,000	
b. B&R Numbers																k. Total Contract Value	
AE- 10-02-02 0																\$886,000	
																l. Unfilled Orders Outstanding	
																m. Estimate for Subsequent Reporting Period	
																\$ 0	

Accrued Costs	c. Planned	0	0	0	0	118	218	13	0	220	305	0	12	0	0	0	m. Estimate for Subsequent Reporting Period
	d. Actual	0	0	0	0	0	0	281	23	0	0	0	0				
	e. Variance	0	0	0	0	118	218	(268)	(23)	220	305	0	12				
	f. Cum. Variance	0	0	0	0	118	336	68	45	265	570	570	582				

10. Manpower Status (Direct Labor)																e. Manpower Plan Date	
a.																f. Planned Manpower Prior FYs	
																g. Actual Manpower Prior FYs	
																h. Total Estimated Manpower for Contract	
																i. Total Contract Manpower	
Manpower	b. Planned																
	c. Actual																
	d. Variance																

11. Major Milestone Status															
a. Drill 8000' Expl. Hole		[Bar chart showing milestone progress]													
b. Test		[Bar chart showing milestone progress]													
c. Drill 8000' Expl. Hole		[Bar chart showing milestone progress]													
d. Test		[Bar chart showing milestone progress]													
e. Report		[Bar chart showing milestone progress]													
f. Seismic Survey		[Bar chart showing milestone progress]													
g.															
h.															
i.															

12. Remarks															
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13. Signature of Contractor's Project Manager and Date <i>[Signature]</i> 10-3-79								14. Signature of Government Technical Representative and Date							
--	--	--	--	--	--	--	--	---	--	--	--	--	--	--	--

Contract No. DE-AC08-79ET-27012
Geothermal Reservoir Assessment
Northern Basin and Range

TECHNICAL PROGRESS REPORT

September, 1979

No significant activities occurred during September, 1979.

CONTRACT MANAGEMENT SUMMARY REPORT

FORM DOE 536 (1/78)

FORM APPROVED OMB NO. 38R-0190

1. Contract Identification Geothermal Reservoir Assessment Northern Basin and Range		2. Reporting Period 9/1/79 through 9/30/79		3. Contract Number DE-AC08-79ET-27012	
4. Contractor (Name and Address) Union Oil Co. of California 461 S. Boylston Street Los Angeles, CA 90017				5. Contract Start Date 10/1/78	
				6. Contract Completion Date 3/30/80	

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		
a. (\$000) Planned																h. Planned Costs Prior FYs		
-----																0		
1,000 Actual																i. Actual Costs Prior FYs		
-----																0		
Estimated																j. Total Estimated Costs for Contract		
.....																\$842,000		
500																k. Total Contract Value		
b. B&R Numbers																\$886,000		
AE-10-02-02 0																l. Unfilled Orders Outstanding		
																m. Estimate for Subsequent Reporting Period		
Accrued Costs																\$ 0		
c. Planned		0	0	0	0	118	218	13	0	220	305	0	12	0	0	0		
d. Actual		0	0	0	0	0	0	281	23	0	0	0	0					
e. Variance		0	0	0	0	118	218	(268)	(23)	220	305	0	12					
f. Cum. Variance		0	0	0	0	118	336	68	45	265	570	570	582					

10. Manpower Status (Direct Labor):																e. Manpower Plan Date		
a.																f. Planned Manpower Prior FYs		
																g. Actual Manpower Prior FYs		
																h. Total Estimated Manpower for Contract		
																i. Total Contract Manpower		
b. Planned																		
c. Actual																		
d. Variance																		

11. Major Milestone Status:															
a. Drill 8000' Expl. Hole		[Progress bar]													
b. Test		[Progress bar]													
c. Drill 8000' Expl. Hole		[Progress bar]													
d. Test		[Progress bar]													
e. Report		[Progress bar]													
f. Seismic Survey		[Progress bar]													
g.															
h.															
i.															

12. Remarks															
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13. Signature of Contractor's Project Manager and Date <i>[Signature]</i> 10-3-79								14. Signature of Government Technical Representative and Date							
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Contract No. DE-AC08-79ET-27012
Geothermal Reservoir Assessment
Northern Basin and Range

TECHNICAL PROGRESS REPORT
September, 1979

No significant activities occurred during September, 1979.

CONTRACT MANAGEMENT SUMMARY REPORT

1. Contract Identification Geothermal Reservoir Assessment Northern Basin and Range	2. Reporting Period 9/1/79 through 9/30/79	3. Contract Number DE-AC08-79ET-27012
4. Contractor (Name and Address) Union Oil Co. of California 461 S. Boylston Street Los Angeles, CA 90017	5. Contract Start Date 10/1/78	
		6. Contract Completion Date 3/30/80

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																																																																	
a. (\$000) Planned ----- 1,000 Actual Estimated 500 b. B&R Numbers AE- 10-02-02 0																	h. Planned Costs Prior FYs 0																																																																
																	i. Actual Costs Prior FYs 0																																																																
																	j. Total Estimated Costs for Contract \$842,000																																																																
																	k. Total Contract Value \$886,000																																																																
<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:5%;">Accrued Costs</td> <td style="width:5%;">c. Planned</td> <td>0</td><td>0</td><td>0</td><td>0</td><td>118</td><td>218</td><td>13</td><td>0</td><td>220</td><td>305</td><td>0</td><td>12</td><td>0</td><td>0</td><td>0</td> </tr> <tr> <td></td> <td>d. Actual</td> <td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>281</td><td>23</td><td>0</td><td>0</td><td>0</td><td>0</td><td></td><td></td> </tr> <tr> <td></td> <td>e. Variance</td> <td>0</td><td>0</td><td>0</td><td>0</td><td>118</td><td>218</td><td>(268)</td><td>(23)</td><td>220</td><td>305</td><td>0</td><td>12</td><td></td><td></td> </tr> <tr> <td></td> <td>f. Cum. Variance</td> <td>0</td><td>0</td><td>0</td><td>0</td><td>118</td><td>336</td><td>68</td><td>45</td><td>265</td><td>570</td><td>570</td><td>582</td><td></td><td></td> </tr> </table>																Accrued Costs	c. Planned	0	0	0	0	118	218	13	0	220	305	0	12	0	0	0		d. Actual	0	0	0	0	0	0	281	23	0	0	0	0				e. Variance	0	0	0	0	118	218	(268)	(23)	220	305	0	12				f. Cum. Variance	0	0	0	0	118	336	68	45	265	570	570	582			l. Unfilled Orders Outstanding
																Accrued Costs	c. Planned	0	0	0	0	118	218	13	0	220	305	0	12	0	0	0																																																	
																	d. Actual	0	0	0	0	0	0	281	23	0	0	0	0																																																				
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	f. Cum. Variance	0	0	0	0	118	336	68	45	265	570	570	582																																																																				
																m. Estimate for Subsequent Reporting Period																																																																	
																\$ 0																																																																	

