

UTAH OIL AND GAS CONSERVATION COMMISSION

REMARKS: WELL LOG \_\_\_\_\_ ELECTRIC LOGS \_\_\_\_\_ FILE X WATER SANDS \_\_\_\_\_ LOCATION INSP \_\_\_\_\_ SUB. REPORT/abd. \_\_\_\_\_

DATE FILED **NOVEMBER 25, 1994**  
 LAND: FEE & PATENTED \_\_\_\_\_ STATE LEASE NO. **ML-3044** PUBLIC LEASE NO. \_\_\_\_\_ INDIAN \_\_\_\_\_

DRILLING APPROVED: **FEBRUARY 13, 1995**

SPUDDED IN: \_\_\_\_\_  
 COMPLETED: \_\_\_\_\_ PUT TO PRODUCING: \_\_\_\_\_

INITIAL PRODUCTION: \_\_\_\_\_  
 GRAVITY A.P.I. \_\_\_\_\_

GOR: \_\_\_\_\_  
 PRODUCING ZONES: \_\_\_\_\_

TOTAL DEPTH: \_\_\_\_\_  
 WELL ELEVATION: \_\_\_\_\_

DATE ABANDONED: **LOCATION ABANDONED APD EXPIRED EFF. APRIL 10, 1996**

FIELD: **UNDESIGNATED FIELD**

UNIT: **RED WASH UNIT**

COUNTY: **UINTAH**

WELL NO. **RED WASH UNIT #322** API NO. **43-047-32598**

LOCATION **1320' FNL** FT. FROM (N) (S) LINE. **1320' FEL** FT. FROM (E) (W) LINE. **C/NE** 1/4 - 1/4 SEC. **16**

TWP.	RGE.	SEC.	OPERATOR	TWP.	RGE.	SEC.	OPERATOR
				<b>8S</b>	<b>24E</b>	<b>16</b>	<b>CHEVRON USA PROD CO</b>

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

Form approved.  
Budget Bureau No. 1004-0136  
Expires December 31, 1991

SUBMIT BY THE APPLICANT\*  
**RECEIVED**  
NOV 25 1991  
DIV OF OIL GAS & MINING

APPLICATION FOR PERMIT TO DRILL OR DEEPEN

1a. TYPE OF WORK  
 DRILL  DEEPEN

b. TYPE OF WELL  
 OIL WELL  GAS-WELL  OTHER \_\_\_\_\_ SINGLE ZONE  MULTIPLE ZONE

2. NAME OF OPERATOR  
**CHEVRON USA PRODUCTION CO., INC.**

3. ADDRESS AND TELEPHONE NO.  
**11002 EAST 17500 SOUTH, VERNAL, UT 84078-8526 (801) 781-4300**

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements)\*  
 At surface  
**1320' FNL, 1320' FEL, C/NE**  
 At proposed prod. zone  
**SAME**

7. UNIT AGREEMENT NAME  
**RED WASH UNIT**

8. FARM OR LEASE NAME, WELL NO.  
**#322**

9. API WELL NO.

10. FIELD AND POOL, OR WILDCAT  
**RED WASH MESAVERDE**

11. SEC., T., R., M., OR BLOCK AND SURVEY OR AREA  
**SEC. 16-T8S-R24E, SLB&M**

12. COUNTY OR PARISH  
**UINTAH**

13. STATE  
**UTAH**

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE\*  
**32.1 miles from Vernal, UT.**

15. DISTANCE FROM PROPOSED\* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any) **1320'**

16. NO. OF ACRES IN LEASE  
**320**

17. NO. OF ACRES ASSIGNED TO THIS WELL  
**NA**

18. DISTANCE FROM PROPOSED LOCATION\* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT. **NA**

19. PROPOSED DEPTH  
**9250'**

20. ROTARY OR CABLE TOOLS  
**ROTARY**

21. ELEVATIONS (Show whether DF, RT, GR, etc.)  
**5198' (UNGRADED GROUND)**

22. APPROX. DATE WORK WILL START\*  
**12/10/94**

PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	GRADE, SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
17.5"	13.375" H-40	48#	320'	222 cuft. (188 sx.), shoe to surface
11"	8.625" J-55	24#	3900'	1062 cuft. (413 sx.), shoe to surface
7.875"	4.5" P-110	11.6	9250'	1244 cuft. (1063 sx.), shoe to 3800'

