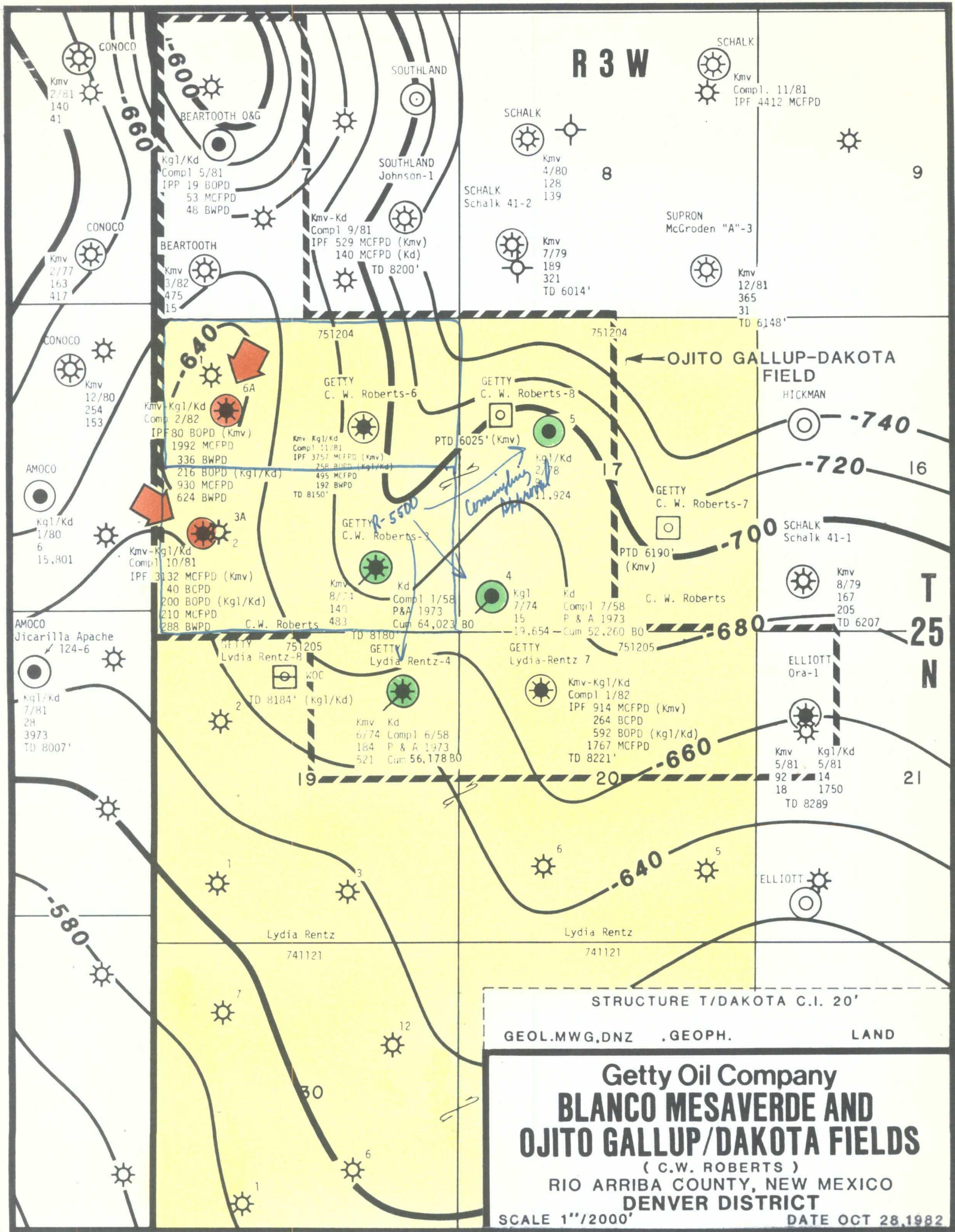




R 3 W

9

8

16

T
25
N

21

OJITO GALLUP-DAKOTA FIELD

C. W. Roberts

STRUCTURE T/DAKOTA C.I. 20'

GEOL.MWG,DNZ .GEOPH. LAND

Getty Oil Company
BLANCO MESAVERDE AND
OJITO GALLUP/DAKOTA FIELDS

(C.W. ROBERTS)
RIO ARriba COUNTY, NEW MEXICO
DENVER DISTRICT

SCALE 1"/2000' DATE OCT 28, 1982

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEYSUBMIT IN DUPLICATE
(See other instructions on reverse side)Form approved.
Budget Bureau No. 42-R355.5.

WELL COMPLETION OR RECOMPLETION REPORT AND LOG *

1a. TYPE OF WELL: OIL WELL ☐ GAS WELL ☒ DRY ☐ Other _____

b. TYPE OF COMPLETION:

NEW WELL ☒ WORK OVER ☐ DEEP-EN ☐ PLUG BACK ☐ DIFF. RESVR. ☐ Other _____

2. NAME OF OPERATOR

Getty Oil Company

3. ADDRESS OF OPERATOR

P.O. Box 3360, Casper, WY 82602

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements)*

At surface 1650' FSL & 810' FWL of Section 18

At top prod. interval reported below Same

At total depth Same

14. PERMIT NO.

DATE ISSUED

--

4-22-81

15. DATE SPUDDED

16. DATE T.D. REACHED

17. DATE COMPL. (Ready to prod.)

18. ELEVATIONS (DF, RKB, RT, GR, ETC.)*

19. ELEV. CASINGHEAD

6-3-81

6-27-81

9-29-81

7090' GR

7102' KB

--

20. TOTAL DEPTH, MD & TVD

21. PLUG, BACK T.D., MD & TVD

22. IF MULTIPLE COMPL., HOW MANY*

23. INTERVALS DRILLED BY

ROTARY TOOLS

CABLE TOOLS

8135'

7970'

2

-->

0'-8135'

--

24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)*

25. WAS DIRECTIONAL SURVEY MADE

5254'-5870'

MesaVerde

Yes

26. TYPE ELECTRIC AND OTHER LOGS RUN

DIL, CNL/FDC, CBL & Tracer

27. WAS WELL CORED

No

28. CASING RECORD (Report all strings set in well)

CASING SIZE	WEIGHT, LB./FT.	DEPTH SET (MD)	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
8 5/8"	24#	302'	12 1/4"	300 SX.	--
5 1/2"	17, 15.5, & 14#	8135'	7 7/8"	2255 SX.	--

29. LINER RECORD

SIZE	TOP (MD)	BOTTOM (MD)	SACKS CEMENT*	SCREEN (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)
					2 1/16"	5809'	6000'

31. PERFORATION RECORD (Interval, size and number)

Perfed MesaVerde w/ 69, 0.40" holes, 1 SPF:

5254'-5276' 5847'-5852'

5708'-5724' 5866'-5870'

5736'-5758'

32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.

DEPTH INTERVAL (MD)	AMOUNT AND KIND OF MATERIAL USED
5254'-5870'	Acid w/ 2700 gal. 15% HCL and
fraced w/ 71,500	gal. of frac gel & 132,000 #
20-40 sand.	

33.*

PRODUCTION

DATE FIRST PRODUCTION		PRODUCTION METHOD (Flowing, gas lift, pumping—size and type of pump)				WELL STATUS (Producing or shut-in)	
10-10-81		Flowing				Shut-In	
DATE OF TEST	HOURS TESTED	CHOKE SIZE	PROD'N. FOR TEST PERIOD	OIL—BBL.	GAS—MCF.	WATER—BBL.	GAS-OIL RATIO
10-10-81	3	3/4"	→	5	431	-	1000
FLOW, TUBING PRSS.	CASING PRESSURE	CALCULATED 24-HOUR RATE	OIL—BBL.	GAS—MCF.	WATER—BBL.	OIL GRAVITY-API (CORR.)	
220#	735#	→	- 40 -	~3132 (IP)-	-	55°	

34. DISPOSITION OF GAS (Sold, used for fuel, vented, etc.)

Vented

TEST WITNESSED BY

Paul D. Berhost

35. LIST OF ATTACHMENTS

36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records

SIGNED

TITLE Area Superintendent

DATE 11/13/81

*(See Instructions and Spaces for Additional Data on Reverse Side)

Form approved.
Budget Bureau No. 42-R355.5.