10. Manpower Status (Direct Labor):																e. Manpower Plan Date																																																
a.																	f. Planned Manpower Prior FYs																																															
																	g. Actual Manpower Prior FYs																																															
																	h. Total Estimated Manpower for Contract																																															
																	i. Total Contract Manpower																																															
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																Manpower	b. Planned																																															
																	c. Actual																																															
																	d. Variance																																															

11. Major Milestone Status:																
a. Drill 8000' Expl. Hole	████████████████████															
b. Test	████████████████████															
c. Drill 8000' Expl. Hole	████████████████████															
d. Test	████████████████████															
e. Report	████████████████████															
f. Seismic Survey	████████████████████															
g.																
h.																
i.																

12. Remarks

13. Signature of Contractor's Project Manager and Date 10-3-79	14. Signature of Government Technical Representative and Date
--	--

Union Geothermal Company of New Mexico

4100 Southern Blvd. SE
P. O. Box 15225
Rio Rancho, New Mexico 87174
Telephone (505) 897-1776



September 5, 1979

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

Attn: Mr. J.B. Cotter, Director
Engineering and Energy
Applications Division

Dr. Howard P. Ross
Earth Sciences Laboratory
University of Utah Research Institute
391 Chipeta Way
Salt Lake City, Utah 84108

Contract DE-AC08-79ET-27012
Geothermal Reservoir Assessment
Northern Basin and Range

Gentlemen:

Attached are the Technical Progress Report and Form DOE 536, Contract Management Summary Report, for the month of August, 1979.

Sincerely,

A handwritten signature in cursive script, appearing to read "C. Frank Corbin".

C. Frank Corbin
Contract Administrator

CFC:dp
Attachment

xc: Accounting Reports Branch
Department of Energy
P.O. Box 14100
Las Vegas, Nevada 89114

Contract No. DE-AC08-79ET-27012
Geothermal Reservoir Assessment
Northern Basin and Range

TECHNICAL PROGRESS REPORT
August, 1979

No significant activities occurred during August, 1979. Work on the reflection seismic survey has been delayed due to the non-availability of seismic crews. It presently appears that the survey will not get underway until late November, 1979.

1. Contract Identification Geothermal Reservoir Assessment Northern Basin and Range	2. Reporting Period 8/1/79 through 8/31/79	3. Contract Number DE-AC08-79ET-27012
4. Contractor (Name and Address): Union Oil Co. of California 461 S. Boylston Street Los Angeles, CA 90017	5. Contract Start Date 10/1/78	
		6. Contract Completion Date 3/30/80

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	
a. (\$000) Planned ----- 1,000 Actual ----- Estimated 500 b. B&R Numbers AE-10-02-02 0																h. Planned Costs Prior FYs 0	
																i. Actual Costs Prior FYs 0	
																j. Total Estimated Costs for Contract \$842,000	
																k. Total Contract Value \$886,000	
															l. Unfilled Orders Outstanding		
																m. Estimate for Subsequent Reporting Period \$ 0	
Accrued Costs	c. Planned	0	0	0	0	118	218	13	0	220	305	0	12	0	0	0	
	d. Actual	0	0	0	0	0	0	281	23	0	0	0					
	e. Variance	0	0	0	0	118	218	(268)	(23)	220	305	0					
	f. Cum. Variance	0	0	0	0	118	336	68	45	265	570	570					

10. Manpower Status (Direct Labor)																e. Manpower Plan Date	
a.																f. Planned Manpower Prior FYs	
																g. Actual Manpower Prior FYs	
																h. Total Estimated Manpower for Contract	
																i. Total Contract Manpower	
Manpower	b. Planned																
	c. Actual																
	d. Variance																

11. Major Milestone Status															
a. Drill 8000' Expl. Hole	██████████														
b. Test	████														
c. Drill 8000' Expl. Hole	████████████████████														
d. Test	████														
e. Report	████████████████████														
f. Seismic Survey	████														
g.															
h.															
i.															

12. Remarks

13. Signature of Contractor's Project Manager and Date 9-5-79	14. Signature of Government Technical Representative and Date
---	--

Contract No. DE-AC08-79ET-27012
Geothermal Reservoir Assessment
Northern Basin and Range

TECHNICAL PROGRESS REPORT
August, 1979

No significant activities occurred during August, 1979. Work on the reflection seismic survey has been delayed due to the non-availability of seismic crews. It presently appears that the survey will not get underway until late November, 1979.

CONTRACT MANAGEMENT SUMMARY REPORT

1. Contract Identification Geothermal Reservoir Assessment Northern Basin and Range	2. Reporting Period 8/1/79 through 8/31/79	3. Contract Number DE-AC08-79ET-27012
4. Contractor (Name and Address) Union Oil Co. of California 461 S. Boylston Street Los Angeles, CA 90017		5. Contract Start Date 10/1/78
		6. Contract Completion Date 3/30/80

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	
a. (\$000) Planned ----- 1,000 Actual ----- Estimated 500																h. Planned Costs Prior FYs	
																0	
																i. Actual Costs Prior FYs	
																0	
															j. Total Estimated Costs for Contract		
															\$842,000		
															k. Total Contract Value		
															\$886,000		
															l. Unfilled Orders Outstanding		
															0		
Accrued Costs	c. Planned	0	0	0	0	118	218	13	0	220	305	0	12	0	0	0	m. Estimate for Subsequent Reporting Period
	d. Actual	0	0	0	0	0	0	281	23	0	0	0					
	e. Variance	0	0	0	0	118	218	(268)	(23)	220	305	0					
	f. Cum. Variance	0	0	0	0	118	336	68	45	265	570	570					
																n. Estimate for Subsequent Reporting Period	
																\$ 0	

10. Manpower Status (Direct Labor)																e. Manpower Plan Date	
a.																f. Planned Manpower Prior FYs	
																0	
																g. Actual Manpower Prior FYs	
																0	
															h. Total Estimated Manpower for Contract		
															0		
Manpower	b. Planned																i. Total Contract Manpower
	c. Actual																
	d. Variance																

11. Major Milestone Status															
a. Drill 8000' Expl. Hole	[]														
b. Test	[]														
c. Drill 8000' Expl. Hole	[]														
d. Test	[]														
e. Report	[]														
f. Seismic Survey	[]														
g.															
h.															
i.															

