

HORSESHOE GALLUP FIELD
SAN JUAN COUNTY, NEW MEXICO
HUMBIE WELL DATA

Lease & Well	Total Depth	Production Casing Size	Depth Self-Feet	Estimated Top of Cement Feet	Perforated Interval	Completion Date	Initial Potential		May - 1960 Production		011 Prod. to June-1960		Waterflood Well Status
							Barrels of Oil/Day	GOR Cu.Ft./Bbl.	Barrels of Oil/Day	GOR Cu.Ft./Bbl.	6-1-60 Bbls.	Allowable Bbls/Day	
Humble Navajo Tribe of Indians													
F-1	1227	4-1/2	1227	700	1147-60	11-5-58	30	167	11	166	11,538	13	Inj.
F-2	1152	4-1/2	1118	155 (Survey)	1118-.52	10-20-58	39	182	22	139	12,917	16	Prod.
F-3	1136	4-1/2	1128	600	1084-1100	1-26-58	117	129	60	138	24,150	30	Inj.
					1105-1116								
F-4	1153	4 DP	1131	600	1078-1094	3-5-59	77	156	31	150	20,055	30	Prod.
F-5	1047	4 DP	1045	500	1014-1032	3-17-59	63	778	51	144	20,754	51	Prod.
F-6	1024	4 DP	1021	500	966-990	3-20-59	72	620	60	52	21,730	61	Prod.
F-7	1080	4 DP	1068	500	1031-1041	4-12-59	24	143	10	98	6,511	11	Prod.
F-8	972	4 DP	969	400	912-937	3-30-59	71	37	60	14	21,812	61	Inj.
F-9	924	4 DP	923	400	877-902	4-8-59	124	3096	19	5526	6,985	23*	Inj.
F-10	1048	4 DP	1046	500	990-1002	4-14-59	23	269	12	269	7,298	12	Prod.
F-11	917	4 DP	914	300	880-894	4-20-59	62	228	9	405	12,303	8	Inj.
F-12	1000	4 DP	998	400	954-967	4-20-59	96	83	60	6	20,704	50	Prod.
F-13	921	4 DP	919	400	884-897	5-4-59	81	99	60	13	20,166	50	Prod.
F-14	860	4 DP	850	300	826-836	5-1-59	Associated Gas Well		-	-	-	-	Inj.
F-15	968	5	967	300	910-922	7-2-59	60	100	23	43	11,220	20	Inj.
F-16	975	5	973	300	922-931	6-27-59	60	100	6	177	9,036	6	Prod.
F-17	954	4 DP	952	400	916-928	5-10-59	85	46	23	14	14,379	23	Inj.
F-18	1027	4 DP	1025	300	978-999	5-17-59	56	77	21	95	14,791	23	Inj.
F-19	1047	5	1045	300	1004-1016	5-20-59	108	18	49	52	18,461	49	Prod.
F-20	975	5	974	300	945-963	5-26-59	115	225	54	11	18,890	56	Prod.
F-21	998	5	997	300	962-979	6-2-59	61	104	38	108	16,134	38	Inj.
F-22	995	5	994	300	931-964	6-2-59	120	207	24	44	14,764	24	Inj.
F-23	1040	5	1037	400	980-1010	6-14-59	78	150	60	100	17,915	61	Inj.
F-24	1045	5	1043	400	996-1012	6-4-59	63	189	40	81	15,145	40	Inj.
F-25	1109	5	1105	500	1030-1060	7-13-59	77	100	60	9	16,420	61	Inj.
F-26	1138	5	1131	500	1054-1068	7-6-59	62	100	52	226	14,297	61	Prod.
F-27	1092	5	1088	400	1056-1071	7-30-59	41	100	22	46	9,807	23	Inj.
F-28	1170	5	1152	400	1110-27	7-29-59	30	100	10	245	5,358	10	Inj.
F-29	1168	5	1161	500	1128-1140	7-11-59	30	TSJM	6	1801	5,511	6	Prod.
F-30	1019	5	983	400	964-973	9-8-59	5	67	5	161	1,527	5	Prod.
F-31	1056	5	1050	450	1012-1022	10-18-59	3	337	3	782	344	3	Inj.
F-32	1076	5	1073	475	1040-1050	9-5-59	6	200	2	516	958	2	Inj.
F-33	1075	5	1071	400	1034-1044	7-19-59	55	100	6	201	10,666	5	Inj.
F-34	1058	5	1053	400	1014-1021	8-7-59	28	353	14	76	5,934	14	Inj.
F-35	1140	5	1137	475	1085-1095	8-27-59	2	TSJM	3	355	893	3	Prod.
F-36	1022	5	1018	400	981-988	8-26-59	51	-	-	-	-	-	Inj.
F-37	1156	-	-	-	-	-	Dry, Plugged and Abandoned		-	-	-	-	-
F-38	1125	4-1/2	1122	600	1069-1077	9-16-55	SI	-	-	-	-	-	Dry
F-39	950	4-1/2	937	514	883-914	9-13-59	70	TSJM	60	83	13,656	61	Inj.
F-40	911	4-1/2	907	320	851-856	9-8-59	75	173	22	2411	10,640	39*	Prod.
F-41	915	4-1/2	904	300	872-882	8-26-59	160	-	5	27077	5,730	3	Prod.
F-42	1117	-	-	-	-	-	Dry, Plugged and Abandoned		-	-	-	-	-
F-43	1068	4-1/2	1064	668	1005-1010	9-16-59	SI	-	-	-	-	-	Dry
F-44	-	-	-	-	-	-	Proposed Inj. Well Location		-	-	-	-	-
G-1	1010	4	1005	400	971-83	5-11-59	104	427	9	87	8,736	16	Prod.
G-2	930	5	927	300	899-911	5-19-59	100	TSJM	21	45	7,990	24	Prod.
G-3	992	4-1/2	988	687	932-942	9-28-59	SI	-	-	-	-	-	Inj.
G-4	958	4-1/2	951	200	905-920	8-17-59	106	3325	20	973	5,901	20	Inj.
G-5	1065	4-1/2	1050	465	1005-1010	9-5-59	SI	-	-	-	-	-	Inj.
G-6	972	4-1/2	969	430	917-927	9-14-59	8	20	6	104	1,612	10	Inj.
Totals:										484,076		1124	