WELL COMPLETION OR RECOMPLETION REPORT AND LOG*

1a. TYPE OF WELL: OIL WELL ☒ GAS WELL ☐ DRY ☐ Other _____						7. UNIT AGREEMENT NAME ---					
b. TYPE OF COMPLETION: NEW WELL ☒ WORK OVER ☐ DEEP-EN ☐ PLUG BACK ☐ DIFF. RESVR. ☐ Other _____						8. FARM OR LEASE NAME C.W. Roberts					
2. NAME OF OPERATOR Getty Oil Company						9. WELL NO. 3-A					
3. ADDRESS OF OPERATOR P.O. Box 3360, Casper, WY 82602						10. FIELD AND POOL, OR WILDCAT Blanco Mesa Verde/Ojito Gallup-					
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements)* At surface 1650' FSL & 810' FWL of Section 18 At top prod. interval reported below Same At total depth Same						11. SEC., T., R., M., OR BLOCK AND SURVEY OR AREA L. Section 18-T25N-R3W					
14. PERMIT NO. --						DATE ISSUED 4-22-81					
12. COUNTY OR PARISH Rio Arriba						13. STATE New Mexico					
15. DATE SPUDDED 6-3-81		16. DATE T.D. REACHED 6-27-81		17. DATE COMPL. (Ready to prod.) 9-28-81		18. ELEVATIONS (DF, RKB, RT, GR, ETC.)* 7090' GR 7102' KB			19. ELEV. CASING HEAD --		
20. TOTAL DEPTH, MD & TVD 8135'		21. PLUG, BACK T.D., MD & TVD 7970'		22. IF MULTIPLE COMPL., HOW MANY* 2		23. INTERVALS DRILLED BY →			ROTARY TOOLS 0'-8135'		
24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)* Gallup/Dakota (comingled downhole) 6894'-7930'									25. WAS DIRECTIONAL SURVEY MADE Yes		
26. TYPE ELECTRIC AND OTHER LOGS RUN DIL, CNL/FDC, CBL, & Tracer									27. WAS WELL CORED NO		
28. CASING RECORD (Report all strings set in well)											
CASING SIZE	WEIGHT, LB./FT.	DEPTH SET (MD)	HOLE SIZE	CEMENTING RECORD				AMOUNT PULLED			
8 5/8"	24#	302'	12 1/4"	300 sx.				--			
5 1/2"	17, 15.5, & 14#	8135'	7 7/8"	2255 sx.				--			
29. LINER RECORD											
SIZE	TOP (MD)	BOTTOM (MD)	SACKS CEMENT*	SCREEN (MD)	30. TUBING RECORD						
					SIZE	DEPTH SET (MD)	PACKER SET (MD)				
					2 1/16"	7636'	6000'				
31. PERFORATION RECORD (Interval, size and number) Perforated Gallup/Dakota w/ 192, 0.40" holes, 1 SPT follows: 7024'-7034' 7756'-7776' 6894'-6904' 7036'-7042' 7831'-7835' 6922'-6938' 7048'-7062' 7906'-7930' 6950'-6956' 7066'-7086' 6962'-6968' 7106'-7146'											
32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.											
DEPTH INTERVAL (MD)				AMOUNT AND KIND OF MATERIAL USED							
6894'-7146'				5000 gal. 15% HCL & 153,000 # 20-40.							
sand w/ 79,000 gal. frac fluid.											
7756'-7930'				1000 gal. 15% HCL & frac w/ 83,820							
gal. frac fluid.				114,050 # 20-40 sd., 70,400 SCF of N ₂							
33. PRODUCTION											
DATE FIRST PRODUCTION 10-17-81		PRODUCTION METHOD (Flowing, gas lift, pumping—size and type of pump) Flowing					WELL STATUS (Producing or shut-in) Shut-In				
DATE OF TEST 10-29-81	HOURS TESTED 3	CHOKE SIZE 1"	PROD'N. FOR TEST PERIOD →	OIL—BBL. 25	GAS—MCF. 40	WATER—BBL. 36	GAS-OIL RATIO 1600				
FLOW. TUBING PRESS. 120	CASING PRESSURE pkr.	CALCULATED 24-HOUR RATE →	OIL—BBL. 200	GAS—MCF. 210	WATER—BBL. 288	OIL GRAVITY-API (CORR.) 46.4°					
34. DISPOSITION OF GAS (Sold, used for fuel, vented, etc.) Vented							TEST WITNESSED BY Paul D. Berhost				
35. LIST OF ATTACHMENTS											

36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records.

SIGNED

TITLE Area Superintendent

DATE 11/18/81

*(See Instructions and Spaces for Additional Data on Reverse Side)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN DUPLICATE

(See other in-
structions on
reverse side)Form approved.
Budget Bureau No. 42-R355.5.

WELL COMPLETION OR RECOMPLETION REPORT AND LOG *

1a. TYPE OF WELL: OIL WELL ☐ GAS WELL ☒ DRY ☐ Other _____				5. LEASE DESIGNATION AND SERIAL NO. SF 079600	
b. TYPE OF COMPLETION: NEW WELL ☒ WORK OVER ☐ DEEP-EN ☐ PLUG BACK ☐ DIFF. RESVR. ☐ Other _____				6. IF INDIAN, ALLOTTEE OR TRIBE NAME -	
2. NAME OF OPERATOR Getty Oil Company				7. UNIT AGREEMENT NAME -	
3. ADDRESS OF OPERATOR P.O. Box 3360, Casper, Wyoming 82602-3360				8. FARM OR LEASE NAME C. W. Roberts	
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements). At surface 1660' FNL & 820' FWL of Section 18 At top prod. interval reported below same At total depth same				9. WELL NO. 6A	
14. PERMIT NO. _____ DATE ISSUED 7-27-81				10. FIELD AND POOL, OR WILDCAT Blanco Mesa Verde Ojito Gallup-Dakota	
15. DATE SPUNDED 9-8-81 16. DATE T.D. REACHED 10-4-81 17. DATE COMPL. (Ready to prod.) 1-28-82				11. SEC. T., R., M., OR BLOCK AND SURVEY OR AREA E Section 18-T25N-R3W	
18. ELEVATIONS (DF, RKB, RT, GR, ETC.)* 7085' GL 7098' KB				12. COUNTY OR PARISH Rio Arriba	
19. ELEV. CASINGHEAD -				13. STATE New Mexico	
20. TOTAL DEPTH, MD & TVD 8134' 21. PLUG BACK T.D., MD & TVD 8073' 22. IF MULTIPLE COMPL., HOW MANY* 2				23. INTERVALS DRILLED BY 0'-8134'	
24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)* 5250'-5861' Mesa Verde				25. WAS DIRECTIONAL SURVEY MADE No	
26. TYPE ELECTRIC AND OTHER LOGS RUN DIL-SFL, CNL-FDC, CBL				27. WAS WELL CORED No	
28. CASING RECORD (Report all strings set in well)					
CASING SIZE		WEIGHT, LB./FT.		DEPTH SET (MD)	
9 5/8"		36#		294'	
7"		23#		6130'	
29. LINER RECORD					
SIZE		TOP (MD)		BOTTOM (MD)	
4 1/2"		5967'		8134'	
30. TUBING RECORD					
SIZE		DEPTH SET (MD)		PACKER SET (MD)	
2 3/8"		5773'		5955'	
31. PERFORATION RECORD (Interval, size and number) Perfed Mesa Verde w/ 46, 0.40" holes 5250'-5270' 5622'-5628' 5749'-5768' 5860'-5861'					
32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.					
DEPTH INTERVAL (MD)			AMOUNT AND KIND OF MATERIAL USED		
5250'-5861'			w/2500 gal 15% HCL		
Fraced w/90,000			gal 2% KCL 20# gel wtr.		
+ 74,000 # 20-40			sand.		
33. PRODUCTION					
DATE FIRST PRODUCTION 2-1-82		PRODUCTION METHOD (Flowing, gas lift, pumping—size and type of pump) Flowing			WELL STATUS (Producing or shut-in) Shut in
DATE OF TEST 2-9-82		HOURS TESTED 3		CHOKE SIZE 3/4"	
FLOW, TUBING PRESS. 96#		CASING PRESSURE 538#		CALCULATED 24-HOUR RATE 80	
				OIL—BBL. 10	
				GAS—MCF. 249	
				WATER—BBL. 42	
				OIL GRAVITY-API (CORR.) 24,900 cu.ft./bbl	
34. DISPOSITION OF GAS (Sold, used for fuel, vented, etc.) Vented					
35. LIST OF ATTACHMENTS					
36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records					
SIGNED <i>[Signature]</i>		TITLE Area Superintendent		DATE 2-25-82	

*(See Instructions and Spaces for Additional Data on Reverse Side)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN DUPLICATE

(See other in-
structions on
reverse side)Form approved.
Budget Bureau No. 42-R355.5.