12. Remarks

13. Signature of Contractor's Project Manager and Date 9-5-79	14. Signature of Government Technical Representative and Date
---	--

Contract No. DE-AC08-79ET-27012
Geothermal Reservoir Assessment
Northern Basin and Range

TECHNICAL PROGRESS REPORT
August, 1979

No significant activities occurred during August, 1979. Work on the reflection seismic survey has been delayed due to the non-availability of seismic crews. It presently appears that the survey will not get underway until late November, 1979.

1. Contract Identification Geothermal Reservoir Assessment Northern Basin and Range	2. Reporting Period 8/1/79 through 8/31/79	3. Contract Number DE-AC08-79ET-27012
4. Contractor (Name and Address) Union Oil Co. of California 461 S. Boylston Street Los Angeles, CA 90017		5. Contract Start Date 10/1/78
		6. Contract Completion Date 3/30/80

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																	
a. (\$000) Planned ----- 1,000 Actual ----- Estimated 500																g. Cost Plan Date	
																h. Planned Costs Prior FYs 0	
																i. Actual Costs Prior FYs 0	
																j. Total Estimated Costs for Contract \$842,000	
b. B&R Numbers AE-10-02-02 0																k. Total Contract Value \$886,000	
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Accrued Costs	c. Planned	0	0	0	0	118	218	13	0	220	305	0	12	0	0	0	m. Estimate for Subsequent Reporting Period
	d. Actual	0	0	0	0	0	0	281	23	0	0	0					
	e. Variance	0	0	0	0	118	218	(268)	(23)	220	305	0					
	f. Cum. Variance	0	0	0	0	118	336	68	45	265	570	570					\$. 0

10. Manpower Status (Direct Labor)																
a.																e. Manpower Plan Date
																f. Planned Manpower Prior FYs
																g. Actual Manpower Prior FYs
																h. Total Estimated Manpower for Contract
Manpower	b. Planned															
	c. Actual															
	d. Variance															i. Total Contract Manpower

11. Major Milestone Status															
a. Drill 8000' Expl. Hole	[Bar chart showing milestone completion]														
b. Test	[Bar chart showing milestone completion]														
c. Drill 8000' Expl. Hole	[Bar chart showing milestone completion]														
d. Test	[Bar chart showing milestone completion]														
e. Report	[Bar chart showing milestone completion]														
f. Seismic Survey	[Bar chart showing milestone completion]														
g.															
h.															
i.															

12. Remarks

13. Signature of Contractor's Project Manager and Date 9-5-79	14. Signature of Government Technical Representative and Date
---	--

Union Geothermal Division

Union Oil Company of California
2099 Range Ave., P.O. Box 6854
Santa Rosa, California 95406
Telephone (707) 542-9543



August 6, 1979

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

Dr. Howard P. Ross
Earth Sciences Laboratory
University of Utah Research Institute
391 Chipeta Way
Salt Lake City, Utah 84108

Attention: Mr. J.B. Cotter, Director
Engineering and Energy
Applications Division

Contract DE-AC08-79ET-27012
Geothermal Reservoir Assessment
Northern Basin and Range

Gentlemen:

Attached are the Technical Progress Report and Form DOE 536, Contract Management Summary Report, for the month of July, 1979.

Sincerely,

UNION OIL CO. OF CALIFORNIA

A handwritten signature in cursive script, appearing to read "C. Frank Corbin".

C. Frank Corbin
Contract Administrator

CFC:CC

Attachment

cc: Accounting Reports Branch
Department of Energy
P.O. Box 14100
Las Vegas, Nevada 89114

Contract No. DE-AC08-79ET-27012
Geothermal Reservoir Assessment
Northern Basin and Range

TECHNICAL PROGRESS REPORT
JULY, 1979

No significant activities occurred during July, 1979.
It is anticipated that work on the reflection seismic
survey will commence in late August, 1979.

CONTRACT MANAGEMENT SUMMARY REPORT

1. Contract Identification Geothermal Reservoir Assessment Northern Basin and Range	2. Reporting Period 7/1/79 through 7/31/79	3. Contract Number DE-AC08-79ET-27012
4. Contractor (Name and Address) Union Oil Co. of California 461 S. Boylston Street Los Angeles, CA 90017	5. Contract Start Date 10/1/78 6. Contract Completion Date 3/30/80	

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 a. (\$000) Planned ----- 1,000 Actual ----- Estimated 500 b. B&ft Numbers AE-10-02-02 0																g. Cost Plan Date h. Planned Costs Prior FYs 0 i. Actual Costs Prior FYs 0 j. Total Estimated Costs for Contract \$842,000 k. Total Contract Value \$886,000 l. Unfilled Orders Outstanding 																																																																		
<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td rowspan="3" style="width:10%;">Accrued Costs</td> <td style="width:10%;">c. Planned</td> <td>0</td><td>0</td><td>0</td><td>0</td><td>118</td><td>218</td><td>13</td><td>0</td><td>220</td><td>305</td><td>0</td><td>12</td><td>0</td><td>0</td><td>0</td> </tr> <tr> <td>d. Actual</td> <td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>281</td><td>23</td><td>0</td><td>0</td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td>e. Variance</td> <td>0</td><td>0</td><td>0</td><td>0</td><td>118</td><td>218</td><td>(268)</td><td>(23)</td><td>220</td><td>305</td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td></td> <td>f. Cum. Variance</td> <td>0</td><td>0</td><td>0</td><td>0</td><td>118</td><td>336</td><td>68</td><td>45</td><td>265</td><td>570</td><td></td><td></td><td></td><td></td><td></td> </tr> </table>																Accrued Costs	c. Planned	0	0	0	0	118	218	13	0	220	305	0	12	0	0	0	d. Actual	0	0	0	0	0	0	281	23	0	0						e. Variance	0	0	0	0	118	218	(268)	(23)	220	305							f. Cum. Variance	0	0	0	0	118	336	68	45	265	570						m. Estimate for Subsequent Reporting Period \$40,000
Accrued Costs	c. Planned	0	0	0	0	118	218	13	0	220	305	0	12	0	0		0																																																																	
	d. Actual	0	0	0	0	0	0	281	23	0	0																																																																							
	e. Variance	0	0	0	0	118	218	(268)	(23)	220	305																																																																							
	f. Cum. Variance	0	0	0	0	118	336	68	45	265	570																																																																							