BEFORE EXAMINER NUTTER
OIL CONSERVATION COMMISSION
CASH NO. 2024
EXHIBIT NO. 5

NO. OF PRODUCING WELLS

50
40
30
20
10
0

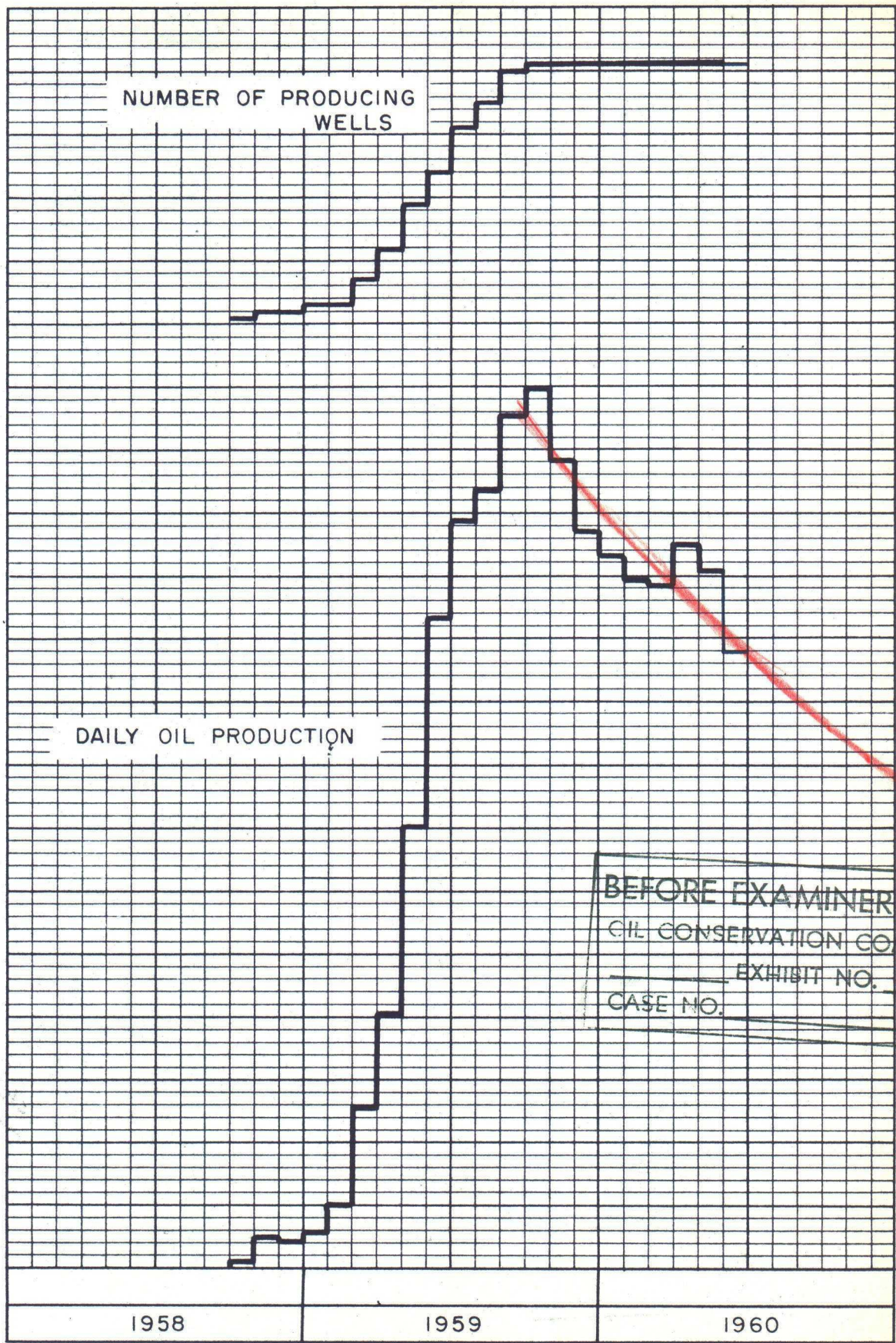
NUMBER OF PRODUCING WELLS

DAILY OIL PRODUCTION - BARRELS

1400
1200
1000
800
600
400
200
0

DAILY OIL PRODUCTION

BEFORE EXAMINER NUTTER
C.I.L. CONSERVATION COMMISSION
EXHIBIT NO. 6
CASE NO. 2024



PERFORMANCE CURVE
HUMBLE'S NAVAJO "F" & "G" LEASES
HORSESHOE GALLUP FIELD
SAN JUAN COUNTY, NEW MEXICO

EXHIBIT NO.	1
DATE	15 W
CASE NO.	2024

36	2022	31
37	2022	31
38	2022	31
39	2022	31
40	2022	31
41	2022	31
42	2022	31
43	2022	31
44	2022	31
45	2022	31
46	2022	31
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92	2022	31
93	2022	31
94	2022	31
95	2022	31
96	2022	31
97	2022	31
98	2022	31
99	2022	31
100	2022	31

