

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEYSUBMIT IN TRIPLI
(Other instructions
reverse side)Form approved.
Budget Bureau No. 42-R1424

5. LEASE DESIGNATION AND SERIAL NO.

14-20-603-2198

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

Navajo

7. UNIT AGREEMENT NAME

Northwest Cha Cha

8. FARM OR LEASE NAME

NW Cha Cha 2 1/2 Unit

9. WELL NO.

14-23

10. FIELD AND POOL, OR WILDCAT

Cha Cha Gallup

11. SEC., T., R., M., OR BLK. AND
SURVEY OR AREA

Sec 23-29N-14W NMPM

1. SUNDRY NOTICES AND REPORTS ON WELLS
(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir.
Use "APPLICATION FOR PERMIT" for such proposals.)OIL WELL ☒ GAS WELL ☐ OTHER

2. NAME OF OPERATOR

Humble Oil & Refining Company

3. ADDRESS OF OPERATOR

P. O. Box 120, Denver, Colorado 80201

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*
See also space 17 below.)
At surface

SWSW(704' FSL & 500' FWL) of Section 23

14. PERMIT NO.

15. ELEVATIONS (Show whether DF, RT, GR, etc.)

5567' KB

12. COUNTY OR PARISH

San Juan

13. STATE

New Mexico

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:

TEST WATER SHUT-OFF ☐FRACTURE TREAT ☐SHOOT OR ACIDIZE ☐REPAIR WELL ☐(Other) ☐PULL OR ALTER CASING ☐MULTIPLE COMPLETE ☐ABANDON* ☐CHANGE PLANS ☐

* SUBSEQUENT REPORT OF:

WATER SHUT-OFF ☐FRACTURE TREATMENT ☐SHOOTING OR ACIDIZING ☐(Other) ☐REPAIRING WELL ☐ALTERING CASING ☐ABANDONMENT* ☒(NOTE: Report results of multiple completion on Well
Completion or Recompletion Report and Log form.)17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any
proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones perti-
nent to this work.)*

11-24-71 - Spot 10 sack cement plug 5117-5017', 10 sack cement plug 4175-4075'.

11-26-71 - Shot 4 1/2" casing off at 3501', pulled casing. Spot 40 sack cement
plug 2160', spot 40 sack cement plug 1100-1000', spot 40 sack cement
plug 260-160'.11-27-71 - Set regulation dry hole marker in top of surface casing with 12 sack
cement plug from 30-0'.

Intervals between plugs filled with mixed mud.

2-7-72 - Location cleaned ready for inspection.

cc: 2 - NM O&G Commission

1 - Minerals Supervisor - Navajo Tribe

1 - Midland

1 - Clinton

RECEIVED

FEB 14 1972

Jt. Operations

18. I hereby certify that the foregoing is true and correct

SIGNED

TITLE

Dist. Superintendent

DATE

2-9-72

(This space for Federal or State office use)

APPROVED BY

TITLE

DATE

CONDITIONS OF APPROVAL, IF ANY:

*See Instructions on Reverse Side

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEYSUBMIT IN TRIPLICATE
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Budget Bureau No. 42-R1424.

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14-20-603-2198

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14-23

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Cha Cha Gallup

11. SEC., T., R., M., OR BLK. AND
SURVEY OR AREA

Sec 23-29N-14W NMPM

12. COUNTY OR PARISH

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13. STATE

New Mexico

SUNDRY NOTICES AND REPORTS ON WELLS
(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir.
Use "APPLICATION FOR PERMIT—" for such proposals.)

1.

OIL WELL ☒ GAS WELL ☐ OTHER

2. NAME OF OPERATOR

Humble Oil & Refining Company

3. ADDRESS OF OPERATOR

P. O. Box 120, Denver, Colorado 80201

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*
See also space 17 below.)
At surface

SWSW(704' FSL & 500' FWL) of Section 23

14. PERMIT NO.

15. ELEVATIONS (Show whether DF, RT, GR, etc.)

5567' KB

16.

Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:

TEST WATER SHUT-OFF

FRACTURE TREAT

SHOOT OR ACIDIZE

REPAIR WELL

(Other)

PULL OR ALTER CASING

MULTIPLE COMPLETE

ABANDON*

CHANGE PLANS

☐
☐
☒
☐

SUBSEQUENT REPORT OF:

WATER SHUT-OFF

FRACTURE TREATMENT

SHOOTING OR ACIDIZING

(Other)

REPAIRING WELL

ALTERING CASING

ABANDONMENT*

☐
☐
☐☐
☐
☐(NOTE: Report results of multiple completion on Well
Completion or Recompletion Report and Log form.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

Well is an uneconomical producer and not essential to waterflood operations. Last test 7-2-70 0 BOPD & 113 BWP. TD 5260', PBTD 5224'. 8-5/8" csg set in 12 1/2" hole at 212' with 180 sxs cement, circulated to surface. 4 1/2" 9.5# csg set in 7-7/8" hole at 5258' w/200 sxs cement(TOC @ 4075' Calc.). Perforated from 5117 to 5184' w/6 shots/ft. We propose to plug & abandon as follows: Spot 10 sxs cement 5117-5117', 10 sxs ~~XXXX~~ cement 4175-4075', Run free point, cut and ~~pull~~ pull as much 4 1/2" csg as possible, spot 40 sxs cement(a 100' plug) between base of pictured cliffs @ 1220 and top of Mesaverde @ 2640', 40 sxs cement 1100-1000' across top of Pictured Cliffs @ 1055', 40 sxs cement from 262-162' across bottom of surface casing, 12 sxs cement 30-0', intervals between plugs to be filled with mixed mud. Place regulation dry hole marker in top of surface casing and clean location for inspection.

cc: 2 - NM O&G Commission
1 - Minerals Supervisor - Navajo Tribe
1 - Midland

18. I hereby certify that the foregoing is true and correct

SIGNED

John F. K. [Signature]

TITLE

Dist. Chief Engineer

DATE

10-4-71

(This space for Federal or State office use)

APPROVED BY

TITLE

DATE

CONDITIONS OF APPROVAL, IF ANY:

*See Instructions on Reverse Side

X			

(SUBMIT IN TRIPLICATE)

**UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY**

Indian Agency

Navajo Tribal

Allottee

Lease No. 14-20-603-2198

SUNDRY NOTICES AND REPORTS ON WELLS

NOTICE OF INTENTION TO DRILL	SUBSEQUENT REPORT OF WATER SHUT-OFF	<u>42N</u>	<u>X</u>
NOTICE OF INTENTION TO CHANGE PLANS	SUBSEQUENT REPORT OF SHOOTING OR ACIDIZING		
NOTICE OF INTENTION TO TEST WATER SHUT-OFF	SUBSEQUENT REPORT OF ALTERING CASING		
NOTICE OF INTENTION TO REDRILL OR REPAIR WELL	SUBSEQUENT REPORT OF REDRILLING OR REPAIR		
NOTICE OF INTENTION TO SHOOT OR ACIDIZE	SUBSEQUENT REPORT OF ABANDONMENT		
NOTICE OF INTENTION TO FULL OR ALTER CASING	SUPPLEMENTARY WELL HISTORY		<u>X</u>
NOTICE OF INTENTION TO ABANDON WELL	<u>Core Results</u>		<u>X</u>

INDICATE ABOVE BY CHECK MARK NATURE OF REPORT, NOTICE, OR OTHER DATA)

Navajo Tribal #NFarmington, New MexicoApril 7, 19 61Well No. 1 is located 70 1/2 ft. from S line and 510 ft. from W line of sec. 23SW 1/4 SW 1/4 of Section 23 T-29-N R-14-W N.M.P.M.

(1/4 Sec. and Sec. No.)

(Twp.)

(Range)

(Meridian)

Cha Cha Gallup

(Field)

San Juan

(County or Subdivision)

New Mexico

(State or Territory)

The elevation of the derrick floor above sea level is 5567 ft. (RDS)

DETAILS OF WORK

(State names of and expected depths to objective sands; show sizes, weights, and lengths of proposed casings; indicate mudlogging jobs, cementing points, and all other important proposed work)

Core No. 1 5150-5210' - Recovered 60' as follows: 1' shale to silty sandy shale, 1' tight shaly sand, 17' silty sandy shale, 3' tight sand with occasional shale partings and nodules, 9' sand with fair porosity and permeability with good odor and bleed with vertically fractured shaly sand 5177-5178' with occasional shale laminations throughout, 2' tight shaly sand, 27' shale to occasional sandy shale.

Total depth 5260' set 4-1/2" casing at 5258' with 125 sacks 6 percent gel cement with 1-1/2 pounds medium tuf plug per sack followed by 75 sacks neat cement. Displaced with 300 gallons BDA and 78 barrels oil. After waiting on cement tested casing with 3000 psi, which held with no indication of pressure drop. Released rig March 25, 1961.