We propose to drill a 9250' well to test the Mesaverde Formation at this location. Enclosures:

- Certified Plat
- Thirteen Point Surface Use Plan With Attachments
- Eight Point Drilling Plan With Attachments
- Self-Certification Statement

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

24. SIGNED *[Signature]* TITLE TEAM LEADER DATE 11-22-94

PERMIT NO. 43-0417-32598 APPROVAL DATE APPROVED BY THE STATE

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

CONDITIONS OF APPROVAL, IF ANY:

APPROVED BY \_\_\_\_\_ TITLE \_\_\_\_\_ DATE: 2/13/95 BY: [Signature]

\*See Instructions On Reverse Side WELL SPACING: 649-2-3

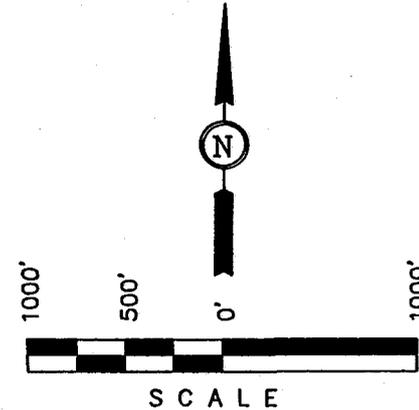
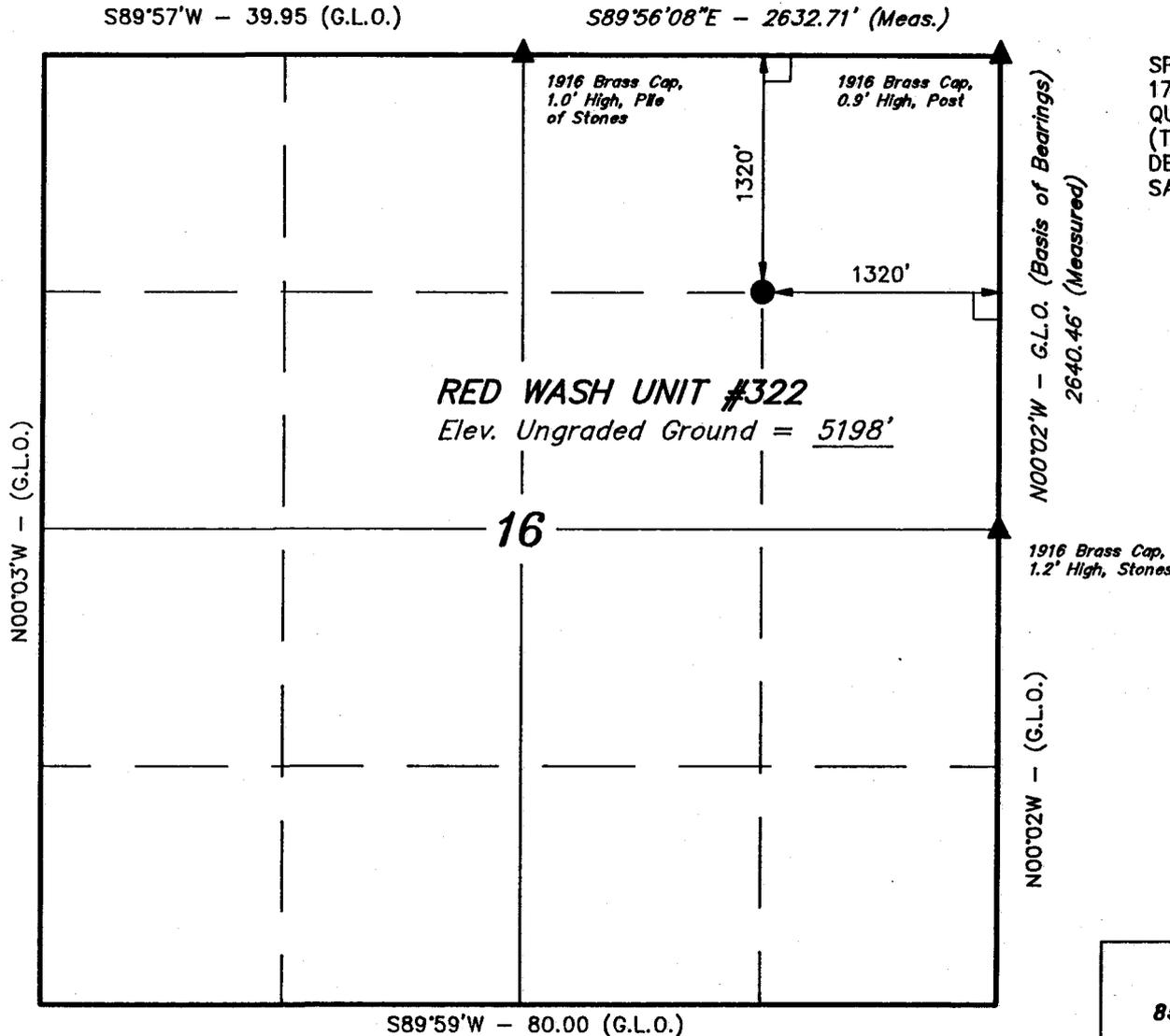
**T8S, R24E, S.L.B.&M.**