10. Manpower Status (Direct Labor) a.																e. Manpower Plan Date f. Planned Manpower Prior FYs g. Actual Manpower Prior FYs h. Total Estimated Manpower for Contract j. Total Contract Manpower																																																
<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td rowspan="3" style="width:10%;">Manpower</td> <td style="width:10%;">b. Planned</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td>c. Actual</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td>d. Variance</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> </table>																Manpower	b. Planned																c. Actual																d. Variance															
Manpower	b. Planned																																																															
	c. Actual																																																															
	d. Variance																																																															

11. Major Milestone Status:															
a. Drill 8000' Expl. Hole	[Bar chart showing milestone completion]														
b. Test	[Bar chart showing milestone completion]														
c. Drill 8000' Expl. Hole	[Bar chart showing milestone completion]														
d. Test	[Bar chart showing milestone completion]														
e. Report	[Bar chart showing milestone completion]														
f. Seismic Survey	[Bar chart showing milestone completion]														
g.															
h.															
i.															

12. Remarks

13. Signature of Contractor's Project Manager and Date 8-7-79	14. Signature of Government Technical Representative and Date
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Contract No. DE-AC08-79ET-27012
Geothermal Reservoir Assessment
Northern Basin and Range

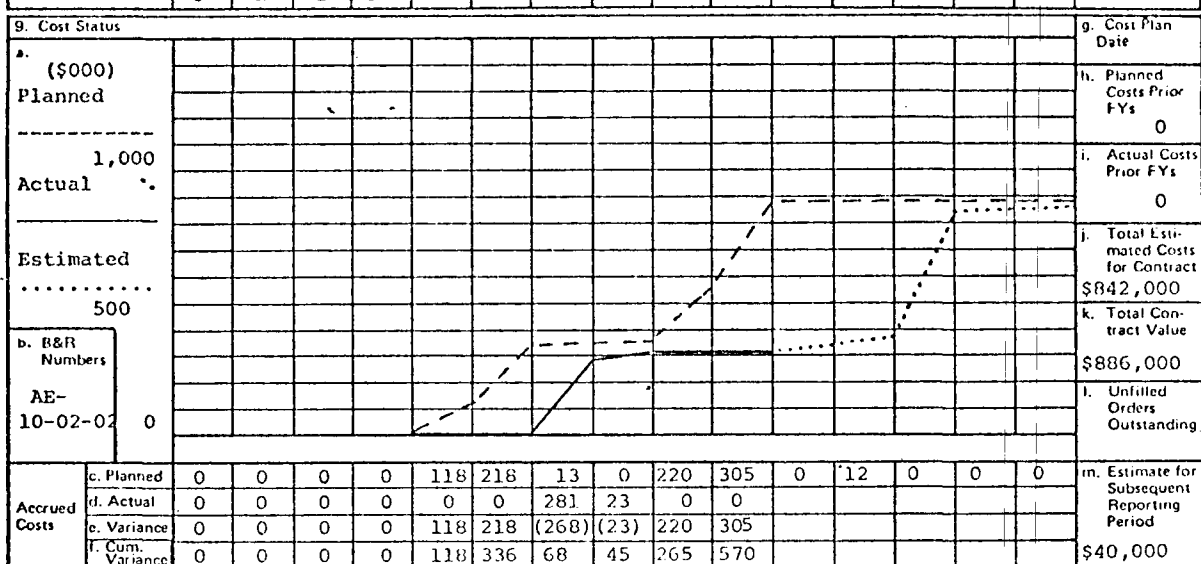
TECHNICAL PROGRESS REPORT
JULY, 1979

No significant activities occurred during July, 1979.
It is anticipated that work on the reflection seismic
survey will commence in late August, 1979.

CONTRACT MANAGEMENT SUMMARY REPORT

1. Contract Identification Geothermal Reservoir Assessment Northern Basin and Range		2. Reporting Period 7/1/79 through 7/31/79		3. Contract Number DE-AC08-79ET-27012	
4. Contractor (Name and Address) Union Oil Co. of California 461 S. Boylston Street Los Angeles, CA 90017				5. Contract Start Date 10/1/78	
				6. Contract Completion Date 3/30/80	

7. Months	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	8. FY 1979
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10. Manpower Status (Direct Labor)																e. Manpower Plan Date	
a.																f. Planned Manpower Prior FYs	
																g. Actual Manpower Prior FYs	
																h. Total Estimated Manpower for Contract	
																i. Total Contract Manpower	
b. Planned																	
c. Actual																	
d. Variance																	

11. Major Milestone Status:															
a. Drill 8000' Expl. Hole		[Timeline bar]													
b. Test		[Timeline bar]													
c. Drill 8000' Expl. Hole		[Timeline bar]													
d. Test		[Timeline bar]													
e. Report		[Timeline bar]													
f. Seismic Survey		[Timeline bar]													
g.															
h.															
i.															