Ran Gamma Ray Correlation Log and perforated with 6 shots per foot 5117-5184'. Sand oil fracked with 18,200 gallons oil containing 1/20 pounds per gallon adomite Mark II with

I understand that this plan of work must receive approval in writing by the Geological Survey before operations may be commenced.

Company Pan American Petroleum CorporationAddress Box 180, Farmington, New MexicoAttn: L. O. Spear, Jr.ORIGINAL SIGNED BY
R. M. Bauer, Jr.

By

Title Senior Petroleum Engineer

(SUBMIT IN TRIPLICATE)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Indian Agency

Navajo Tribal

Allottee

Lease No. **14-20-601-2190**

SUNDRY NOTICES AND REPORTS ON WELLS

NOTICE OF INTENTION TO DRILL	SUBSEQUENT REPORT OF WATER SHUT-OFF
NOTICE OF INTENTION TO CHANGE PLANS	SUBSEQUENT REPORT OF SHOOTING OR ACIDIZING
NOTICE OF INTENTION TO TEST WATER SHUT-OFF	SUBSEQUENT REPORT OF ALTERING CASING
NOTICE OF INTENTION TO REDRILL OR REPAIR WELL	SUBSEQUENT REPORT OF REDRILLING OR REPAIR
NOTICE OF INTENTION TO SHOOT OR ACIDIZE	SUBSEQUENT REPORT OF ABANDONMENT
NOTICE OF INTENTION TO PULL OR ALTER CASING	SUPPLEMENTARY WELL HISTORY
NOTICE OF INTENTION TO ABANDON WELL	

(INDICATE ABOVE BY CHECK MARK NATURE OF REPORT, NOTICE, OR OTHER DATA)

Navajo Tribal

Farmington, New Mexico March 23, 1961

Well No. 1 is located 704 ft. from S line and 510 ft. from W line of sec. 23

SW 1/4 NW 1/4 of Section 23	T-29-N	R-24-W	N.M.P.M.
(1/4 Sec. and Sec. No.)	(Twp.)	(Range)	(Meridian)

Was Was Gallup	San Juan	New Mexico
(Field)	(County or Subdivision)	(State or Territory)

The elevation of the derrick floor above sea level is _____ ft. (To be reported later.)

DETAILS OF WORK

(State names of and expected depths to objective sands; show sizes, weights, and lengths of proposed casings; indicate mudding jobs, cementing points, and all other important proposed work)

Spudded 12-1/2" hole on March 19, 1961. 8-5/8" casing was set at 213' with 175 sacks test cement with 2 per cent Calcium Chloride. Circulated 60 sacks. Wait on cement 12 hours. Test casing with 500 psi. Test ok. Reduced hole at 214' to 7-7/8". Resumed drilling operations.

I understand that this plan of work must receive approval in writing by the Geological Survey before operations may be commenced.

Company Pan American Petroleum Corporation

Address **Box 480**

Farmington, New Mexico

ALVIN L. O. ROBERT, JR.

ORIGINAL SIGNED BY
R. M. Bauer, Jr.

By R. M. Bauer, Jr.

Title Senior Petroleum Engineer

(SUBMIT IN TRIPLICATE)

Indian Agency

Navajo Tribal

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Allottee

Lease No. 14-20-603-2198

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SUNDRY NOTICES AND REPORTS ON WELLS

NOTICE OF INTENTION TO DRILL	☒	SUBSEQUENT REPORT OF WATER SHUT-OFF
NOTICE OF INTENTION TO CHANGE PLANS		SUBSEQUENT REPORT OF SHOOTING OR ACIDIZING
NOTICE OF INTENTION TO TEST WATER SHUT-OFF		SUBSEQUENT REPORT OF ALTERING CASING
NOTICE OF INTENTION TO REDRILL OR REPAIR WELL		SUBSEQUENT REPORT OF REDRILLING OR REPAIR
NOTICE OF INTENTION TO SHOOT OR ACIDIZE		SUBSEQUENT REPORT OF ABANDONMENT
NOTICE OF INTENTION TO PULL OR ALTER CASING		SUPPLEMENTARY WELL HISTORY
NOTICE OF INTENTION TO ABANDON WELL		

(INDICATE ABOVE BY CHECK MARK NATURE OF REPORT, NOTICE, OR OTHER DATA)

Navajo Tribal #H

Farmington, New Mexico March 10, 1961

Well No. 1 is located 704 ft. from $\begin{matrix} N \\ S \end{matrix}$ line and 510 ft. from $\begin{matrix} E \\ W \end{matrix}$ line of sec. 23

SW/4 SW/4 of Section 23

T-29-N

R-14-W

N.M.P.M.