WELL COMPLETION OR RECOMPLETION REPORT AND LOG *

1a. TYPE OF WELL: OIL WELL ☒ GAS WELL ☐ DRY ☐ Other _____				5. LEASE DESIGNATION AND SERIAL NO. SF 079600		
b. TYPE OF COMPLETION: NEW WELL ☒ WORK OVER ☐ DEEP-EN ☐ PLUG BACK ☐ DIFF. RESVR. ☐ Other _____				6. IF INDIAN, ALLOTTEE OR TRIBE NAME -		
2. NAME OF OPERATOR Getty Oil Company				7. UNIT AGREEMENT NAME -		
3. ADDRESS OF OPERATOR P.O. Box 3360, Casper, Wyoming 82602-3360				8. FARM OR LEASE NAME C. W. Roberts		
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements)* At surface 1660' FNL & 820' FWL of Section 18 At top prod. interval reported below same At total depth same				9. WELL NO. 6A		
14. PERMIT NO. -				DATE ISSUED 7-27-81		
15. DATE SPUDDED 9-8-81				16. DATE T.D. REACHED 10-4-81		
17. DATE COMPL. (Ready to prod.) 1-27-82				18. ELEVATIONS (DF, RKB, RT, GR, ETC.)* 7085' GL 7098' KB		
20. TOTAL DEPTH, MD & TVD 8134'				21. PLUG, BACK T.D., MD & TVD 8073'		
22. IF MULTIPLE COMPL., HOW MANY* 2				23. INTERVALS DRILLED BY → 0'-8134'		
24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)* 6865'-7906' Gallup/Dakota (commingled downhole)				19. ELEV. CASINGHEAD -		
26. TYPE ELECTRIC AND OTHER LOGS RUN DIL-SFL, CNL-FDC, CBL				25. WAS DIRECTIONAL SURVEY MADE No		
27. WAS WELL CORED No				28. CASING RECORD (Report all strings set in well)		
CASING SIZE		WEIGHT, LB./FT.	DEPTH SET (MD)	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
9 5/8"	36#	294'	12 1/4"	300 sx	-	-
7"	23#	6130'	8 3/4"	1140 sx	-	-
29. LINER RECORD						
SIZE	TOP (MD)	BOTTOM (MD)	SACKS CEMENT*	SCREEN (MD)	30. TUBING RECORD	
4 1/2"	5967'	8134'	100 sx		SIZE	DEPTH SET (MD)
					2 3/8"	7629'
31. PERFORATION RECORD (Interval, size and number) Perfed Gal-Dak w/188 holes - 0.40" 6865'-69' 6964'-68' 7740'-7754' 6875'-90' 6974'-82' 7885'-7906' 6905'-14' 7038'-96' 6936'-47' 7120'-64'				32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC. DEPTH INTERVAL (MD) AMOUNT AND KIND OF MATERIAL USED 7740'-7906' w/2400gal 15% HCL&Frac w/96000gal 2% KCl 20#gel wtr. +117000 #20-40sd+1141725 SCF of CO ₂ . 6865'-7164' w/4950gal 2% KCL wtr w/Cla- Sta & Frac-flo. Frac w/171,000gal 40# X-linked PRODUCTION gel & 180000 #20-40 sd		
33.* DATE FIRST PRODUCTION 2-1-82				PRODUCTION METHOD (Flowing, gas lift, pumping—size and type of pump) Flowing		WELL STATUS (Producing or shut-in) Shut in
DATE OF TEST 2-16-82	HOURS TESTED 3 hrs	CHOKE SIZE 3/4"	PROD'N. FOR TEST PERIOD →	OIL—BBL. 27	GAS—MCF. 117	WATER—BBL. 78
FLOW. TUBING PRESS. 770	CASING PRESSURE Pkr	CALCULATED 24-HOUR RATE →	OIL—BBL. 216	GAS—MCF. 930	WATER—BBL. 624	GAS-OIL RATIO 4333 cu. ft/bbl
34. DISPOSITION OF GAS (Sold, used for fuel, vented, etc.) Vented				TEST WITNESSED BY Paul Berhost		
35. LIST OF ATTACHMENTS						
36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records						
SIGNED <u>Steve B...</u>		TITLE Area Superintendent			DATE 2-25-82	

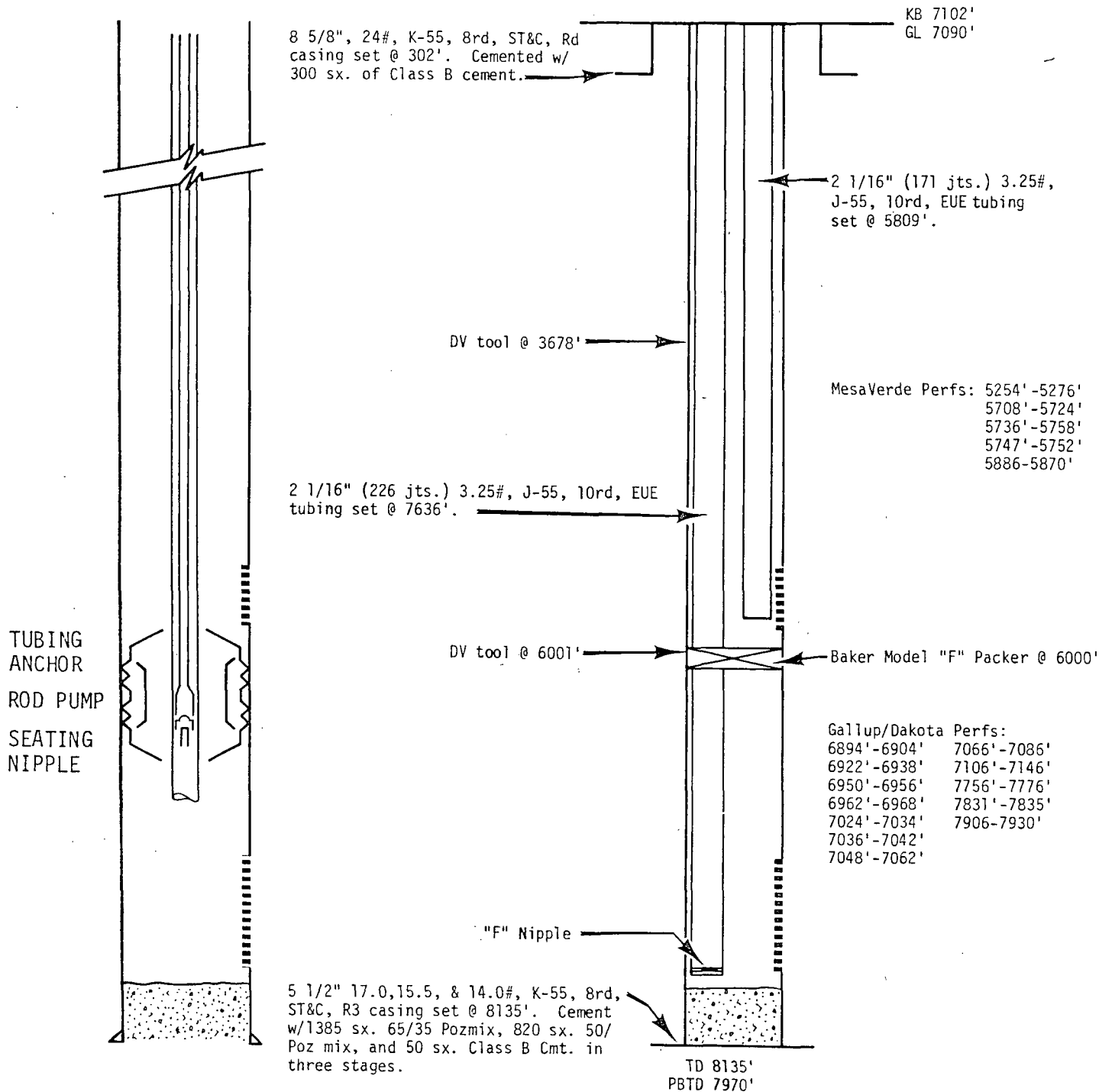
*(See Instructions and Spaces for Additional Data on Reverse Side)