12. Remarks

13. Signature of Contractor's Project Manager and Date <i>E. K. K...</i> 8-7-79	14. Signature of Government Technical Representative and Date
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Contract No. DE-AC08-79ET-27012
Geothermal Reservoir Assessment
Northern Basin and Range

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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	
a. (\$000)																h. Planned Costs Prior FYs	
Planned																0	
-----																i. Actual Costs Prior FYs	
1,000																0	
Actual																j. Total Estimated Costs for Contract	
-----																\$842,000	
Estimated																k. Total Contract Value	
.....																\$886,000	
500																l. Unfilled Orders Outstanding	
b. B&R Numbers																m. Estimate for Subsequent Reporting Period	
AE-10-02-02 0																\$40,000	
Accrued Costs		c. Planned	0	0	0	0	118	218	13	0	220	305	0	12	0	0	0
		d. Actual	0	0	0	0	0	0	281	23	0	0					
		e. Variance	0	0	0	0	118	218	(268)	(23)	220	305					
		f. Cum. Variance	0	0	0	0	118	336	68	45	265	570					

10. Manpower Status (Direct Labor)																e. Manpower Plan Date	
a.																f. Planned Manpower Prior FYs	
																g. Actual Manpower Prior FYs	
																h. Total Estimated Manpower for Contract	
																i. Total Contract Manpower	
Manpower		b. Planned															
		c. Actual															
		d. Variance															

11. Major Milestone Status:															
a. Drill 8000' Expl. Hole		[Gantt chart bar]													
b. Test		[Gantt chart bar]													
c. Drill 8000' Expl. Hole		[Gantt chart bar]													
d. Test		[Gantt chart bar]													
e. Report		[Gantt chart bar]													
f. Seismic Survey		[Gantt chart bar]													
g.															
h.															
i.															

12. Remarks

13. Signature of Contractor's Project Manager and Date <i>[Signature]</i> 8-7-79	14. Signature of Government Technical Representative and Date
---	---

Union Geothermal Division

Union Oil Company of California
2099 Range Ave., P.O. Box 6854
Santa Rosa, California 95406
Telephone (707) 542-9543



57122

July 6, 1979

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

Dr. Howard P. Ross
Earth Sciences Laboratory
University of Utah Research Institute
391 Chipeta Way
Salt Lake City, Utah 84108

Attention: Mr. J.B. Cotter, Director
Engineering and Energy
Applications Division

Contract DE-AC08-79ET-27012
Geothermal Reservoir Assessment
Northern Basin and Range

Gentlemen:

Attached are the Technical Progress Report and Form DOE 536, Contract Management Summary Report, for the month of June, 1979.

Sincerely,

UNION OIL CO. OF CALIFORNIA

A handwritten signature in cursive script, appearing to read "C. Frank Corbin".

C. Frank Corbin
Contract Administrator

CFC:cc

Attachment

cc: Accounting Reports Branch
Department of Energy
P.O. Box 14100
Las Vegas, Nevada 89114.

Contract No. DE-AC08-79ET-27012
Geothermal Reservoir Assessment
Northern Basin and Range

TECHNICAL PROGRESS REPORT
JUNE, 1979
PHASE I
WELL DE BRAGE NO. 2

No significant activities occurred during June, 1979.

CONTRACT MANAGEMENT SUMMARY REPORT

1. Contract Identification Geothermal Reservoir Assessment Northern Basin and Range		2. Reporting Period 6/1/79 through 6/30/79		3. Contract Number DE-AC08-79ET-27012	
4. Contractor (Name and Address) Union Oil Co. of California 461 S. Boylston Street Los Angeles, CA 90017				5. Contract Start Date 10/1/78	
				6. Contract Completion Date 3/30/80	

7. Months	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	& FY 1979
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9. Cost Status																g. Cost Plan Date	
a. (\$000) Planned																h. Planned Costs Prior FYs	
Actual 1,000																i. Actual Costs Prior FYs	
Estimated																j. Total Estimated Costs for Contract	
b. B&R Numbers																k. Total Contract Value	
AE-10-02-02																l. Unfilled Orders Outstanding	
m. Estimate for Subsequent Reporting Period																\$85,000	
Accrued Costs		c. Planned	0	0	0	0	118	218	13	0	220	305	0	12	0	0	0
		d. Actual	0	0	0	0	0	0	281	23	0						
		e. Variance	0	0	0	0	118	218	(268)	(23)	220						
		f. Cum. Variance	0	0	0	0	118	336	68	45	265						

10. Manpower Status (Direct Labor)																e. Manpower Plan Date	
a.																f. Planned Manpower Prior FYs	
																g. Actual Manpower Prior FYs	
																h. Total Estimated Manpower for Contract	
																i. Total Contract Manpower	
Manpower		b. Planned															
		c. Actual															
		d. Variance															

11. Major Milestone Status															
a. Drill 8000' Expl. Hole		[Bar chart showing completion progress]													
b. Test		[Bar chart showing completion progress]													
c. Drill 8000' Expl. Hole		[Bar chart showing completion progress]													
d. Test		[Bar chart showing completion progress]													
e. Report		[Bar chart showing completion progress]													
f. Seismic Survey		[Bar chart showing completion progress]													
g.															
h.															
i.															

12. Remarks

13. Signature of Contractor's Project Manager and Date
[Signature] 7-12-79

14. Signature of Government Technical Representative and Date

Contract No. DE-AC08-79ET-27012
Geothermal Reservoir Assessment
Northern Basin and Range