(1/4 Sec. and Sec. No.)

(Twp.)

(Range)

(Meridian)

Cha Cha Gallup

San Juan

New Mexico

(Field)

(County or Subdivision)

(State or Territory)

The elevation of the derrick floor above sea level is _____ ft. (To be reported later.)

DETAILS OF WORK

(State names of and expected depths to objective sands; show sizes, weights, and lengths of proposed casings; indicate mudding jobs, cementing points, and all other important proposed work)

We propose to drill the above well to approximately 5450' to test and develop productive Gallup zones. Stimulation will be as indicated upon penetration of Gallup pay. Rotary tools will be used to total depth. Casing program as follows:

SIZE	DEPTH	CEMENT	REMARKS
8-5/8"	200'	200 sacks	Neat - circulate.
4-1/2"	5450'	200 sacks	6% gel cement with 100 sacks neat on bottom

Copies of location plats attached. A copy of any survey taken will be submitted upon completion of well.

I understand that this plan of work must receive approval in writing by the Geological Survey before operations may be commenced.

Company Pan American Petroleum Corporation

Address Box 480

Farmington, New Mexico

Attn: L. O. Speer, Jr.

ORIGINAL SIGNED BY
R. M. Bauer, Jr.

By

Title Senior Petroleum Engineer

WELLBORE DIAGRAM

K.B. ELEV.: 5561
 K.B. CORRECTION: 12
 C.L. ELEV.: 5555

HOLE SIZE: 12 1/4"

LE SIZE: 7 7/8"

D.V. tool @ _____
 Cement with _____ sx

FIELD: _____
 FORMATION: _____

*TOP PERF: 5117

*BOT PERF: 5184

PBTD: 5224'
 TOTAL DEPTH 5260'
 *INDIVIDUAL PERFS: _____

6 SPF = _____ HOLES

LEASE NAME: Cho Cho WELL NO.: 23-16 #29

WELLBORE DIAGRAM AS OF DATE: _____

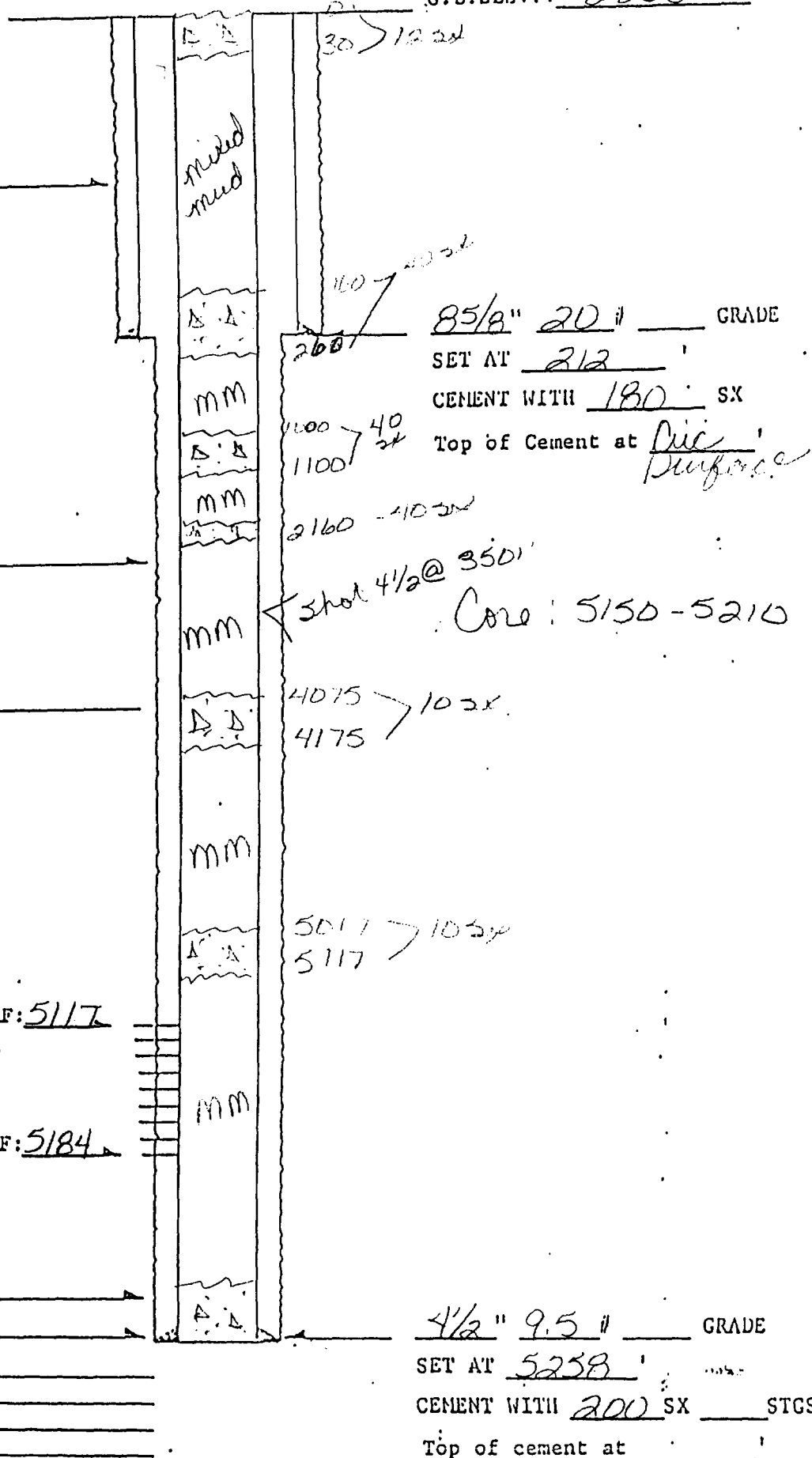
STATE: NM COUNTY: San Juan BLOCK: _____ SECTION: 23