**CHEVRON U.S.A., INC.**

Well location, RED WASH UNIT #322, located as shown in the NE 1/4 of Section 16, T8S, R24E, S.L.B.&M. Uintah County, Utah.

**BASIS OF ELEVATION**

SPOT ELEVATION AT THE SOUTH 1/4 CORNER OF SECTION 17, T8S, R24E, S.L.B.&M. TAKEN FROM THE BONANZA QUADRANGLE, UTAH, UINTAH COUNTY, 7.5 MINUTE QUAD. (TOPOGRAPHIC MAP) PUBLISHED BY THE UNITED STATES DEPARTMENT OF THE INTERIOR, GEOLOGICAL SURVEY. SAID ELEVATION IS MARKED AS BEING 5118 FEET.



**CERTIFICATE**

THIS IS TO CERTIFY THAT THE ABOVE PLAT WAS PREPARED FROM FIELD NOTES OF ACTUAL SURVEYS MADE BY ME OR UNDER MY SUPERVISION AND THAT THE SAME ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

*Robert L. Kay*  
REGISTERED LAND SURVEYOR  
REGISTRATION NO. 181319  
STATE OF UTAH

**LEGEND:**

- └─┘ = 90° SYMBOL
- = PROPOSED WELL HEAD.
- ▲ = SECTION CORNERS LOCATED.

**UINTAH ENGINEERING & LAND SURVEYING**

85 SOUTH 200 EAST - VERNAL, UTAH 84078

(801) 789-1017

SCALE 1" = 1000'	DATE SURVEYED: 10-31-94	DATE DRAWN: 11-2-94
PARTY B.B. A.Z. C.B.T.	REFERENCES G.L.O. PLAT	
WEATHER WARM	FILE CHEVRON U.S.A., INC.	

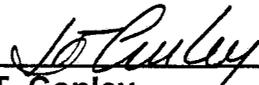
United States Department of the Interior  
Bureau of Land Management  
Vernal District Office  
170 South 500 West  
Vernal, UT 84078

**SELF-CERTIFICATION STATEMENT**

Be advised that Chevron USA Production Company is considered to be the operator of Red Wash Unit #322, CNE-Sec.16-T8S-R24E, Uintah County, Utah, and is responsible under the terms and conditions of the lease for the operations conducted on the leased lands.

Bond coverage for this well is provided by Nationwide Bond #U-89-75-81-34 (Standard Oil Co. of California and its wholly owned subsidiary Chevron USA Production Co., as co-principals) via surety consent as provided for in 43 CFR 3104.2.

Sincerely,

  
\_\_\_\_\_  
J. T. Conley  
Red Wash Area Team Leader

DATE: 11-22-94

**CHEVRON USA PRODUCTION CO.**

**RED WASH UNIT #322  
1320' FNL, 1320' FEL  
CNE-S4-T8S-R24E  
UINTAH COUNTY, UTAH**

**THIRTEEN POINT SURFACE USE PLAN**

**1. EXISTING ROADS:**

A. See Topographic Map A. There are no plans to change, alter or improve upon any existing state or county road.

B. See Topographic Map A. Travel east from Vernal on U.S. Highway 40 to the intersection with Utah State Highway 45. Turn south on Utah State 45 and proceed 30.1 miles. Turn east at existing two-track road and proceed 1.7 miles to proposed new access road.