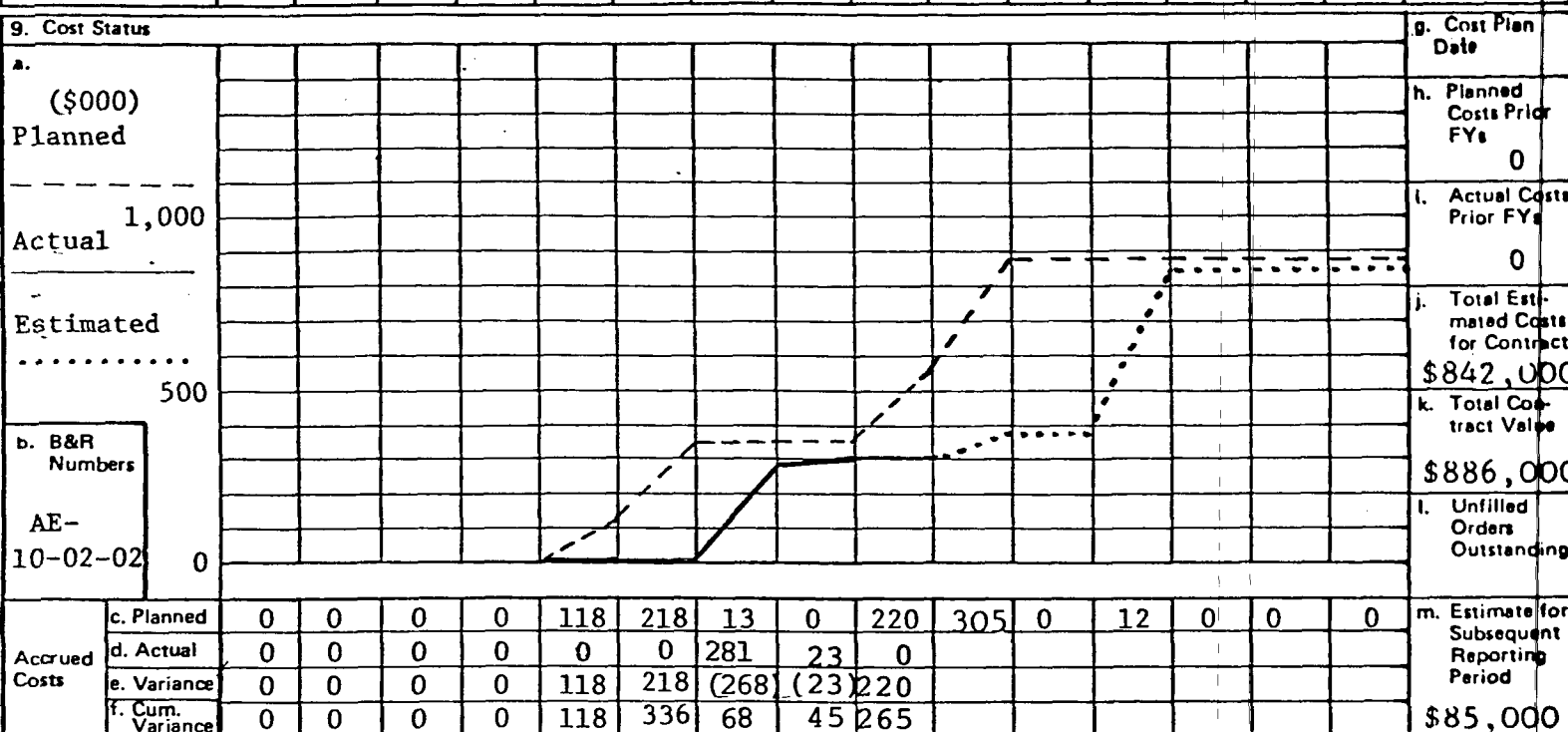
TECHNICAL PROGRESS REPORT
JUNE, 1979
PHASE I
WELL DE BRAGE NO. 2

No significant activities occurred during June, 1979.

CONTRACT MANAGEMENT SUMMARY REPORT

1. Contract Identification Geothermal Reservoir Assessment Northern Basin and Range		2. Reporting Period 6/1/79 through 6/30/79		3. Contract Number DE-AC08-79ET-27012	
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7. Months	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	8. FY 1979
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10. Manpower Status (Direct Labor)																e. Manpower Plan Date
a.																f. Planned Manpower Prior FYs
																g. Actual Manpower Prior FYs
																h. Total Estimated Manpower for Contract
																i. Total Contract Manpower
b. Planned																
c. Actual																
d. Variance																

11. Major Milestone Status															
a. Drill 8000' Expl. Hole		[Bar chart showing milestone completion from Oct to Dec]													
b. Test		[Bar chart showing milestone completion from Oct to Dec]													
c. Drill 8000' Expl. Hole		[Bar chart showing milestone completion from Oct to Dec]													
d. Test		[Bar chart showing milestone completion from Oct to Dec]													
e. Report		[Bar chart showing milestone completion from Oct to Dec]													
f. Seismic Survey		[Bar chart showing milestone completion from Oct to Dec]													
g.															
h.															
i.															

12. Remarks

13. Signature of Contractor's Project Manager and Date <i>[Signature]</i> 7-12-79	14. Signature of Government Technical Representative and Date
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Contract No. DE-AC08-79ET-27012
Geothermal Reservoir Assessment
Northern Basin and Range

TECHNICAL PROGRESS REPORT
JUNE, 1979
PHASE I
WELL DE BRAGE NO. 2

No significant activities occurred during June, 1979.

CONTRACT MANAGEMENT SUMMARY REPORT

1. Contract Identification Geothermal Reservoir Assessment Northern Basin and Range	2. Reporting Period 6/1 /79 through 6/30/79	3. Contract Number DE-AC08-79ET-27012
4. Contractor (Name and Address) Union Oil Co. of California 461 S. Boylston Street Los Angeles, CA 90017		5. Contract Start Date 10/1/78
		6. Contract Completion Date 3/30/80

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 a. (\$000) Planned ----- Actual 1,000 ----- Estimated 500 b. B&R Numbers AE-10-02-02 0																g. Cost Plan Date h. Planned Costs Prior FYs 0 i. Actual Costs Prior FYs 0 j. Total Estimated Costs for Contract \$842,000 k. Total Contract Value \$886,000 l. Unfilled Orders Outstanding	
Accrued Costs	c. Planned	0	0	0	0	118	218	13	0	220	305	0	12	0	0	0	m. Estimate for Subsequent Reporting Period
	d. Actual	0	0	0	0	0	0	281	23	0							
	e. Variance	0	0	0	0	118	218	(268)	(23)	220							
	f. Cum. Variance	0	0	0	0	118	336	68	45	265							
																n. Estimate for Subsequent Reporting Period \$85,000	

10. Manpower Status (Direct Labor) a.																e. Manpower Plan Date f. Planned Manpower Prior FYs g. Actual Manpower Prior FYs h. Total Estimated Manpower for Contract i. Total Contract Manpower	
Manpower	b. Planned																i. Total Contract Manpower
	c. Actual																
	d. Variance																

11. Major Milestone Status															
a. Drill 8000' Expl. Hole															
b. Test															
c. Drill 8000' Expl. Hole															
d. Test															
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f. Seismic Survey															
g.															
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12. Remarks

13. Signature of Contractor's Project Manager and Date 7-12-79	14. Signature of Government Technical Representative and Date
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Union Geothermal Division

Union Oil Company of California
2099 Range Ave., P.O. Box 6854
Santa Rosa, California 95406
Telephone (707) 542-9543



June 5, 1979

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

Dr. Howard P. Ross
Earth Sciences Laboratory
University of Utah Research Institute
391 Chipeta Way
Salt Lake City, Utah 84108

Attention: Mr. J.B. Cotter, Director
Engineering and Energy
Applications Division

Contract DE-AC08-79ET-27012
Geothermal Reservoir Assessment
Northern Basin and Range

Gentlemen:

Attached are the Technical Progress Report and Form DOE 536, Contract Management Summary Report, for the month of May, 1979.