C.W. ROBERTS #3-A
 E Section 18 - T25N - R3W
 Rio Arriba County, New Mexico

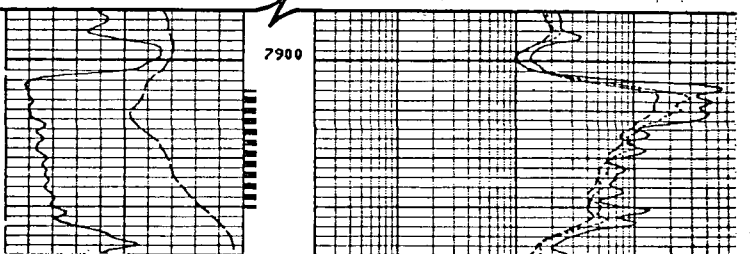
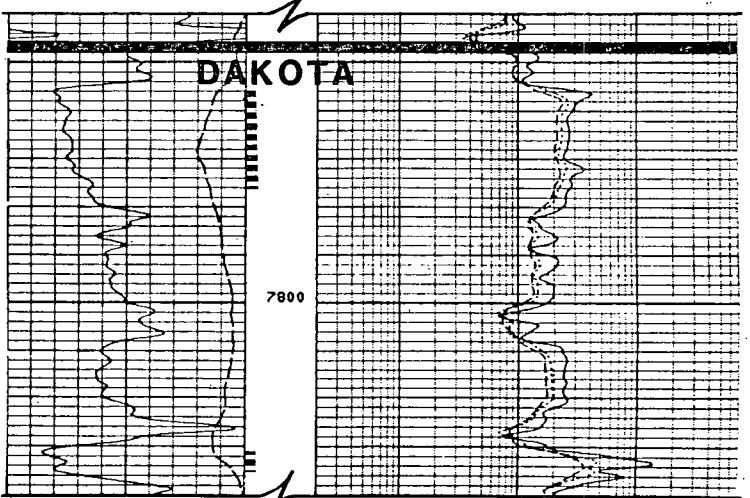
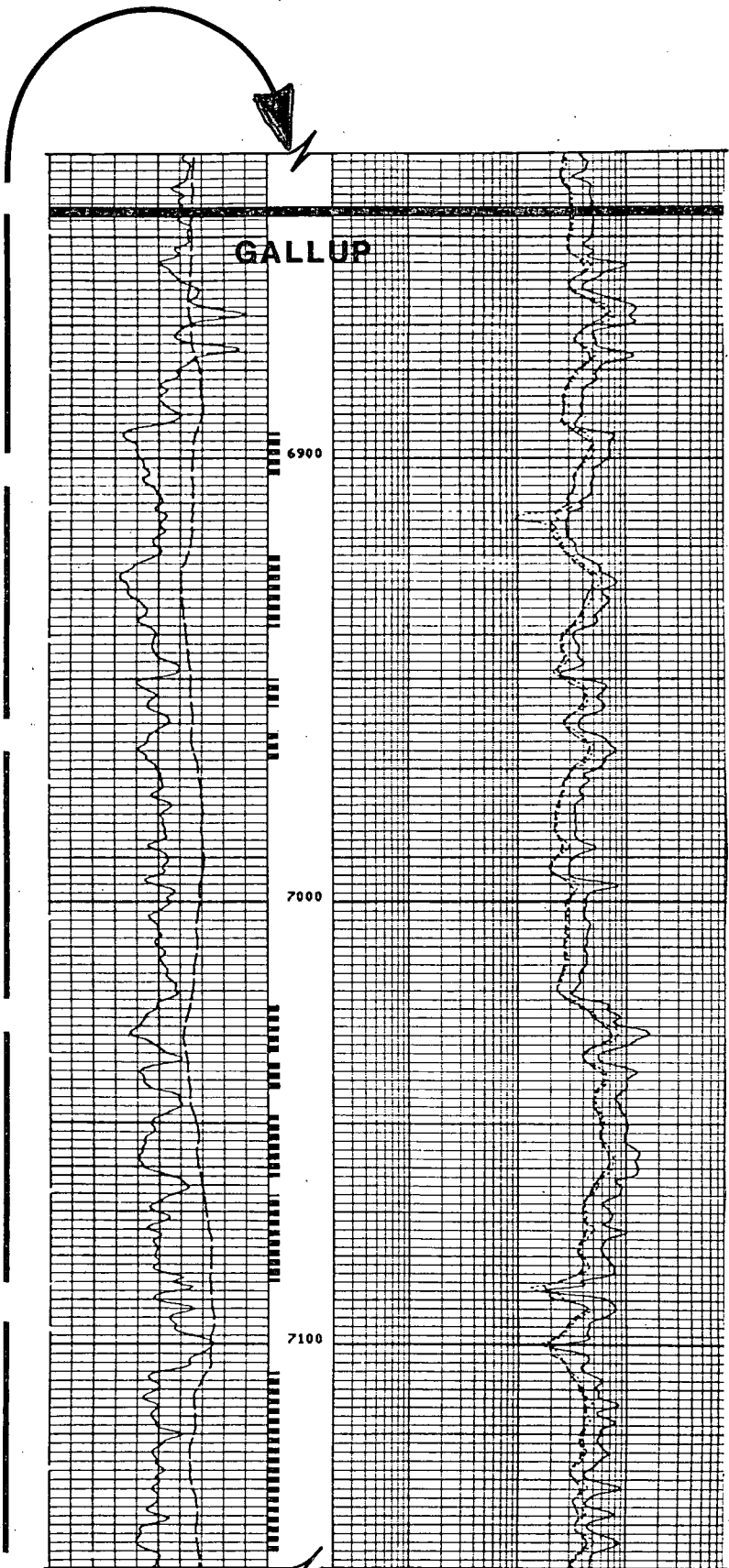
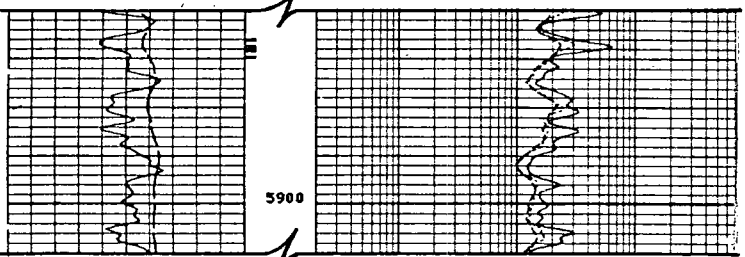
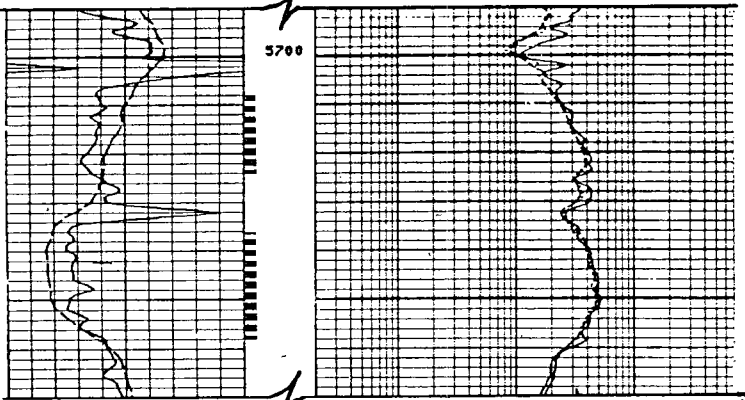
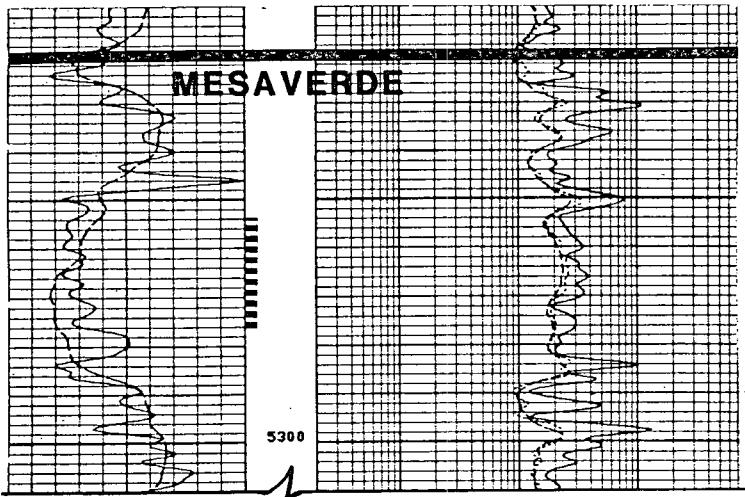
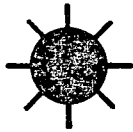
BEFORE EXAMINER NUTTER	
OIL CONSERVATION DIVISION	
GETTY	EXHIBIT NO. 3
CASE NO.	7723

