Form 3160-5
(June, 1990)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
Budget Bureau No. 1004-0135
Expires: March 31, 1993

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill, or to deepen or reentry to a different reservoir.
Use "APPLICATION FOR PERMIT--" for such proposals

SUBMIT IN TRIPLICATE

5. Lease Designation and Serial No.: 14-20-603-2198
6. If Indian, Allotte or Tribe Name: Navajo Tribal
7. If Unit or CA, Agreement Designation:
8. Well Name and No.: Navajo H #12
9. API Well No.: 30-045-08363
10. Field and Pool, or Exploratory Area: Cha Cha Gallup
11. County or Parish, State: San Juan County, New Mexico

1. Type of Well: [ ] Oil Well [X] Gas Well [ ] Other
2. Name of Operator: Richardson Operating Company
3. Address and Telephone No.: 1700 Lincoln, Suite 1700, Denver, Colorado 80203 (303) 830-8000
4. Location of Well (Footage, T., R., M., or Survey Description): 1830' Fnl and 810' Fwl Section 14, T29N, R14W

MAY 2000 RECEIVED OIL CON. DIV. DIST. 3

12. **CHECK APPROPRIATE BOX(s) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA**

TYPE OF SUBMISSION	TYPE OF ACTION		
[X] Notice of Intent	[ ] Abandonment	[ ] Change of Plans	
[ ] Subsequent Report	[ ] Recompletion	[ ] New Construction	
[ ] Final Abandonment Notice	[X] Plugging Back	[ ] Non-Routine Fracturing	
	[ ] Casing Repair	[ ] Water Shut-Off	
	[ ] Altering Casing	[ ] Conversion to Injection	
	[ ] Surface Casing/Cementing	[ ] Dispose Water	
	[ ] Other: see below	(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form)	

13. 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 markets and zones pertinent to this work.)*

Richardson Operating Co. obtained BLM approval to plug and abandon the Cha Cha Gallup formation on 5/24/1999 and recomplete the Kutz West Pictured Cliff formation as per a procedure submitted 4/24/1999.

BLM Approval was granted to spot a balanced plug from 4969' to 4465' in the 4 1/2" casing above the Cha Cha Gallup.

Richardson plans on plugging the Cha Cha Gallup starting 5/26/2000 and hereby gives notice of intent to plug. Richardson plans on plugging the Cha Cha Gallup as per the attached revised 5/18/2000 procedure which varies only by setting a cement retainer at 4465' and squeeze cementing 45 sacks into the Cha Cha Gallup rather than spotting a balanced plug.

Richardson hereby requests the BLM's approval to plug the Cha Cha Gallup as per the attached revised procedure.

14. I hereby certify that the foregoing is true and correct
Signed: Ralph L. Nelms Title: Petroleum Engineer Date: 5/18/2000

(This space for Federal or State office use)
Approved by: _____ Title: _____ Date: 5/23/00
Conditions of approval, if any:

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

* See Instructions on Reverse Side

NMOCD

WORKOVER/COMPLETION PROCEDURE

RICHARDSON OPERATING COMPANY
3100 La Plata Highway
Farmington, Nm 87401
Phone 505-564-3100
Fax: 505-564-3109

Prepared by	R. Nelms
Date:	5/18/00
Well Name	Navajo Tribal H #12
Location	T29N R14W Sec 14 Unit E
	1830' FNL 810' FWL
County	San Juan
Field	Kutz West Pictured Cliffs
Pool	Cha Cha Gallup
API #	30-045-08363
Surface	Navajo Tribal
Lease #	14-20-603-2198
Elev	5203'
Elev KB	5214'
KB	11'

OBJECTIVE Plug and Abandon Gallup and recomplete in Pictured Cliffs

PROCEDURE

1. MIRU Ropco Rig #1. NU 2 3/8" relief line. Hold safety meeting. ND tubinghead. NU BOP. MIRU two 400 bbl frac tanks with fresh clean city water. DO NOT CONTAMINATE WITH PRODUCTION WATER. PRODUCTION WATER WILL RETARD CEMENT.

2. Drop check valve down 2 3/8" tubing and set in Seat Nipple at 4881' KB. MIRU cement pump truck.

3. Install 5000 psi 2 3/8" tubing valve and pressure test tubing to 4000 psi with cement pump truck.

4. TOOH with 2 3/8" tubing. Install 5000 psi frac valve on 4 1/2" casing. Bullhead water at 5 bpm to establish injection rate and pressure into Gallup.

5. MIRU Schlumberger wireline services. Make gauge ring run 3.927" drift diameter 4 1/2" 10.50#/ft K-55 casing to 4500. Set cement retainer on wireline at 4465' KB.

6. Run CBL log from 1500' to top of cement or surface. RD and release schlumberger.

7. TIH with stinger on 2 3/8" tubing. Sting into cement retainer at 4465'.

8. Bullhead water at 5 bpm to establish injection rate and pressure. Bullhead 45 sacks Class B neat cement. Yield 1.18 ft3/sack at 15.6 #/gallon.