Sincerely,

UNION OIL CO. OF CALIFORNIA

A handwritten signature in cursive script, appearing to read "C. Frank Corbin".

C. Frank Corbin
Contract Administrator

CFC:mra

Attachment

cc: Accounting Reports Branch
Department of Energy
P.O. Box 14100
Las Vegas, Nevada 89114

TECHNICAL PROGRESS REPORT

PHASE I

WELL DE BRAGA NO. 2

De Braga #2 was produced for 3 hours and 37 minutes on May 22, 1979. Mass produced to the pit during the test was 505,000# for an average rate of 140,000#/hour. Wellhead pressure and temperature were stable at 20 psig and 252°F throughout the test.

Maximum reservoir temperature of 336°F was recorded on the static survey the day before the test.

Flash was 8%, based upon 336°F reservoir temperature and a pressure of 20 psig at the orifice.

The temperature survey shows a high gradient in the bottom 250' of the hole indicating that temperature may continue to rise rapidly with depth.

Pressure build-up data has not yet been evaluated. A formal report will be prepared of all the testing including analysis of the data.

CONTRACT MANAGEMENT SUMMARY REPORT

1. Contract Identification Geothermal Reservoir Assessment Northern Basin and Range		2. Reporting Period 5/1/79 through 5/31/79		3. Contract Number DE-AC08-79ET-27012	
4. Contractor (Name and Address) Union Oil Co. of California 461 S. Boylston Street Los Angeles, CA 90017				5. Contract Start Date 10/1/78	
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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	
A. (\$000) Planned																h. Planned Costs Prior FYs 0	
Actual 1,000																i. Actual Costs Prior FYs 0	
Estimated																j. Total Estimated Costs for Contract \$757,000	
b. B&R Numbers																k. Total Contract Value \$801,000	
AE-10-02-02 0																l. Unfilled Orders Outstanding	
m. Estimate for Subsequent Reporting Period -0-																	
Accrued Costs		c. Planned	0	0	0	0	118	218	13	0	220	220	0	12	0	0	0
		d. Actual	0	0	0	0	0	0	281	23							
		e. Variance	0	0	0	0	118	218	(268)	(23)							
		f. Cum. Variance	0	0	0	0	118	336	68	45							

10. Manpower Status (Direct Labor)																e. Manpower Plan Date	
a.																f. Planned Manpower Prior FYs	
																g. Actual Manpower Prior FYs	
																h. Total Estimated Manpower for Contract	
																i. Total Contract Manpower	
Manpower		b. Planned															
		c. Actual															
		d. Variance															

11. Major Milestone Status															
a. Drill 8000' Expl. Hole		[Timeline bar]													
b. Test		[Timeline bar]													
c. Drill 8000' Expl. Hole		[Timeline bar]													
d. Test		[Timeline bar]													
e. Report		[Timeline bar]													
f.															
g.															
h.															
i.															

12. Remarks

13. Signature of Contractor's Project Manager and Date <i>[Signature]</i> 6-5-79	14. Signature of Government Technical Representative and Date
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TECHNICAL PROGRESS REPORT

PHASE I

WELL DE BRAGA NO. 2

De Braga #2 was produced for 3 hours and 37 minutes on May 22, 1979. Mass produced to the pit during the test was 505,000# for an average rate of 140,000#/hour. Wellhead pressure and temperature were stable at 20 psig and 252°F throughout the test.

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CONTRACT MANAGEMENT SUMMARY REPORT

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9. Cost Status															g. Cost Plan Date			
a. (\$000) Planned																h. Planned Costs Prior FYs		
																0		
	Actual 1,000																i. Actual Costs Prior FYs	
																	0	
Estimated 500																j. Total Estimated Costs for Contract		
																\$757,000		
b. B&R Numbers AE-10-02-02 0															k. Total Contract Value			
															\$801,000			
															l. Unfilled Orders Outstanding			
															m. Estimate for Subsequent Reporting Period			
															-0-			
Accrued Costs		c. Planned	0	0	0	0	118	218	13	0	220	220	0	12	0	0	0	
		d. Actual	0	0	0	0	0	0	281	23								
		e. Variance	0	0	0	0	118	218	(268)	(23)								
		f. Cum. Variance	0	0	0	0	118	336	68	45								

10. Manpower Status (Direct Labor)															e. Manpower Plan Date		
a.															f. Planned Manpower Prior FYs		
															g. Actual Manpower Prior FYs		
															h. Total Estimated Manpower for Contract		
															i. Total Contract Manpower		
Manpower		b. Planned															
		c. Actual															
		d. Variance															

11. Major Milestone Status														
a. Drill 8000' Expl. Hole		[Timeline bar]												
b. Test		[Timeline bar]												
c. Drill 8000' Expl. Hole		[Timeline bar]												
d. Test		[Timeline bar]												
e. Report		[Timeline bar]												
f.														
g.														
h.														
i.														