LEGEND

- HUMBLES PROPOSED PROTECT AREA
- ATLANTIC'S PROTECT AREA



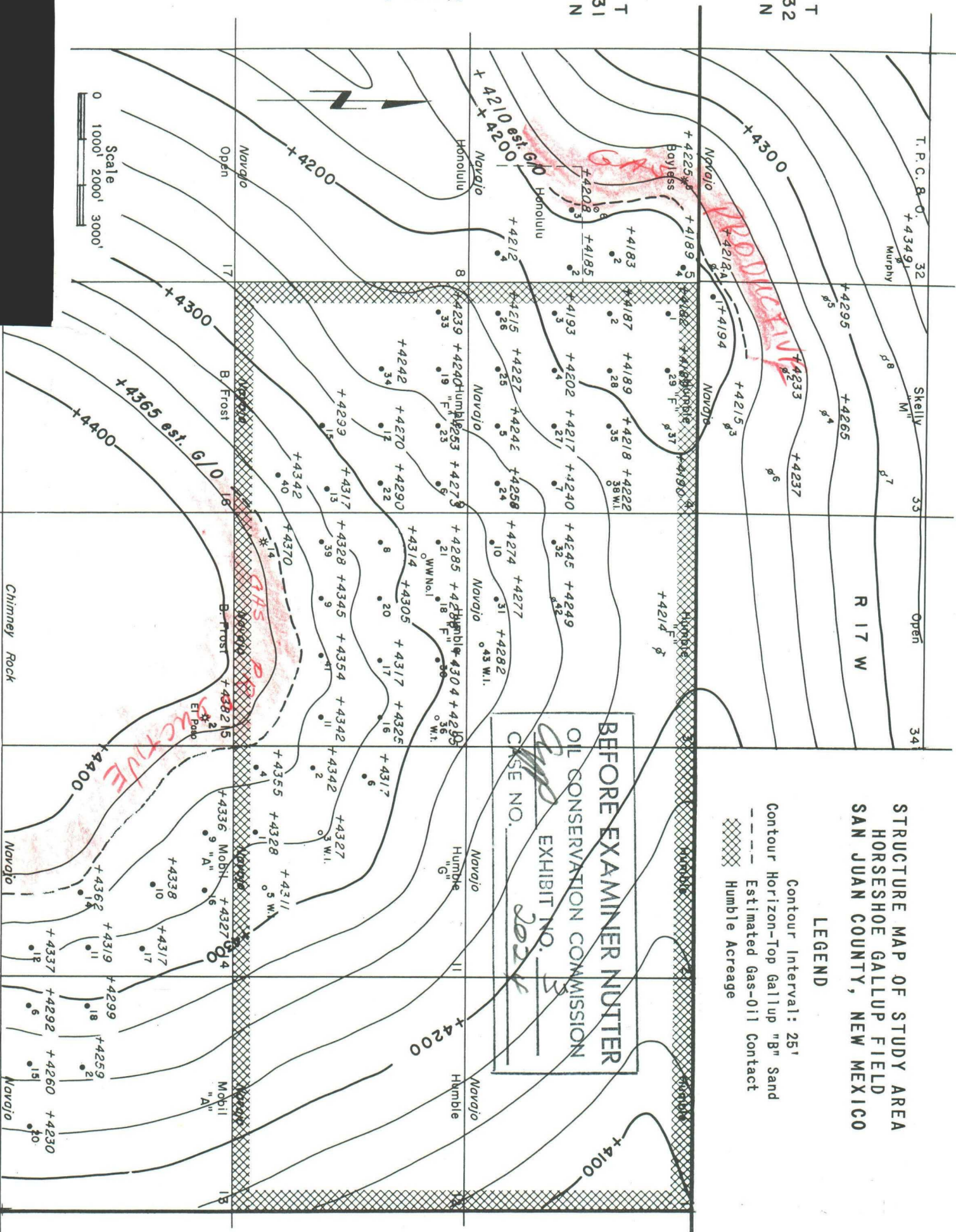
31 N

STRUCTURE MAP OF STUDY AREA
HORSESHOE GALLUP FIELD
SAN JUAN COUNTY, NEW MEXICO

LEGEND

- Contour Interval: 25'
 --- Contour Horizon-Top Gallup "B" Sand
 --- Estimated Gas-Oil Contact
 ▨ Humble Acreage

BEFORE EXAMINER NUTTER
OIL CONSERVATION COMMISSION
CASE NO. 2024
EXHIBIT NO. 3



LARGE FORMAT
EXHIBIT HAS
BEEN REMOVED
AND IS LOCATED
IN THE NEXT FILE

HORSESHOE GALLUP FIELD
SAN JUAN COUNTY, NEW MEXICO
HUMBLE WELL DATA

Lease & Well	Total Depth	Production Casing Size	Depth Set-Feet	Estimated Top of Cement Feet	Perforated Interval	Completion Date	Initial Potential		May - 1960 Production		Cumulative Oil Prod. to 6-1-60		June-1960 Allowable Bbls./Day	Waterflood Well Status	
							Barrels of Oil/Day	GOR Cu.Ft./Bbl.	Barrels of Oil/Day	GOR Cu.Ft./Bbl.	Bbls.	Bbls.			
Humble Navajo Tribe of Indians															
F-1	1227	4-1/2	1227	700	1147-60	11-5-58	30	167	11	166	11,538	13		Inj.	
F-2	1152	4-1/2	1118	155 (Survey)	1118-52	10-20-58	39	182	22	139	12,917	16		Prod.	
F-3	1136	4-1/2	1128	600	1084-1100	1-26-59	117	129	60	138	24,150	30		Inj.	
F-4	1153	4 DP	1131	600	1078-1094	3-5-59	77	156	31	150	20,055	30		Prod.	
F-5	1047	4 DP	1045	500	1014-1032	3-17-59	63	778	51	144	20,754	51		Prod.	
F-6	1024	4 DP	1021	500	966-990	3-20-59	72	620	60	52	21,730	61		Prod.	
F-7	1080	4 DP	1068	500	1031-1041	4-12-59	24	143	10	98	6,511	11		Prod.	
F-8	972	4 DP	969	400	912-937	3-30-59	71	37	60	14	21,812	61		Inj.	
F-9	924	4 DP	923	400	877-902	4-8-59	124	3096	19	5526	6,985	23*		Inj.	
F-10	1048	4 DP	1046	500	990-1002	4-14-59	23	269	12	289	7,298	12		Prod.	
F-11	917	4 DP	914	300	880-894	4-20-59	62	228	9	405	12,303	8		Inj.	
F-12	1000	4 DP	998	400	954-967	4-20-59	96	83	60	6	20,704	50		Prod.	
F-13	921	4 DP	919	400	884-897	5-4-59	81	99	60	13	20,166	50		Prod.	
F-14	860	4 DP	850	300	826-836	5-1-59	Associated Gas Well								Inj.
F-15	968	5	967	300	910-922	7-2-59	60	100	23	43	11,220	20		Inj.	
F-16	975	5	973	300	922-931	6-27-59	60	100	6	177	9,036	6		Prod.	
F-17	954	4 DP	952	400	916-928	5-10-59	85	46	23	14	14,379	23		Inj.	
F-18	1027	4 DP	1025	300	978-999	5-17-59	56	77	21	95	14,791	23		Inj.	
F-19	1047	5	1045	300	1004-1016	5-20-59	108	18	49	52	18,461	49		Prod.	
F-20	975	5	974	300	945-963	5-26-59	115	225	54	11	18,890	56		Prod.	
F-21	998	5	997	300	962-979	6-2-59	61	104	38	108	16,134	38		Inj.	
F-22	995	5	994	300	931-964	6-2-59	120	207	24	44	14,764	24		Inj.	
F-23	1040	5	1037	400	980-1010	6-14-59	78	150	60	100	17,915	61		Inj.	
F-24	1045	5	1043	400	996-1012	6-4-59	63	189	40	81	15,145	40		Inj.	
F-25	1109	5	1105	500	1030-1060	7-13-59	77	100	60	9	16,420	61		Inj.	
F-26	1138	5	1131	500	1054-1068	7-6-59	62	100	52	226	14,297	61		Prod.	
F-27	1092	5	1088	400	1056-1071	7-30-59	41	100	22	46	9,807	23		Inj.	
F-28	1170	5	1152	400	1110-127	7-29-59	30	100	10	245	5,358	10		Inj.	
F-29	1168	5	1161	500	1128-1140	7-11-59	30	TSTM		6	5,511	6		Prod.	
F-30	1019	5	983	400	964-973	9-8-59	5	67	3	161	1,527	5		Prod.	
F-31	1056	5	1050	450	1012-1022	10-18-59	3	337	3	344	782	3		Inj.	
F-32	1076	5	1073	475	1040-1050	9-5-59	6	200	2	516	958	2		Inj.	
F-33	1075	5	1071	400	1034-1044	7-19-59	55	100	6	201	10,666	5		Inj.	
F-34	1058	5	1053	400	1014-1021	8-7-59	28	353	14	76	5,934	14		Inj.	
F-35	1140	5	1137	475	1085-1095	8-27-59	2	TSTM		3	355	3		Prod.	
F-36	1022	5	1018	400	981-988	8-26-59	SI	-	-	-	-	-		Inj.	
F-37	1156	-	-	-	-	-	Dry, Plugged and Abandoned								Dry
F-38	1125	4-1/2	1122	600	1069-1077	9-16-55	SI	-	-	-	-	-		Inj.	
F-39	950	4-1/2	937	514	883-914	9-13-59	70	TSTM		83	13,656	61		Prod.	
F-40	911	4-1/2	907	320	851-856	9-8-59	75	173	22	2411	10,640	39*		Inj.	
F-41	915	4-1/2	904	300	872-882	8-26-59	160	-	5	27077	5,730	5		Prod.	
F-42	1117	-	-	-	-	-	Dry, Plugged and Abandoned								Dry
F-43	1068	4-1/2	1064	668	1005-1010	9-16-59	SI	-	-	-	-	-		Inj.	
F-44	-	-	-	-	-	-	Proposed Inj. Well Location								Inj.
G-1	1010	4	1005	400	971-93	5-11-59	104	427	9	87	8,736	16		Prod.	
G-2	930	5	927	300	899-911	5-19-59	100	TSTM		21	7,990	24		Prod.	
G-3	982	4-1/2	988	687	932-942	9-28-59	SI	-	-	-	-	-		Inj.	
G-4	958	4-1/2	951	200	905-920	8-17-59	106	3325	20	973	5,901	20		Inj.	
G-5	1065	4-1/2	1050	465	1005-1010	9-5-59	SI	-	-	-	-	-		Inj.	
G-6	972	4-1/2	969	430	917-927	9-14-59	8	20	6	104	1,612	10		Inj.	
Totals:															