9 Sting out of cement retainer at 4465 and reverse circulate tubing 125% of capacity.

10 TOOH and set end of tubing at 3380' KB. Equaliize 125 sacks Class B with 1% CaCL2 with balanced plug. TOOH to 1700' and reverse circulate tubing 125% of capacity. TOOH and shut down overnight. Cement plug should be spotted 3380-1800' in 4 1/2".

11 TIH and tag cement top. Set full tubing weight on plug. Record on daily report. Depth cannot be less than 1800'.

12 TOOH. RU Schlumberger. Perforate four cement squeeze holes at 1000'. 0.41" 90 degree phasing. Pump down 4 1/2" casing with red dye and determine annular volume of cement required to circulate to surface. Bring 125 sacks Class B, 1% Cacl2, 1/4 #/sack celloflake, 25 #/sack Gilsonite to location with yield of 1.80 ft3/sack. 13.3 #/ gallon.

13 TIH and set cement retainer at 980' on wireline. TOOH and release Schlumberger.

14 TIH with stinger on 2 3/8" tubing and sting into retainer at 980'. Pump 10 bbls scavenger cement ahead with red dye and 125 Class B sacks cement. Pump Class B cement as described in step 12 above to surface.

15 Sting out of retainer and reverse circulate 125% tubing capacity.

16 Shut down overnight.

17 RU Schlumberger. Run CBL GR Neutron logs 980' to surface.
If cement not to surface then 1" cement down 8 5/8" and 4 1/2" annulus 50' to surface.
If cement is at suface then:
RU pump truck and pressure test casing to 4200 psi.
Perforate Pictured Cliffs formation 750' to 755' and 763' to 770' with 2 spf.

18 Install 5000# 4 1/2" frac valve.

19 RU frac equipment and pressure test surface lines to 5000 psi.

20 Fracture treat with 20# linear gel and 40,000# 20/40 sand as per service company design. Bullhead 500 gallons 7 1/2" HCL ahead. Observe fracture closure after treatment.

21 Close Frac valve. RD frac company and install flowline. Shut in for 24 hours. Flow well back on 16/64" choke. Flow one hour. If no sand increase to 32/64" choke.

22 When well dies, remove frac valve and install tubing head. NU stripping head.

23 TIH and clean out sand with sand bailer to PBTD at 980'. TOH.

24 TIH with 24 joints 2 3/8" tubing with notched collar on end of tubing, one joint, 4' perforated sub, seat nipple and land end of tubing at 830'. SN at 800'.

25 Swab well until flow rate is established or run rods as pump if needed.

BEFORE PLUG BACK

RICHARDSON OPERATING COMPANY
3100 La Plata Highway
Farmington, Nm 87401
Phone 505-564-3100
Fax: 505-564-3109

Prepared by R. Nelms
Date: 5/17/00

Well Name Navajo Tribal H #12
Location T29N R14W Sec 14 Unit E
1830' FNL 810' FWL
County San Juan
Field Kutz West Pictured Cliffs
Pool Cha Cha Gallup
API # 30-045-08363
Surface Navajo Tribal
Lease # 14-20-603-2198
Elev 5203'
Elev KB 5214'
KB 11'

Well Status Pumping well

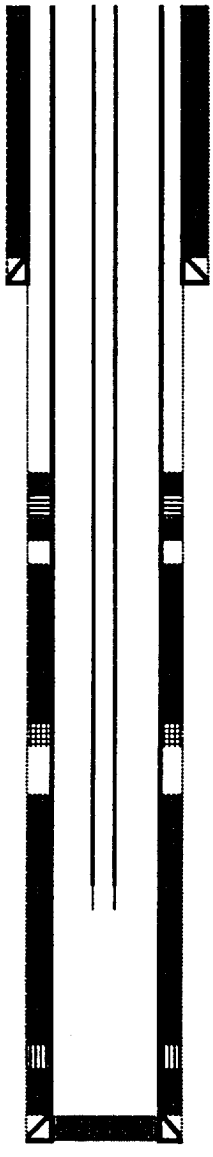
Surface Hole 12 1/4"

Surface Casing 8 5/8" 20#/ft K-55

Cemented with 50 sx
Cement Type B

Cemented to Surface Yes. Circulated 10 bbls

Casing shoe 211' KB



Formation tops

Surface	Kirkland
Ojo Alamo	
Fruitland Coal	655
Pictured Cliffs	750
Lewis Shale	960
Mesaverde	1735
Chacra	
Cliffhouse	2360
Menefee	2600
Point Lookout	3130
Mancos	3565
Gallup	4515
Sanastee	4930
TD	5020

Hole Size 6 1/4"
Casing Size 4 1/2" 10.50#/ft K-55

Tubing 2 3/8" 4.70#/ft J-55 EUE

Tubing Joints 160
Tubing feet 4870.6'
Seat Nipple 4881'
Perofated sub 4'
Mud Anchor 15'
Tubing Anchor Not in reports