PROPOSED COMMINGLED
 COMPLETION

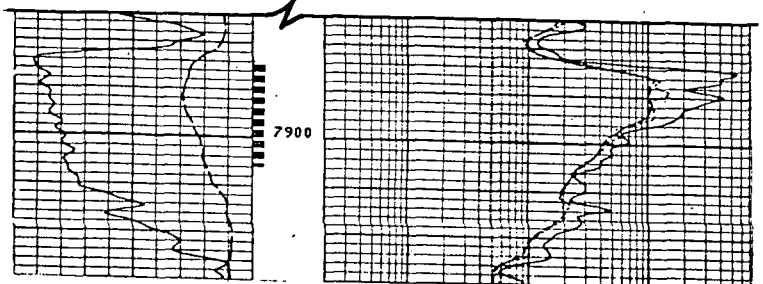
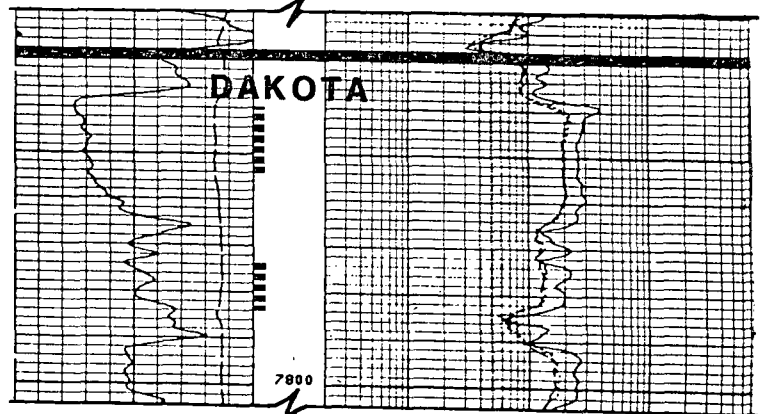
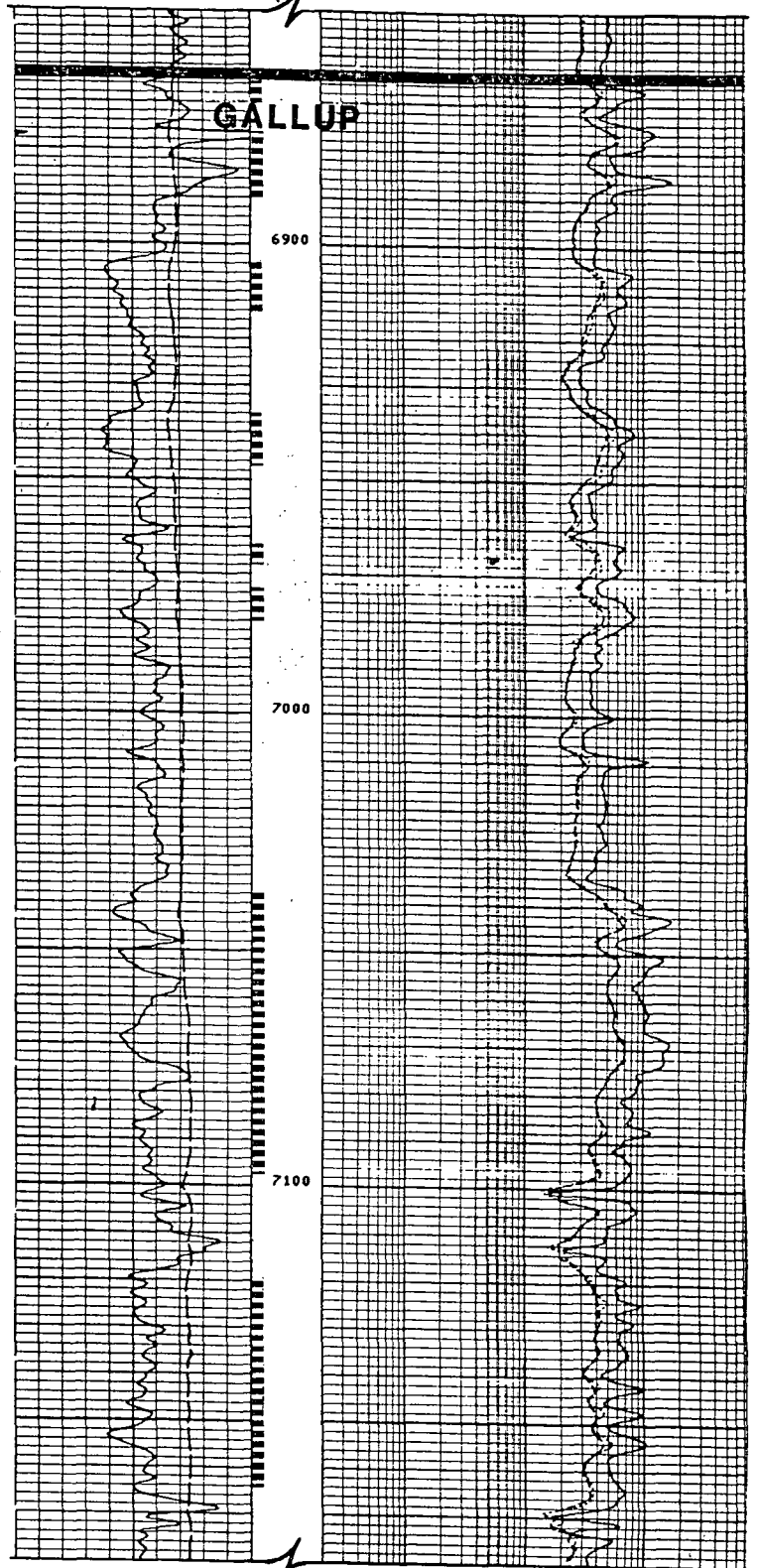
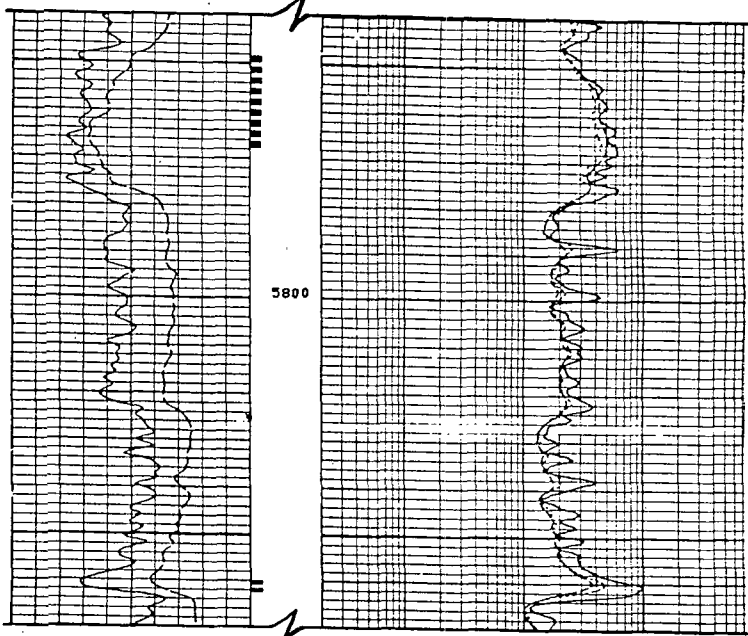
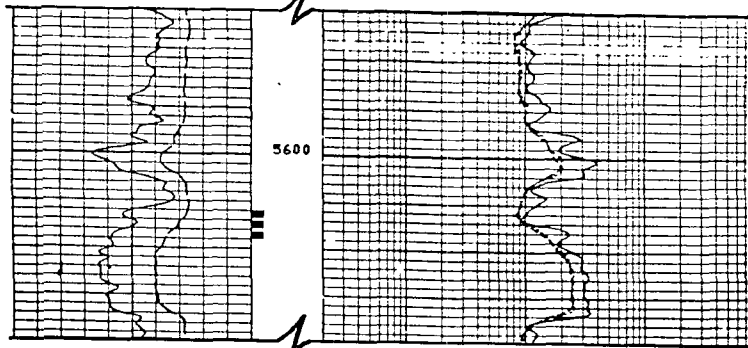
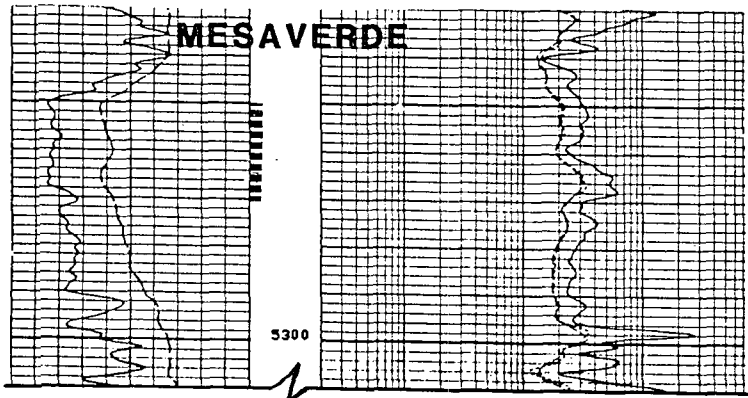
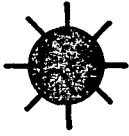
EXISTING COMPLETION