LARGE FORMAT
EXHIBIT HAS
BEEN REMOVED
AND IS LOCATED
IN THE NEXT FILE

WELEX



INDUCTION— ELECTRIC LOG

COMPANY HUMBLE OIL &
REFINING COMPANY
WELL NAVAJO F-24
FIELD CHIMNEY ROCK
County SAN JUAN
State NEW MEXICO
File

COMPANY HUMBLE OIL & REFINING COMPANY

WELL NAVAJO F-24

FIELD CHIMNEY ROCK

COUNTY SAN JUAN STATE NEW MEXICO

Location

660' FSL 660' FEL

Other Logs

—

Sec. 4 Twp 31N Rge 17W

Elevation

Permanent Datum 4-1/2' ABOVE GROUND Elev. 5255.5'
Log Measured From KELLY BUSHING
Drilling Measured From KELLY BUSHING

KB. 5255.5'
DF. 5254.5'
GL. 5251'

Run No. ONE
Date 5-24-59
Total Depth Driller 1045'
Total Depth Welex 1048'
Csg. Shoe Driller 48'
Csg. Shoe Welex 52'
Survey Begins 1043'
Survey Ends 52'
Csg. Size 5-7/8"
Bit Size 6-3/4"

Mud Data — Type CHEMICAL

Weight

Viscosity

Ph.

Wtr. Loss cc/ min.

Res. @ Surface Temp.

Res. @ Max. Hole Temp.

Rmf.

Rmc.

Source Mud Sample

Recorded By

Witnessed By

Logging Tool No.

1.2 @ 72 F @ F @ F @ F
1.1 @ 79 F @ F @ F @ F
0.9 @ 79 F @ F @ F @ F
1.3 @ 79 F @ F @ F @ F
FLOW LINE
WRIGHT
MR. BOANE
9490

well file

**DIVISION
PRODUCTION GEOLOGIST
FILE**

LARGE FORMAT
EXHIBIT HAS
BEEN REMOVED
AND IS LOCATED
IN THE NEXT FILE



McCULLOUGH

TOOL COMPANY
RADIATION LOG



Location of Well	COMPANY	HUMBLE OIL COMPANY						
	WELL	NAYAJO #1-P						
	FIELD	CHIMNEY ROCK GALLUP						
	COUNTY	SAN JUAN STATE NEW MEXICO						
	LOCATION	SECTION 4 - 31N - 17W 660'FWL & 660'FWL						
Log Mass. From	KELLY BUSHING	Flow	5331'					
Drp. Mass. From	KELLY BUSHING	Flow	5331'					
Perm. Datum	GROUND LEVEL	Flow	5323'					
Rec. Trk. No.	1462	Trk. No.	1424	Trk. Oper.	THANIEL	Log Ticket No.	67802	
Date	9-29-58		Maximum Recorded Temp.					
Total Depth (Driller)	(1185' P.D.)		Effective Depth (McCulloch)			1187'		
Type of Fluid in Hole	OIL		Fluid Level			FULL		
O.D. of Instrument	3 1/2"		Length of Device—Overall			11'		
Neutron Source P.	441		Spacing			19 1/2" setting 3.9 CU		
Recorded By	RIMARSON		Witnessed By			MR. McCLELLAN		
Type of Log	GAMMA RAY		GAMMA RAY		NEUTRON		NEUTRON	
Run No.	2 2"		2 2" 1 5"		2 2"		2 2" 1 5"	
Top of Logged Interval	0'		250' 850'		0'		250' 850'	
Bottom of Logged Interval	250'		1179' 1179'		250'		1185' 1185'	
Time Constant and Instrument Setting	G2 TC4.25S D-153 R-4		G2 TC4.5SEC D-153 R-3		G2 TC6SEC D-155 R-3		G2 TC7.5SEC D-155 R-2	
Logging Speed Ft./Min.	30'		30' 20'		30'		30' 20'	
Statistical Variation								
Sensitivity	2.7 MICRO-ROENTGENS/HR./IN.		2.0		75 COUNTS PER SEC.		51 PER IN.	
CASING RECORD (Customer)								
Run No.	Size—In.	Wt.—lb.	Interval		OPEN (BONE) HOLE RECORD			
1	7-5/8"	--	0' to 42'		Bit Size			
2	4 1/2"	--	0' to 1220'		Interval			
3								
4								
5								
REMARKS OR OTHER DATA								
NOTE: GAMMA AND NEUTRON ZEROS ARE THE SAME ON THE 2" SCALE AND 5" SCALE.								

Reproduced By
Four Corners Well Log Service

Dallas 2, Texas

REFERENCE K1019B

4

COMPLETION RECORD

SPUD DATE

COMP DATE

BEFORE EXAMINER NUTTER
OIL CONSERVATION COMMISSION
EXHIBIT NO. 7
CASE I.O. 20 ref

MICRO-ROENTGENS/HR.				COUNTS/SEC.			
5.8	34.8	72.8	80.8	561	612	663	714

WELEX



INDUCTION- ELECTRIC LOG

COMPANY HUMBLE OIL & REFINING COMPANY WELL NAVAJO F. NO. 33 FIELD CHIMNEY ROCK COUNTY SAN JUAN STATE NEW MEXICO FILE	COMPANY HUMBLE OIL & REFINING COMPANY	
	WELL NAVAJO "F" NO. 33	
	FIELD CHIMNEY ROCK	
	COUNTY SAN JUAN	STATE NEW MEXICO
	Location 660' FNL @ 660' FWL	
Sec 9 Top 31N Rge 17W		Other Logs
Permanent Datum GROUND LEVEL Elev 5273'		Elevation
Log Measured From ROTARY KELLY BUSHING KB 5277.5'		
Drilling Measured From ROTARY KELLY BUSHING DF 5276.5'		
		GL 5273'
Run No.	ONE	
Date	7-2-53	
Total Depth Driller	1075'	
Total Depth Welex	1076'	
Cgs. Shoe Driller	48'	
Cgs. Shoe Welex	50'	
Survey Begins	1071'	
Survey Ends	50'	
Cgs. Size	7-5/8"	
Bit Size	6-3/4"	
Mud Data - Type	WATER BASE CHEMICALS	
Weight	9.0	
Viscosity	40	
Ph.		
Wtr. Loss cc/30 min.	5.0 @ 70°F	
Res. @ Surface Temp.	1.5 @ 70°F	
Res. @ Max. Hole Temp.	1.3 @ 78°F	
Ref.	1.1 @ 78°F	
Res.	1.6 @ 78°F	
Source Mud Sample	CIRCULATED	
Recorded By	K. QUINN	
Witnessed By	MR. DOANE	
Logging Tool No.	10057	