TOWNSHIP: 29N RANGE: 14W LEGAL: 704 E3L 500 F-WL

OPERATOR: SOI WORKING INTEREST: _____ ROYALTY INTEREST: _____

COMPLETION DATE: 3.31.61 CURRENT STATUS: (PI/P) (FLOW) (INJ) (T/A) (SI) PI/P

REMARKS: _____



U. S. LAND OFFICE Navajo Tribal
SERIAL NUMBER 14-20-603-2198LEASE OR PERMIT TO PROSPECT
Navajo Tribal "H"UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

LOG OF OIL OR GAS WELL

LOCATE WELL CORRECTLY

Company Pan American Petroleum Corporation Address Box 480, Farmington, New Mexico

State New Mexico
County San Juan
Section 23
T23N R14E S14E
Well No. 1
The information given herewith is a complete and correct record of the well and all work done thereon so far as can be determined from all available records.
Signed R. M. Bauer, Jr.
Senior Petroleum Engineer
April 17, 1961

The summary on this page is for the condition of the well at above date.

Commenced drilling March 12, 1961. Finished drilling March 25, 1961.
Casing 300 feet. Cement 300 feet.
No. 1, from 5177 to 5184. No. 4, from 5184 to 5191.
No. 2, from 5191 to 5198. No. 5, from 5198 to 5205.
No. 3, from 5205 to 5212. No. 6, from 5212 to 5219.
No. 1, from 5219 to 5226. No. 3, from 5226 to 5233.
No. 2, from 5233 to 5240. No. 4, from 5240 to 5247.

CASING RECORD

Casing	Weight per foot	Thickness in inch	Make	Amount	Kind of steel	Cut and pulled from	Perforated From To	Purpose
8-5/8"	20	3/16	1-52	1000	Guide	Surface		Surface
4-1/2"	19.5	3/16	1-52	500	Guide	Oil String		Oil String
HISTORY OF OIL OR GAS WELL								

MUDDING AND CEMENTING RECORD

Size casing	Where set	Number sacks of cement	Method used	Mud gravity	Amount of mud used
8"	212	180 sacks of cement	Halliburton	1 plug	
4-1/2"	5258	200 sacks of cement	B. J. Service	3 plug	

PLUGS AND ADAPTERS

Heaving plug—Material _____ Length _____ Depth set _____
Adapters—Material _____ Size _____