GETTY
C.W. Roberts 3-A
Rio Arriba County, New Mexico
SE NW SW Sec 18, T 25 N-R 3 W



GETTY
C.W. Roberts 6-A
Rio Arriba County, New Mexico
NE SW NW Sec 18, T 25 N-R 3 W



Getty Oil Company
Producing Data (Ojito Gallup-Dakota, Blanco Mesaverde Fields)
January-July, 1982

Mesaverde Gas/Condensate (MCF/Bbls)

	January	February	March	April	May	June	July	July GOR	Year to Date GOR	Cumulative Gas/Oil
Lydia Rentz 4	3781/37	3882/25	4780/32	4649/28	4250/35	3008/6	2125/25	85,000	140,824	535,742/5229
Lydia Rentz 7	0	0	0	0	0/69	502/240	1616/120	13,467	36,329	15,585/429
C. W. Roberts 3	4086/0	4160/0	4325/0	4515/0	4573/0	4616/0	4324/0	-	-	500,844/3728
C. W. Roberts 3A	0	0	0	10,535/440	24,090/234	SI 5/82	-	-	51,372	34,625/674
C. W. Roberts 6	0	0	0	8536/229	21,723/117	14,817/93	15,245/80	185,915	116,225	60,321/519
C. W. Roberts 6A	0	0	0	1017/0	255/85	SI 5/82	-	-	7,617	1,272/167

Gallup-Dakota Oil/Gas (Bbls/MCF)

C. W. Roberts 3A	0	0	0	99/0	151/199	212/783	42/198	4,714	2,341	504/1180
C. W. Roberts 4	149/703	175/701	208/691	121/580	112/378	91/153	97/464	4,784	3,851	20,607/17,042
C. W. Roberts 5	262/1298	111/873	319/1393	339/4215	300/1350	227/880	250/1437	5,748	6,331	13,732/66,108
C. W. Roberts 6	0	0	0	1397/0	1142/2896	954/2054	987/3022	3,061	1,779	4,480/7972
C. W. Roberts 6A	0	0	0	40/0	62/297	30/1174	14/297	21,214	12,110	146/1768
Lydia Rentz 7	0	0	0	0	27/0	1936/4965	1281/4633	3,617	2,959	3,244/9598

BEFORE EXAMINER NUTTER
OIL CONSERVATION DIVISION

GETTY EXHIBIT NO. 4

CASE NO. 7723

B & R SERVICE, INC.

P. O. Box 1048
Farmington, New Mexico 87401
(505) 325-2393

Company Getty Oil Company Lease C.W. Roberts Well 3-A
County Rio Arriba State New Mexico Date 6-26-82
Shut-In 6 weeks Zero Point G.L. Tbg. Pressure 825
Casing Pressure 1049 Tbg. Depth _____ Casing Perf. Mesa Verde
Max. Temp. _____ Fluid Level 5420

<u>DEPTH</u>	<u>PSIG</u>	<u>GRADIENT</u>
0	825	----
1000	849	.024
3000	904	.028
5000	1015	.056
5562	1195	.320

BEFORE EXAMINER NUTTER	
OIL CONSERVATION DIVISION	
<u>GETTY</u>	EXHIBIT NO. <u>5</u>
CASE NO. <u>7723</u>	

B & R SERVICE, INC.

P. O. Box 1048
Farmington, New Mexico 87401
(505) 325-2393

Company Getty Oil Company Lease C.W. Roberts Well 3-A
County Rio Arriba State New Mexico Date 6-26-82
Shut-In ~ 6 weeks Zero Point G.L. Tbg. Pressure 422
Casing Pressure _____ Tbg. Depth _____ Casing Perf. Dakota
Max. Temp. _____ Fluid Level 3540

<u>DEPTH</u>	<u>PSIG</u>	<u>GRADIENT</u>
0	422	----
1000	442	.020
3000	465	.012
5000	1121	.328
7000	1985	.432
7440	2177	.436
7540	2218	.410
7843	2342	.410

B & R SERVICE, INC.

P. O. Box 1048
Farmington, New Mexico 87401
(505) 325-2393

Company Getty Oil Company Lease C.W. Roberts Well 6-A
County Rio Arriba State New Mexico Date 6-26-82
Shut-In ~ 6 weeks Zero Point G.L. Tbg. Pressure 1338
Casing Pressure 1340 Tbg. Depth _____ Casing Perf. Mesa Verde
Max. Temp. _____ Fluid Level _____

<u>DEPTH</u>	<u>PSIG</u>	<u>GRADIENT</u>
0	1338	----
1000	1386	.048
3000	1475	.045
5000	1559	.042
5555	1583	.043

B & R SERVICE, INC.