Resistivity Curves Recorded Normal 18' Normal Lateral Lateral INDUCTION 40' 5 COIL	REMARKS:
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Reproduced By
Four Corners Well Log Service

Dallas 2, Texas

REFERENCE K1285B

3 COMPLETION RECORD

SPUD DATE

COMP DATE

DST RECORD

WELEX



INDUCTION— ELECTRIC LOG

COMPANY HUMBLE OIL & REFINING COMPANY
WELL NAVAJO "G" 6
FIELD CHIMNEY ROCK
COUNTY SAN JUAN
STATE NEW MEXICO
File

COMPANY HUMBLE OIL & REFINING COMPANY

WELL NAVAJO "G" 6

FIELD CHIMNEY ROCK

COUNTY SAN JUAN STATE NEW MEXICO

Location

2300' FNL 660' FWL

Other Logs

Sec. 11 Top 31N Rge 17W

Elevation

Permanent Datum 4.5' ABOVE GROUND LEVEL 5236.5'

KB 5236.5'

Log Measured From KELLY BUSHING

DF 5236.5'

Drilling Measured From KELLY BUSHING

GL 5232'

Run No.	ONE								
Date	7-27-59								
Total Depth Driller	972'								
Total Depth Water	971'								
Cap. Shoe Driller	48'								
Cap. Shoe Water	50'								
Survey Begins	966'								
Survey Ends	50'								
Cap. Size	7-5/8"								
Bit Size	6-1/8"								
Mud Data - Type	CHEMICAL								
Weight	8.9								
Viscosity	46								
Ph.	1.5 @ -°F	@ -°F	@ -°F	@ -°F	@ -°F	@ -°F	@ -°F	@ -°F	@ -°F
Wtr. Loss cc./min.	95 @ 79 °F	@ -°F	@ -°F	@ -°F	@ -°F	@ -°F	@ -°F	@ -°F	@ -°F
Res. @ Surface Temp.	95 @ 78 °F	@ -°F	@ -°F	@ -°F	@ -°F	@ -°F	@ -°F	@ -°F	@ -°F
Res. @ Max. Hole Temp.	75 @ 78 °F	@ -°F	@ -°F	@ -°F	@ -°F	@ -°F	@ -°F	@ -°F	@ -°F
Res.	8 @ 78 °F	@ -°F	@ -°F	@ -°F	@ -°F	@ -°F	@ -°F	@ -°F	@ -°F
Source Mud Sample	PTT								
Recorded By	WRIGHT								
Witnessed By	MR. BOANE								
Logging Tool No.	10058								

Reproduced By

Four Corners Well Log Service

Dallas 2, Texas

REFERENCE K1317D

3 COMPLETION RECORD

SPUD DATE

COMP DATE

DST RECORD

CASING RECORD

WELEX



INDUCTION— ELECTRIC LOG

HUMBLE OIL &
REFINING COMPANY
NAVAJO NO. "G"-5
CHIMNEY ROCK
SAN JUAN
NEW MEXICO

COMPANY HUMBLE OIL & REFINING COMPANY

WELL NAVAJO NO. "G"-5

FIELD CHIMNEY ROCK

COUNTY SAN JUAN STATE NEW MEXICO

Location

736' FSL 2045' FEL

Other Logs

Sec. 11 Twp 31N Rge 17W

Elevation

Permanent Datum 3.5' ABOVE GROUND LEVEL Elev. 5316.5'

Log Measured From KELLY BUSHING

KB. 5315.5'

Drilling Measured From KELLY BUSHING

DF. 5316.5'

GL. 5312.0'

Run No. ONE
Date 8-5-59
Total Depth Driller 1065'
Total Depth Welox 1068'
Csg. Shoe Driller 38'
Csg. Shoe Welox 38'
Survey Begins 1063'
Survey Ends 38'
Csg. Size 7"
Bit Size 6-1/8"
Mud Data - Type CHEMICAL
Weight 8.9
Viscosity 42
Ph. 9.0 @ 72°F @ 72°F @ 72°F @ 72°F
Wt. Loss cc/ 30 min. 15 @ 72°F @ 72°F @ 72°F @ 72°F
Res. @ Surface Temp. 1.0 @ 72°F @ 72°F @ 72°F @ 72°F
Res. @ Max. Hole Temp. 0.9 @ 72°F @ 72°F @ 72°F @ 72°F
Rhe. 1.4 @ 72°F @ 72°F @ 72°F @ 72°F
Rhe. 1.4 @ 72°F @ 72°F @ 72°F @ 72°F
Source Mud Sample CIRCULATED
Recorded By WRIGHT
Witnessed By MR. BOANE
Logging Tool No. 10058

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Four Corners Well Log Service

Dallas 2, Texas

REFERENCE K1342D

4

COMPLETION RECORD

SPUD DATE

COMP DATE

DST RECORD

CASING RECORD

HOSTON, TEXAS



Induction-Electrical Log

COUNTY	SAN JUAN, NEW MEX.	COMPANY	HUMBLE OIL & REFG. COMPANY	Other Surveys	
FIELD or LOCATION	CHIMNEY ROCK	REFINING COMPANY		SL	
WELL	NAVAJO G 4	WELL	NAVAJO G 4	Location of Well	
		FIELD	CHIMNEY ROCK	660' FR S/L	
		LOCATION	SEC. 11-31N-17W	660' FR W/L	
		COUNTY	SAN JUAN	SEC. 11-31N-17W	
		STATE	NEW MEXICO	Elevation: D.F. 5262.5 K.B. 5263.5 or G.L. 5259	
				FILING No.	