SHOOTING RECORD

Size	Shell used	Explosive used	Quantity	Date	Depth shot	Depth cleaned out

TOOLS USED

Rotary tools were used from 0 feet to 5260 feet, and from _____ feet to _____ feet.
Cable tools were used from _____ feet to _____ feet, and from _____ feet to _____ feet.
Completed March 31, 1961 as flowing oil DATES Date first new oil produced.
well Cha Cha Gallup Field, 19 _____ Put to producing March 29, 19 61
The production for the first 24 hours was 210 barrels of fluid of which 99.8% was oil; _____ %
emulsion; _____ % water; and 2% sediment. Gravity, °Bé. 42.6° API
If gas well, cu. ft. per 24 hours _____ Gallons gasoline per 1,000 cu. ft. of gas _____
Rock _____

Jackie White, Driller
 Pete Estes, Driller
 James Smith, Driller
 Bert W. Farris, Driller

FORMATION RECORD

FROM—	TO—	TOTAL FEET	FORMATION
0	213	213	Surface sand and shale.
213	770	557	Kirtland-Farmington sand and shale.
770	1070	300	Fruitland sand, shale, and coal.
1070	1225	155	Pictured Cliffs sand and shale.
1225	2225	1000	Lewis shale.
2225	3885	1660	Mesaverde sand, shale and coal.
3885	4810	925	Mancos shale.
4810	5175	365	Gallup sand and shale.
5175	5260	85	Gallup pay sand and shale.
ABOVE	50—	TOTAL FEET	(Tops from E log) DIRECTION

(OVER)

FORMATION RECORD—CONTINUED

HISTORY OF OIL OR GAS WELL

16-43004-2 U. S. GOVERNMENT PRINTING OFFICE

It is of the greatest importance to have a complete history of the well. Please state in detail the dates of redrilling, together with the reasons for the work and its results. If there were any changes made in the casing, state fully, and if any casing was "sidetracked" or left in the well, give its size and location. If the well has been dynamited, give date, size, position, and number of shots. If plugs or bridges were put in the well, state kind of material used, position, and results of pumping or flowing.

Spudded 12-1/4" hole on March 13, 1961. 8-5/8" casing was set at 213' with 175 sacks neat cement with 2 percent Calcium Chloride. Circulated 60 sacks. Wait on cement 12 hours. Test casing with 500 psi. Test ok. Reduced hole at 214' to 7-7/8". Resumed drilling operations.

Core No. 1 5150-5210' — Recovered 60' as follows: 1' shale to silty sandy shale, 1' tight shaly sand, 17' silty sandy shale, 1' tight sand with occasional shale partings and nodules, 9' sand with fair porosity and permeability with good odor and bleed with vertically fractured shaly sand 5177-5178' with occasional shale laminations throughout, 2' tight shaly sand, 27' shale to occasional sandy shale.

Total depth 5260' set 4-1/2" casing at 5258' with 125 sacks 6 percent gel cement with 1-1/2 pounds medium tuf plug per sack followed by 75 sacks neat cement. Displaced with 300 gallons BDA and 78 barrels oil. After waiting on cement tested casing with 3000 psi, which held with no indication of pressure drop. Released rig March 25, 1961.

RAF Gamma Ray Correlation Log and perforated with 6 shots per foot, 5177-5181'. Fractured sand oil fracked with 18,200 gallons oil containing 1/20 pounds per gallon Adonite Mark II with 5 gallons per 1000 gallons Halliburton FR-1 additive and 20,000 pounds sand. Breakdown pressure 2100 psi, maximum treating pressure 2750 psi, minimum treating pressure 1300 psi, AVG treating pressure 2400 psi, and average injection rate 129 barrels per minute. Landed 4-3/8" tubing at 5293'. Completed March 31, 1961, as flowing oil well Cha Cha Gallup Field. Potential test March 31, 1961, flowed 210 barrels of oil per day on 18/64" choke. Tubing pressure flowing 260 psi, casing pressure flowing 575 psi. Gravity 42.6° API. State New Mexico

Company BSN American Petroleum Corporation Address Box 180, Alamogordo, New Mexico

LOCAL WELL CORRELATION

X									

Form 8-330

LOC OF OIL OR GAS WELL

GEOLOGICAL SURVEY

DEPARTMENT OF THE INTERIOR

UNITED STATES

WASJO LITREJ NH
FVRE OF FVREIL TO FVREEL

SENIOR NUMBER 17-50-203-5128
U. S. LAND OFFICE WASJO LITREJ

YBLOASJ 6128 13-21-00
BUDGET BUDGET NO. 43-1322-1