12. Remarks

13. Signature of Contractor's Project Manager and Date <i>[Signature]</i> 6-5-79	14. Signature of Government Technical Representative and Date
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TECHNICAL PROGRESS REPORT

PHASE I

WELL DE BRAGA NO. 2

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				6. Contract Completion Date 3/30/80	

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																																																																
a. (\$000) Planned															h. Planned Costs Prior FYs																																																																
Actual 1,000															i. Actual Costs Prior FYs																																																																
Estimated															j. Total Estimated Costs for Contract																																																																
b. B&R Numbers															k. Total Contract Value																																																																
AE-10-02-02															l. Unfilled Orders Outstanding																																																																
m. Estimate for Subsequent Reporting Period															-0-																																																																
Accrued Costs		<table border="1"> <tr> <td>c. Planned</td> <td>0</td><td>0</td><td>0</td><td>0</td><td>118</td><td>218</td><td>13</td><td>0</td><td>220</td><td>220</td><td>0</td><td>12</td><td>0</td><td>0</td><td>0</td> </tr> <tr> <td>d. Actual</td> <td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>281</td><td>23</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td>e. Variance</td> <td>0</td><td>0</td><td>0</td><td>0</td><td>118</td><td>218</td><td>(268)</td><td>(23)</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td>f. Cum. Variance</td> <td>0</td><td>0</td><td>0</td><td>0</td><td>118</td><td>336</td><td>68</td><td>45</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> </table>													c. Planned	0	0	0	0	118	218	13	0	220	220	0	12	0	0	0	d. Actual	0	0	0	0	0	0	281	23								e. Variance	0	0	0	0	118	218	(268)	(23)								f. Cum. Variance	0	0	0	0	118	336	68	45								
c. Planned	0	0	0	0	118	218	13	0	220	220	0	12	0	0	0																																																																
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10. Manpower Status (Direct Labor)															e. Manpower Plan Date																																																
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11. Major Milestone Status														
a. Drill 8000' Expl. Hole		[Timeline bar]												
b. Test		[Timeline bar]												
c. Drill 8000' Expl. Hole		[Timeline bar]												
d. Test		[Timeline bar]												
e. Report		[Timeline bar]												
f.														
g.														
h.														
i.														

12. Remarks

13. Signature of Contractor's Project Manager and Date <i>[Signature]</i> 6-5-79	14. Signature of Government Technical Representative and Date
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Union Geothermal Division

Union Oil Company of California
2099 Range Ave., P.O. Box 6854
Santa Rosa, California 95406
Telephone (707) 542-9543



May 10, 1979

Department of Energy
Nevada Operations Office
P.O. Box 14100
Las Vegas, Nevada 89114
Attn: Mr. J. B. Cotter, Director
Engineering and Energy
Applications Division

Dr. Howard P. Ross
Earth Sciences Laboratory
University of Utah
Research Institute
391 Chipeta Way
Salt Lake City, Utah 84108

Contract DE-AC08-79ET-27012
Geothermal Reservoir Assessment
Northern Basin and Range

Gentlemen:

Attached is the Technical Progress Report for the month of April, 1979. The reporting period has been extended through May 7th to include the completion of DeBraga No. 2.

The drilling and completion history, along with the applicable samples and logs should be available shortly.

Sincerely,

UNION OIL COMPANY OF CALIFORNIA

A handwritten signature in cursive script, appearing to read "C. Frank Corbin".

C. Frank Corbin
Contract Administrator

CFC:ts

Attachment

Contract No. DE-AC08-79ET-27012
Geothermal Reservoir Assessment
Northern Basin and Range

TECHNICAL PROGRESS REPORT
PHASE I
WELL DE BRAGA NO. 2

Moved in and rigged up Coastal Drilling Co. Rig #2 on 4/5/79. The well was spudded at 0600 hours on 4/6/79, and 17-1/2" hole drilled to 312'.

312' of 13-3/8", 54.5#, K55 buttress casing was set and cemented to surface. A 12" hydril and double shaffer blowout preventer was installed and tested.

Drilled out cement and drilled 12-1/4" hole from 312' to 1205'.

Ran Schlumberger temperature logs, DIL-8, CNL-FDC and 4-arm Dipmeter. Maximum reading thermometer temperature was 222°F at 950'.

1196' of 9-5/8", 40#, K55 buttress casing was set and cemented to surface. The 10"-600 x 9-5/8" S.O.W. casing head and B.O.P equipment were installed and tested to 1000 psi.

Drilled out cement and drilled 8-3/4" hole from 1205' to 1309'. Lost returns at 1309'. Pumped 200 ft³ cement through bit at 881', and 400 ft³ at 682'.

Drilled cement from 911' to 1309'. Drilled 8-3/4" hole from 1309' to 1355'. While making connection encountered obstruction at 1328'. Drilled for 30 minutes with no success. Well commenced flowing. Killed well and pumped 190 ft³ LCM and 100 ft³ cement at 907'.

Cleaned out cement from 1126' to 1355'. Well began flowing. Killed well and pumped 190 ft³ LCM and 200 ft³ cement at 939'. Drilled firm cement from 1061' to 1326'. Well began flowing. Killed well. Ran and set EZSV cement retainer at 1065'. Cemented with 350 ft³ cement.

Drilled through EZSV and cleaned out cement from 1220' to 1355'. Drilled 8 3/4" hole from 1355' to 1450'. Lost 25% returns. Pumped 420 ft³ cement through OEDP at 1159'. Drilled through cement to 1450'. Drilled 8 3/4" hole from 1450' to 4772'.

Broke wire line while surveying. Reamed hole from 4750' to 4772'. Broke rotary drive. Pulled drilling assembly to 1168' and repaired rotary drive.

Drilled 8 3/4" hole from 4772' to 5124'. Broke wire line while surveying. Recovered line and continued drilling.

Drilled 8 3/4" hole from 5124' to 6130'. Shut down to repair pumps and level derrick.

Drilled 8 3/4" hole from 6130' to 6946', total depth.

Twisted off box on No. 9 drill collar leaving fish in hole. Made up 8 1/8" socket, jars and bumper sub and pulled fish free.

Ran Schlumberger temperature logs, DIL-8, CNL-FDC and 4-arm Dipmeter. Maximum temperature recorded was 312° on bottom after 14 hours static.

All drill pipe and tools were laid down.

Ran combination blank and slotted 7", 26#, 8rd, LT&C liner with guide shoe at 6940', hung on Midway 7" x 9 5/8" liner hanger at 987'. Slotted liner from 2724'-3241', 3408'-3725', 4220'-5146', 6303'-6503', and 6625'-6940'. Perforated 18 slots per foot, 2" slots, 6" centers, 160 mesh.

Installed 10" 600 WKM Master Valve and 10" 600 x 10" 900 crossover spool and hydril. Closed well in.

The Coastal Drilling Co. Rig #2 was released at 2400 hours, 5/7/79.

Contract No. DE-AC08-79ET-27012
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Northern Basin and Range

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