RUN No.	ONE
Date	7-20-59
First Reading	953
Last Reading	48
Feet Measured	905
Csg. Schlum.	48
Csg. Driller	47
Depth Reached	959
Bottom Driller	957
Depth Datum	K8
Mud Nat.	GEL CHCM
Dens. Visc.	9.0 48
Mud Resist.	1.6 @ 78°F @ F @ F @ F @ F @ F
Res. BHT	1.59 @ 80°F @ F @ F @ F @ F @ F
Rmf	.98 @ 80°F @ F @ F @ F @ F @ F
Rmc	-- @ -- F @ F @ F @ F @ F
pH	-- @ -- F @ F @ F @ F @ F
" Wtr. Loss	-- CC30 min. CC30 min. CC30 min. CC30 min. CC30 min.
Bit Size	6 3/4" CSG TO 885' 6 1/8" [885 TO TD]
Spcgs.--AM	16"
MN	--
IND.	40"
Opr. Rig Time	1 HS.
Truck No.	25 OFAHH
Recorded By	PAP SLOW
Witness	MR. EOKNE

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Dallas 2, Texas

REFERENCE K1318E

3 COMPLETION RECORD

SPUD DATE

COMP DATE

DST RECORD

CASING RECORD

PERFORATING RECORD

HONOLULU, TEXAS



PERFORATING RECORD

WELEX



INDUCTION-
ELECTRIC LOG

REFINING COMPANY NAVAJO NO. G-3 WELL FIELD COUNTY STATE FILE	COMPANY <u>HUMBLE OIL & REFINING COMPANY</u>	
	WELL <u>NAVAJO NO. G-3</u>	
	FIELD <u>CHINNEY ROCK</u>	
	COUNTY <u>SAN JUAN</u> STATE <u>NEW MEXICO</u>	
	Location 1980' FSL 1980' FWL	
Sec. <u>11</u> Twp <u>31N</u> Rge <u>17W</u>		Other Logs
GROUND LEVEL Elev. <u>5257'</u>		Elevation
g. Measured From <u>ROTARY KELLY BUSHING</u>		KR <u>5261.5'</u>
Wing Measured From <u>ROTARY KELLY BUSHING</u>		DF <u>5260.5'</u>
		GL <u>5257'</u>
Log No.	<u>ONE</u>	
Log Date	<u>7-16-59</u>	
Log Depth Driller	<u>991'</u>	
Log Depth Welex	<u>991'</u>	
g. Shoe Driller	<u>48'</u>	
g. Shoe Welex	<u>48'</u>	
Survey Begins	<u>986'</u>	
Survey Ends	<u>48'</u>	
g. Size	<u>8-5/8"</u>	
Size	<u>6-3/4"</u>	
Log Data - Type	<u>WATER BASE</u>	
	<u>CHEMICAL</u>	
Weight	<u>9.2</u>	
Viscosity	<u>43</u>	
Ph.	<u>12 @ 80°F</u>	
Wt. Loss cc/30 min.	<u>1.2 @ 80°F</u>	
Res. @ Surface Temp.	<u>1.8 @ 85°F</u>	
Res. @ Max. Hole Temp.	<u>1.8 @ 83°F</u>	
Barf	<u>1.5 @ 83°F</u>	
Barf	<u>1.9 @ 83°F</u>	
Source Mud Sample	<u>CIRCULATED</u>	
Recorded By	<u>QUINT</u>	
Measured By	<u>MR. BOAN</u>	
Casing Tool No.	<u>10058</u>	

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Dallas 2, Texas

REFERENCE K1303E

3 COMPLETION RECORD

SPUD DATE
COMP DATE
DST RECORD
CASING RECORD

WELEX



INDUCTION— ELECTRIC LOG

COMPANY HUMBLE OIL & REFINING COMPANY WELL NAVAJO NO. "F"-43 FIELD CHIMNEY ROCK COUNTY SAN JUAN STATE NEW MEXICO FILE	COMPANY. HUMBLE OIL & REFINING COMPANY	
	WELL. NAVAJO NO. "F"-43	
	FIELD. CHIMNEY ROCK	
	COUNTY. SAN JUAN STATE. NEW MEXICO	
Location		Other Logs
2310' FEL 330' FSL		-
Sec. 3 Twp. 31N Rge. 17W		Elevation
Permanent Datum 3.5' ABOVE GROUND LEVEL Elev. 5288.5'		KB. 5288'
Log Measured From KELLY BUSHING		DF. 5288.5'
Drilling Measured From KELLY BUSHING		GL. 5285'
Run No. ONE		
Date. 8-7-59		
Total Depth Driller. 1068'		
Total Depth Welox. 1067'		
Csg. Shoe Driller. 35'		
Csg. Shoe Welox. 36'		
Survey Begins. 1062'		
Survey Ends. 36'		
Csg. Size. 6-1/8"		
Bit Size. 6-1/8"		
Mud Data -- Type. CHEMICAL		
Weight. 8		
Viscosity. 46		
Ph. 5 @ F @ F @ F @ F		
Wtr. Loss cc/ 30 min. 1.4 @ 70 F @ F @ F @ F		
Res. @ Surface Temp. 1.3 @ 79 F @ F @ F @ F		
Res. @ Max. Hole Temp. 1.4 @ 79 F @ F @ F @ F		
Rmf. 2.2 @ 79 F @ F @ F @ F		
Rmc. 2.2 @ 79 F @ F @ F @ F		
Source Mud Sample. P11		
Recorded By. WRIGHT		
Witnessed By. MR. BOANE		
Logging Tool No. 10058		

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Dallas 2, Texas

REFERENCE K1341E

3 COMPLETION RECORD

SPUD DATE

COMP DATE

DST RECORD

CASING RECORD

PERFORATING RECORD

WELEX



INDUCTION— ELECTRIC LOG

COMPANY <u>HUMBLE OIL & REFINING COMPANY</u> WELL <u>NAVAJO NO. "F"-31</u> FIELD <u>CHINNEY ROCK</u> COUNTY <u>SAN JUAN</u> STATE <u>NEW MEXICO</u> Location 1980' FWL 660' FSL Sec. <u>3</u> Twp. <u>31N</u> Rge. <u>17W</u> Elevation KB. <u>5285.5'</u> DF. <u>5285'</u> GL. <u>5285'</u>	COMPANY <u>HUMBLE OIL & REFINING COMPANY</u> WELL <u>NAVAJO NO. "F"-31</u> FIELD <u>CHINNEY ROCK</u> COUNTY <u>SAN JUAN</u> STATE <u>NEW MEXICO</u> Location 1980' FWL 660' FSL Sec. <u>3</u> Twp. <u>31N</u> Rge. <u>17W</u> Elevation KB. <u>5285.5'</u> DF. <u>5285'</u> GL. <u>5285'</u>	
	Permanent Datum <u>GROUND LEVEL</u> Elev. <u>5285'</u> Log Measured From <u>ROTARY KELLY BUSHING</u> Drilling Measured From <u>ROTARY KELLY BUSHING</u>	
	Run No.	ONE
	Date	7-15-59
	Total Depth Driller	1056'
Total Depth Welox	1059'	
Csg. Shoe Driller	48'	
Csg. Shoe Welox	47'	
Survey Begins	1054'	
Survey Ends	47'	
Csg. Size	7-5 8"	
Bit Size	6-3 4"	
Mud Data - Type	WATER BASE CHEMICAL	
Weight	9.6	
Viscosity	42	
Ph.	8	
Wtr. Loss cc/30 min.	2.0 @ 76	
Res. @ Surface Temp.	1.5 @ 84	
Res. @ Max. Hole Temp.	1.05 @ 84	
Res.	2.2 @ 84	
Res.	2.2 @ 84	
Source Mud Sample	PIT	
Recorded By	QUINT	
Witnessed By	MR. BOANE	
Logging Tool No.	10058	