P. O. Box 1048
Farmington, New Mexico 87401
(505) 325-2393

Company Getty Oil Company Lease C.W. Roberts Well 6-A
County Rio Arriba State New Mexico Date 6-26-82
Shut-In 6 weeks Zero Point G.L. Tbg. Pressure 1260
Casing Pressure _____ Tbg. Depth _____ Casing Perf. Dakota
Max. Temp. _____ Fluid Level 6600'

<u>DEPTH</u>	<u>PSIG</u>	<u>GRADIENT</u>
0	1260	----
1000	1309	.049
3000	1413	.052
5000	1587	.087
7000	2201	.341
7460	2401	.435
7560	2444	.430
7823	2557	.430

88% 6D
12 MV

13%

87%

NEW MEXICO SERVICES

P.O. Box 1079 • Farmington, NM 87401 • Phone 505-327-4911

API WATER ANALYSIS REPORT FORM

DATE <u>July 1, 1982</u>	TYPE SAMPLE <u>Water</u>
COMPANY <u>Getty Oil</u>	DEPTH <u>Unknown</u>
SAMPLE NO. # <u>1</u>	FORMATION <u>Mesa Verde</u>
DATE SAMPLED <u>6/28/82</u>	WELL NO. <u>3 A</u>
FIELD <u>Basin</u>	LEASE <u>C.W. Roberts</u>
COUNTY OR PARISH <u>Rio Arriba</u>	SAMPLED BY <u>Loyd</u>
STATE <u>New Mexico</u>	REPORT BY <u>Frank Platt</u>

DISSOLVED SOLIDS

Cations	PPM	me/l	x	Valence	=	Product
Sodium, Na & K	<u>4572.40</u>			<u>1</u>		
Calcium, Ca	<u>10.4</u>			<u>2</u>		
Magnesium, Mg	<u>12.15</u>			<u>2</u>		
Barium, Ba	<u>Unknown</u>					
TOTAL	<u>4594.75</u>					

Anions

Chloride, Cl	<u>7023</u>	
Sulfate, SO ₄	<u>15</u>	
Bicarbonate, HCO ₃	<u>109.80</u>	
Carbonate, CO ₃	<u>6</u>	
TOTAL	<u>7153.8</u>	

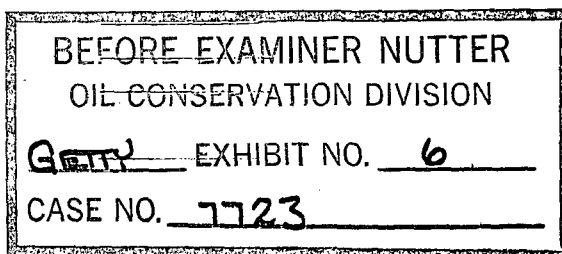
Total Hardness = 7.6
 Total Dissolved Solids (calc.) 11750.75

Iron, Fe (total) 2.0
 Sulfide, as H₂S None
 Specific Gravity @ 1.008

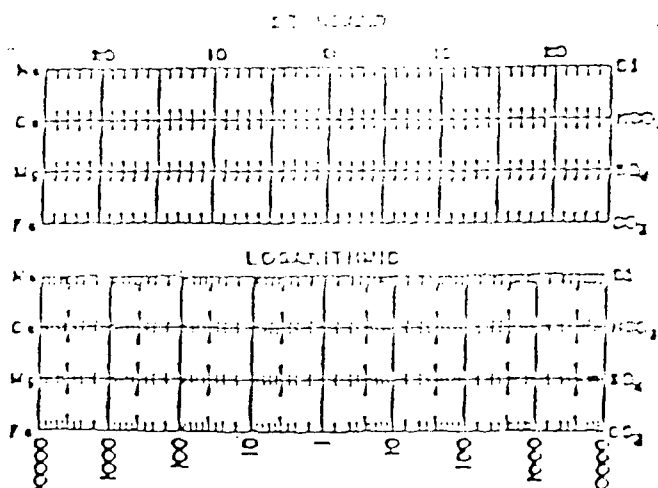
pH @ Temp. 7.75 @ 84°
 Resistivity _____
 BHT °F _____

Remarks: _____

1
2
1
-



WATER PATTERNS



Chemical Consultants

All Types Oil Field Chemicals and Services

P.O. Box 421
Farmington, New Mexico 87401

WATER ANALYSIS TEST REPORT

COMPANY Getty Oil Company						SHEET NUMBER	
FIELD						DATE 9-28-81	
COUNTY OR PARISH						STATE	
LEASE OR UNIT C.W. Roberts			WELL(S) NAME OR NO. #3-A		WATER SOURCE (FORMATION) Gallup-Dakota		
DEPTH, FT.	BHT, F	SAMPLE SOURCE	TEMP, F	WATER, BBL/DAY	OIL, BBL/DAY	GAS, MMCF/DAY	
TYPE OF OIL		API GRAVITY 0	TYPE OF WATER ☒ PRODUCED WATER ☐ INJECTION WATER OTHER				

WATER ANALYSIS PATTERN (NUMBER BESIDE ION SYMBOL INDICATES me/l * SCALE UNIT)

Na ⁺ 20	15	10	5	0	5	10	15	20 Cl ⁻
Ca ⁺⁺								HCO ₃ ⁻
Mg ⁺⁺								SO ₄ ⁼
Fe ⁺⁺⁺								CO ₃ ⁼

DISSOLVED SOLIDS

CATIONS

	me/l *	mg/l *
Total Hardness	16.0	800 as CaCO ₃
Sodium, Na ⁺ (calc.)	31.25	812.5
Calcium, Ca ⁺⁺	10.0	200.0
Magnesium, Mg ⁺⁺	6.0	72.9
Iron (Total), Fe ⁺⁺⁺	.35	6.5

ANIONS

Chloride, Cl ⁻	11.3	400
Sulfate, SO ₄ ⁼	33.3	1,600.0
Carbonate, CO ₃ ⁼	0	0
Bicarbonate, HCO ₃ ⁻	3.0	183.0
Hydroxyl, OH ⁻	0	0
Sulfide, S ⁼		
Phosphate - Meta, PO ₃ ⁼		
Phosphate - Ortho, PO ₄ ⁼		

DISSOLVED GASES

Hydrogen Sulfide, H ₂ S	mg/l *
Carbon Dioxide, CO ₂	mg/l *
Oxygen, O ₂	mg/l *

PHYSICAL PROPERTIES

pH	6.9
Eh (Redox Potential)	MV
Specific Gravity	
Turbidity, JTU Units	
Total Dissolved Solids (Calc.)	mg/l *
Stability Index @ F	
CaSO ₄ Solubility @ F	mg/l *
Max. CaSO ₄ Possible (Calc.)	mg/l *
Max. BaSO ₄ Possible (Calc.)	mg/l *
Residual Hydrocarbons	ppm (Vol/Vol)

SUSPENDED SOLIDS (QUALITATIVE)

Iron Sulfide ☐ Iron Oxide ☐ Calcium Carbonate ☐ Acid Insoluble ☐

REMARKS AND RECOMMENDATIONS:

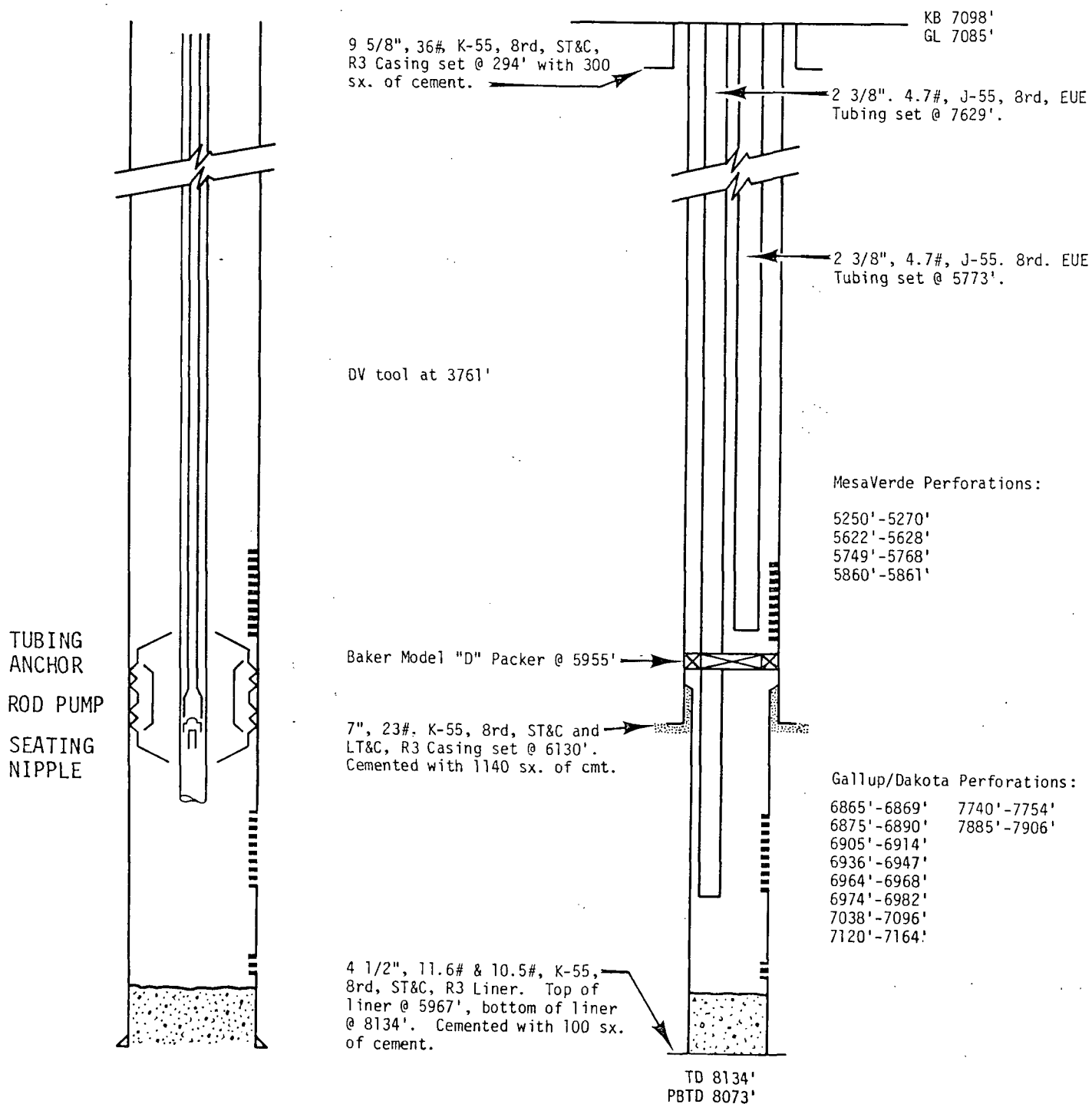
* NOTE: me/l and mg/l are commonly used interchangeably for epm and ppm respectively. Where epm and ppm are used, corrections should be made for specific gravity.

ENGINEER Max Woolery	DIST. NO.	ADDRESS Farmington, NM	OFFICE PHONE 327-7775	HOME PHONE
-------------------------	-----------	---------------------------	--------------------------	------------

C.W. ROBERTS #6-A
 L Section 18 - T25N - R3W
 Rio Arriba County, New Mexico

PROPOSED COMMINGLED
 COMPLETION

EXISTING COMPLETION



NOWSCO SERVICES

P.O. Box 1079 • Farmington, NM 87401 • Phone 505-327-4911

API WATER ANALYSIS REPORT FORM

DATE 4-23-82
COMPANY Guth Oil Co
SAMPLE NO. #1
DATE SAMPLED 4-23-82
FIELD Basin Dakota
COUNTY OR PARISH Re Grabe
STATE N.M.

TYPE SAMPLE H₂O
DEPTH UNKNOWN
FORMATION Mesa Verde
WELL NO. 6A
LEASE CW Roberts
SAMPLED BY John Gellesky
REPORT BY Frank Platt

DISSOLVED SOLIDS

Cations	ppm mg/l	me/l	x	Valence	=	Product
Sodium, Na & K	<u>4002.95</u>			1		
Calcium, Ca	<u>28</u>			2		
Magnesium, Mg	<u>25.758</u>			2		
Barium, Ba	<u>UNKNOWN</u>					
TOTAL	<u>4056.708</u>					

Anions

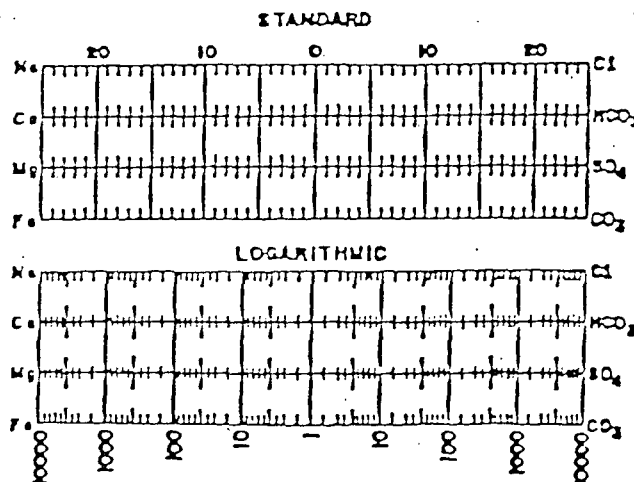
Chloride, Cl	<u>6145</u>			1		
Sulfate, SO ₄	<u>75</u>			2		
Bicarbonate, HCO ₃	<u>164.7</u>			1		
Carbonate, CO ₃	<u>.1</u>			-		
TOTAL	<u>6384.8</u>					

Total Hardness = 17.6
Total Dissolved Solids (calc.) _____

Iron, Fe (total) 1.5
Sulfide, as H₂S NDDE
Specific Gravity @ 1.007
pH @ Temp. 8 @ 75°
Resistivity 4167
BHT °F _____

Remarks: _____

WATER PATTERNS — mg/l.



NOWSCO SERVICES

P.O. Box 1079 • Farmington, NM 87401 • Phone 505-327-4911

API WATER ANALYSIS REPORT FORM

DATE 4-13-82 TYPE SAMPLE Oil/Water
 COMPANY Getty Oil Co. DEPTH UNKNOWN
 SAMPLE NO. #1 FORMATION Gallup Dakota
 DATE SAMPLED 4-12-82 WELL NO. 6 A
 FIELD Basin Dakota LEASE CW Roberts
 COUNTY OR PARISH Rio Grande SAMPLED BY _____
 STATE N. M. REPORT BY KEN BOONE

DISSOLVED SOLIDS	ppm	me/l	x	Valence	=	Product
Cations	mg/l					
Sodium, Na & K	<u>8807.85</u>			1		
Calcium, Ca	<u>60</u>			2		
Magnesium, Mg	<u>31.6</u>			2		
Barium, Ba	<u>unknown</u>					
TOTAL	<u>8899.45</u>					

Anions						
Chloride, Cl	<u>16750</u>			1		
Sulfate, SO ₄	<u>0</u>			2		
Bicarbonate, HCO ₃	<u>134.20</u>			1		
Carbonate, CO ₃	<u>0</u>			-		
TOTAL	<u>16884.2</u>					

Total Hardness = _____
 Total Dissolved Solids (calc.) 25825.55

Iron, Fe (total) 41.9 ppm
 Sulfide, as H₂S 0
 Specific Gravity @ 1.02
 pH @ Temp. 6.5 @ 60°
 Resistivity 23
 BHT °F _____

Remarks: _____

WATER PATTERNS — mg/l.