Pump pulled
Rods pulled

Gallup Perforations 4846 - 4802 16 holes

Slotted Casing 4891'

PBTD 4969' KB
Casing Shoe 5016' KB

Squeeze hole at 1843'
Squeezed three times
150 sxs Class H total
Original cement top at 2200
before squeeze job

DV tool at 3581'
Cemented second stage with 400 Sx
6% gel + 1 1/2# Tuf Plug /sk
Cement top at 4100'

Cemented first stage with 125 Sxs
6%Gel + 1 1/2#/sk Tuf Plug/sk
and 75 sacks Neat Cement

Frac'd Gallup with 20,000# sand in oil

AFTER PLUG BACK

RICHARDSON OPERATING COMPANY
3100 La Plata Highway
Farmington, Nm 87401
Phone 505-564-3100
Fax: 505-564-3109

Prepared by R. Nelms
Date: 5/17/00

Well Name Navajo Tribal H #12
Location T29N R14W Sec 14 Unit E
1830' FNL 810' FWL
County San Juan
Field Kutz West Pictured Cliffs
Pool Cha Cha Gallup
API # 30-045-08363
Surface Navajo Tribal
Lease # 14-20-603-2198
Elev 5203'
Elev KB 5214'
KB 11'

Well Status Flowing well

Formation tops

Surface	Kirkland
Ojo Alamo	
Fruitland Coal	655
Pictured Cliffs	750
Lewis Shale	960
Mesaverde	1735
Chacra	
Cliffhouse	2360
Menefee	2600
Point Lookout	3130
Mancos	3565
Gallup	4515
Sanastee	4930
TD	5020

Surface Hole 12 1/4"

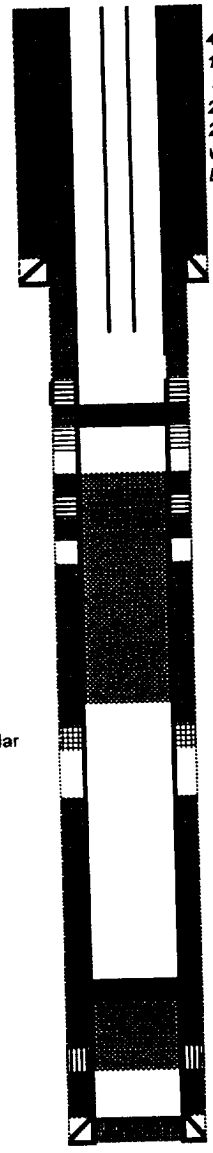
Surface Casing 8 5/8" 20#/ft K-55

Cemented with 50 sx
Cement Type B

Cemented to Surface Yes. Circulated 10 bbls

Casing shoe 211' KB

4 1/2" csg and 7 1/2" hole
1000' - 211' = 789' x 0.19ft3/ft = 150 ft3
4 1/2" csg and 8 5/8" csg
211' - 0 = 211' x 0.24ft3/ft = 50.6 ft3
200 ft3 / 1.8 ft3/sk = 111 sacks Class B 1% CaCl2
with 1/4 #/sk celloflake and 25 #/sk Gilsonite
Bring 125 sacks to location



Squeeze holes at 1000'
circulate cement to surface
Cement Retainer set at 980'

Pictured Cliffs Perforations 750'-755' and 763'-770'
Fracture treated with 40,000# 20/40 sand
20# linear gel

Cement spotted top at 1800' new PBTD

Hole Size 6 1/4"
Casing Size 4 1/2" 10.50#/ft K-55

Tubing 2 3/8" 4.70#/ft J-55
EUE

Tubing Joints 24
Tubing feet 750'
Seat Nipple 720'
Perofated sub 4'
Mud Anchor open ended with notched collar
Tubing Anchor none

Pump Do not run initially
Rods will try to flow well

Gallup Perforations 4846 - 4802 16 holes

Slotted Casing 4891'

PBTD 4969' KB
Casing Shoe 5016' KB

Squeeze hole at 1843'
Squeezed three times with 150 sacks
Original top at 2200' before squeeze job
3380 - 1800 = 1580'
1580' x 0.0895 ft3/ft = 141.4 ft3
141.4 ft3 / 1.18 ft3/sk = 119.8 sacks
Spot using 125 sacks Class B 1% CaCl2

Cemented spotted bottom 3380'

DV tool at 3581'
Cemented second stage with 400 Sx
6% gel + 1 1/2# Tuf Plug /sk
Cement top 4100'

Cement Retainer at 4465
4969-4465 = 504' cement plug
504' x 0.0895 ft3/ft = 45.1 ft3
45.1 ft3 / 1.18 ft3/sk =38 sks Class B
Squeeze with 45 sacks Class B neat

Cemented first stage with 125 Sxs
6%Gel + 1 1/2#/sk Tuf Plug/sk
and 75 sacks Neat Cement

Frac'd Gallup with 20,000# sand in oil