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Dallas 2, Texas

REFERENCE K1304A

3 COMPLETION RECORD

SPUD DATE

COMP DATE

DST RECORD

CASING RECORD

PERFORATING RECORD

SCHLUMBERGER WELL SURVEYING CORPORATION

HOUSTON, TEXAS



Induction-Electrical Log

COUNTY SAN JUAN, NEW MEXICO FIELD CHIMNEY ROCK LOCATION CHIMNEY ROCK WELL NAVAJO F-38 COMPANY HUMBLE OIL CO.	COMPANY HUMBLE OIL AND REFINING CO.	Other Surveys NONE
	WELL NAVAJO F-38	Location of Well 1980' FR N/L 660' FR E/L SEC. 4-31N-17W
	FIELD CHIMNEY ROCK	
	LOCATION SEC. 4-31N-17W	
	COUNTY SAN JUAN	Elevation: D.F. 5293 K.B. 5293.5 or G.L. 5290
	STATE NEW MEXICO	FILING No.

RUN No.	ONE								
Date	7-23-59								
First Reading	1122								
Last Reading	73								
Feet Measured	1049								
Csg. Schlum.	-								
Csg. Driller	34								
Depth Reached	1128								
Bottom Driller	1125								
Depth Datum	K.L.								
Mud Nat.	GEL								
Dens. Visc.	8.8 43								
Mud Resist.	1.6 @ 80 F	@	F	@	F	@	F	@	F
Res. BHT	1.6 @ 80 F	@	F	@	F	@	F	@	F
Rmf	1 @ 80 F	@	F	@	F	@	F	@	F
Rmc	1 @ 80 F	@	F	@	F	@	F	@	F
pH	@ 80 F	@	F	@	F	@	F	@	F
Wtr. Loss	CC 30 min.	CC 30 min.	CC 30 min.	CC 30 min.	CC 30 min.	CC 30 min.	CC 30 min.	CC 30 min.	CC 30 min.
Bit Size	6 1/8"								
Spchs.	AM								
	MN								
	IND								
Cpr. Rig Time	1 HP								
Truck No.	2536 FARM								
Recorded By	HAAR								
Witness	ME BOONE								

Reproduced By Four Corners Well Log Service

Dallas 2, Texas

REFERENCE K1315B

4 COMPLETION RECORD

SPUD DATE

COMP DATE

DST RECORD

CASING RECORD

PERFORATING RECORD

ACID. FRAC SHOT

WELEX



INDUCTION ELECTRIC LOG

HUMBLE OIL &
REFINING COMPANY
WELL NAVAJO "F" 40
FIELD CHIMNEY ROCK
COUNTY SAN JUAN
STATE NEW MEXICO
FILE

COMPANY HUMBLE OIL & REFINING COMPANY

WELL NAVAJO "F" 40

FIELD CHIMNEY ROCK

COUNTY SAN JUAN STATE NEW MEXICO

Location

990' FSL 850' FEL

Other Logs

Sec. 9

Twp 31N

Rge 17W

Elevation

Permanent Datum 4.5' ABOVE GROUND LEVEL Elev. 5190.5'

Log Measured From KELLY BUSHING

KB 5190.5'

Drilling Measured From KELLY BUSHING

DL 5189'

Run No.	ONE				
Date	8-2-59				
Total Depth Driller	911'				
Total Depth Well	913'				
Cap. Shoe Driller	36'				
Cap. Shoe Well	36'				
Survey Begins	908'				
Survey Ends	36'				
Cap. Size	7"				
Bit Size	6-1/8"				

Mud Data - Type CHEMICAL

Weight	9.0				
Viscosity	46				
Pl.	8.9 @ -°F	@ -°F	@ -°F	@ -°F	@ -°F
Wtr. Loss oz./min.	75 @ 85 -°F	@ -°F	@ -°F	@ -°F	@ -°F
Res. @ Surface Temp.	85 @ 85 -°F	@ -°F	@ -°F	@ -°F	@ -°F
Res. @ Max. Hole Temp.	85 @ 79 -°F	@ -°F	@ -°F	@ -°F	@ -°F
Res.	95 @ -°F	@ -°F	@ -°F	@ -°F	@ -°F
Res.	1.3 @ -°F	@ -°F	@ -°F	@ -°F	@ -°F
Source Mud Sample	CIRCULATED				
Recorded By	WRIGHT				
Witnessed By	MR. BEARD				
Logging Tool No.	10058				

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Four Corners Well Log Service

Dallas 2, Texas

REFERENCE K1331C

3

COMPLETION RECORD

SPUD DATE

COMP DATE

DST RECORD

CASING RECORD

SCHLUMBERGER WELL SURVEYING CORPORATION

— DALLAS, TEXAS —

COUNTY <u>SAN JUAN, NEW MEX.</u> FIELD or LOCATION <u>CHIMNEY ROCK</u> WELL <u>NAVAJO F # 34</u> COMPANY <u>HUMBLE OIL & REFG.</u>	COMPANY <u>HUMBLE OIL & REFG.</u>		Other Surveys NONE	
	WELL <u>NAVAJO F # 34</u>		Location of Well 1980' FR N/L 1980' FR W/L SEC. 9-31N-17W	
	FIELD <u>CHIMNEY ROCK</u>		Elevation: D.F. 5260.5 K.B. 5261.5 or G.L. 5257	
	LOCATION <u>SEC. 9-31N-17W</u>		FILING No.	
	COUNTY <u>SAN JUAN</u> STATE <u>NEW MEXICO</u>			

RUN No.	ONE								
Date	7-6-59								
First Reading	1052								
Last Reading	100								
Feet Measured	952								
Cop. Schum.	--								
Cop. Driller	48								
Depth Reached	1058								
Bottom Driller	1058								
Depth Datum	K8								
Mud Mat.	CHEM-GEL								
Down. Visc.	8.9 38								
Mud Resist.	1.30 65"	●	○	●	○	●	○	●	○
Res. BHT	1.10 79"	●	○	●	○	●	○	●	○
Res.	--	●	○	●	○	●	○	●	○
Res.	--	●	○	●	○	●	○	●	○
Res.	--	●	○	●	○	●	○	●	○
Wtr. Loss	-- CC 30 min.	CC 30 min.	CC 30 min.	CC 30 min.	CC 30 min.	CC 30 min.	CC 30 min.	CC 30 min.	CC 30 min.
Bit Size	6.3 1/4"								
Spuds—AM	16"								
AM									
IND.	40"								
Cop. Rig Time	1 HR.								
Truck No.	2515FARM								
Recorded By	KIMBALL								
Witness	MR. BOANE								

REMARKS NO C.D. ; S.O. 0

Cartridge No. 155C
 Panel No. 41B
 Sende No. 200E

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Dallas 2, Texas

REFERENCE K1291A

3 COMPLETION RECORD

SPUD DATE

COMP DATE

DST RECORD

CASING RECORD

WELEX



INDUCTION— ELECTRIC LOG

COMPANY HUMBLE OIL & REFINING COMPANY WELL NAVAJO NO. 1-36 FIELD CHIMNEY ROCK COUNTY SAN JUAN STATE NEW MEXICO	COMPANY HUMBLE OIL & REFINING COMPANY				
	WELL NAVAJO F-36				
	FIELD CHIMNEY ROCK				
	COUNTY SAN JUAN STATE NEW MEXICO				
	Location	Other Logs			
	660' FNL 660' FEL				
	Sec. 10 Twp 31N Rge 17W	Elevation			
	Permanent Datum 4.5' ABOVE GROUND LEVEL	Elev. 5277.5'			
	Log Measured From KELLY BUSHING	KB 5277.5'			
	Drilling Measured From KELLY BUSHING	DF 5276.5'			
GL 5273.0'					
Run No.	ONE				
Date	7-13-59				
Total Depth Driller	1022'				
Total Depth Welox	1021'				
Cog. Shoe Driller	48'				
Cog. Shoe Welox	48'				
Survey Begins	1016'				
Survey Ends	48'				
Cog. Size	7-5/8"				
Bit Size	6-3/4"				
Mud Data - Type	CHEMICAL				
Weight	9.6				
Viscosity	68				
Ph.	8 @ °F	@ °F	@ °F	@ °F	@ °F
Wtr. Loss cc/30 min.	6 @ °F	@ °F	@ °F	@ °F	@ °F
Res. @ Surface Temp.	1.2 @ 92 °F	@ °F	@ °F	@ °F	@ °F
Res. @ Max. Hole Temp.	1.45 @ 80 °F	@ °F	@ °F	@ °F	@ °F
Res.	0.9 @ 80 °F	@ °F	@ °F	@ °F	@ °F
Res.	1.35 @ 80 °F	@ °F	@ °F	@ °F	@ °F
Source Mud Sample	PIT				
Recorded By	WRIGHT				
Witnessed By	MR. ROANE				
Logging Tool No.	10058				

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Dallas 2, Texas

REFERENCE K1304B

3

COMPLETION RECORD

SPUD DATE

COMP DATE

DST RECORD

CASING RECORD

PERFORATING RECORD

SCHLUMBERGER WELL SURVEYING CORPORATION

DALLAS, TEXAS



Electric - Mechanical - Chemical

COUNTY	SAN JUAN, NEW MEX.	COMPANY	HUMBLE OIL & REFG.	Other Surveys	NONE
FIELD or LOCATION	CHIMNEY ROCK	COMPANY		Location of Well	
WELL	NAVAJO F-28	WELL	NAVAJO F-28	1980' FR N/L	
COMPANY	HUMBLE OIL & REFG.	FIELD	CHIMNEY ROCK	1980' FR W/L	
		LOCATION	SEC. 4-31N-17W	SEC. 4-31N-17W	
		COUNTY	SAN JUAN	Elevation: D.F.:	
		STATE	NEW MEXICO	K.B.: 5299	
				or G.L.: 5296	
				FILING No.	

RUN No.	ONE								
Date	6-26-59								
First Reading	1166								
Last Reading	210 (FLUID LEVEL)								
Feet Measured	956								
Csg. Schlum.	--								
Csg. Driller	47								
Depth Reached	1172								
Bottom Driller	1170								
Depth Datum	K8								
Mud Mat.	GFI								
Dens. Visc.	9.4 70								
Mud Resist.	1.30 80°F	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗
Res. BHT	1.10 80°F	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗
Rmf	.08 80°F	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗
Rmc	--	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗
pH	--	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗
Wtr. Loss	-- CC30 min.	CC30 min.	CC30 min.	CC30 min.	CC30 min.	CC30 min.	CC30 min.	CC30 min.	CC30 min.
Bit Size	6 3/4"								
Spchs. - AM	16"								
MIN	27' 2"								
IND.	40"								
Op. Rig Time	1 HR.								
Truck No.	2516 FARM								
Recorded By	HAMILTON								
Witness	MR. ROANE								

REMARKS	C.D. NOT USED	S.O.	0
Cartridge No.	155		
Panel No.	179		
Sonde No.	354		

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Dallas 2, Texas

REFERENCE **K1283A**

4 COMPLETION RECORD

SPUD DATE

COMP DATE

DST RECORD

WELEX



INDUCTION ELECTRIC LOG

COMPANY HUMBLE OIL & REFINING COMPANY NO. 32 WELL NAVAJO "F" NO. 32 FIELD CHIMNEY ROCK COUNTY SAN JUAN STATE NEW MEXICO	COMPANY <u>HUMBLE OIL & REFINING COMPANY</u>	
	WELL <u>NAVAJO "F" NO. 32</u>	
	FIELD <u>CHIMNEY ROCK</u>	
	COUNTY <u>SAN JUAN</u> STATE <u>NEW MEXICO</u>	
	Location <u>1080' FSL & 660' FWL</u>	
Sec. <u>3</u> Twp. <u>31N</u> Rge. <u>17W</u>		Other Logs
Permanent Datum <u>GROUND LEVEL</u> Elev. <u>5281'</u>		Elevation
Log Measured From <u>ROTARY KELLY BUSHING</u>		KB. <u>5284.5'</u>
Drilling Measured From <u>ROTARY KELLY BUSHING</u>		DF. <u>5283'</u>
Run No. <u>ONE</u>		GL. <u>5281'</u>
Date <u>7-2-52</u>		
Total Depth Driller <u>1044'</u>		
Total Depth Welex <u>46'</u>		
Cg. Shoe Driller <u>46'</u>		
Cg. Shoe Welex <u>1072'</u>		
Survey Begins <u>46'</u>		
Survey Ends <u>7-5-8'</u>		
Cg. Size <u>6-3/4"</u>		
Bit Size <u>6-3/4"</u>		
Mud Data - Type <u>WATER BASE CHEMICALS</u>		
Weight <u>9.1</u>		
Viscosity <u>40</u>		
Pl. <u>1</u> @ <u>1</u> °F		
Wtr. Loss cc/ <u>1</u> min. <u>1</u> @ <u>1</u> °F		
Res. @ Surface Temp. <u>1</u> @ <u>1</u> °F		
Res. @ Max. Hole Temp. <u>1</u> @ <u>1</u> °F		
Ref. <u>1</u> @ <u>1</u> °F		
Rmc. <u>1</u> @ <u>1</u> °F		
Source Mud Sample <u>CIRCULATED</u>		
Recorded By <u>D. GILBERT</u>		
Witnessed By <u>MR. BOANE</u>		
Logging Tool No. <u>10056</u>		

Resistivity Curves Recorded	REMARKS
Normal <u>16</u>	
Normal	
Lateral	
Lateral	
<u>INDUCTION</u>	
<u>40 - 5 COIL</u>	

Reproduced By
Four Corners Well Log Service

Dallas 2, Texas

REFERENCE **K1285C**

4 COMPLETION RECORD

SPUD DATE

COMP DATE

DST RECORD

CASING RECORD