**2. ACCESS ROADS TO BE CONSTRUCTED OR RECONSTRUCTED:**

See Topographic Maps A and B. The access road and location site are on Federal and State lands. Minimal upgrades are planned for an existing two-track road of approximately 1.7 miles. A new access road approximately 0.3 miles in length will be constructed to the location.

**3. LOCATION OF EXISTING WELLS WITHIN ONE MILE:**

See Topographic Map B.

**4. LOCATION OF EXISTING OR PROPOSED FACILITIES IF WELL IS PRODUCTIVE:**

A. See Topographic Map C.

B. Gas dehydration and metering equipment will be installed onsite following completion of the new wellbore. A gas pipeline approximately 5800' in length will be constructed to connect the well to the gas gathering system at the proposed RWU #321. A pipeline is proposed from that point to connect with the existing gas gathering system, as detailed in the Surface Use Plan for RWU #321.

## **RED WASH UNIT #322 - THIRTEEN POINT SURFACE USE PLAN**

C. Disturbed areas no longer needed for operations will be graded back to as near original state as possible. Drainage channels will be returned to original state and the areas will be reseeded as prescribed by the BLM.

D. A blooie pit 8' X 10' X 5' deep will be constructed 150' diagonally from the center hole. A line will be placed on the surface from the center hole to the burn pit. The pit will be fenced on four sides to protect livestock.

### **5. LOCATION AND TYPE OF WATER SUPPLY:**

Red Wash Unit fresh water supply, Application #A17791, Water Right Number 49-2153. Water will be picked up from a water injection facilities water tank located within Red Wash Unit, shown on Topographic Map A, and be transported ~9.2 miles to the wellsite on the proposed access route.

Transportation of water shall be by tank truck.

### **6. CONSTRUCTION MATERIALS:**

Native dirt and gravel will be used as construction materials.

### **7. METHODS FOR HANDLING WASTE DISPOSAL:**

A. The reserve pit will be lined if required.

B. Excess reserve pit fluid will be disposed of via evaporation, solidification and/or haul-off to a commercial disposal facility.

C. Drill cuttings will be caught and settled in the reserve pit and buried when the pit is backfilled.

D. Commercial service will provide portable toilets and haul-off to a commercial disposal facility.

E. Trash will be stored in trash containers and hauled to commercial or municipal facility for disposal.

F. It is not anticipated that any salt or chemicals will need to be disposed of. If required, disposal will be by commercial disposal facility.

## RED WASH UNIT #322 - THIRTEEN POINT SURFACE USE PLAN

G. In the event fluids are produced, any gas and associated condensate will be flared over the flare pit while testing. Any produced water will be caught in the flare pit and transferred to Red Wash Central Battery for use in the waterflood system. Depending on the nature of completion/stimulation fluids, these will be caught in the flare pit and disposed of via use in the waterflood system, evaporation or haul-off to a commercial disposal facility.

H. Hazardous chemicals 10,000lb. of which will most likely be used, produced, stored, transported or disposed of in association with the proposed action of drilling, completing and producing this well: We anticipate that none of the hazardous chemicals in quantities of 10,000 lb. or more will be associated with these operations.

I. Extremely hazardous substances threshold quantities of which will be used, produced, stored, transported or disposed of in association with the proposed action of drilling, completing and producing this well: We anticipate that none of the extremely hazardous substances in threshold quantities per 40 CFR 355 will be associated with these operations.

### 8. ANCILLARY FACILITIES:

None.

### 9. WELLSITE LAYOUT:

A. See Figures 1 and 2.

B. Burn pit will not be lined.

C. Access to the well pad will be as shown on Topographic Map B.

### 10. PLAN FOR RESTORATION OF SURFACE:

A. All surface areas not required for production operations will be graded to as near original condition as possible and contoured to maintain possible erosion to a minimum. Any rock encountered in excavation will be disposed of beneath backfill to return surface to its present appearance and provide soil for seed growth.

## **RED WASH UNIT #322 - THIRTEEN POINT SURFACE USE PLAN**

B. The topsoil will be evenly distributed over the disturbed areas. Reseeding will be performed as directed by the BLM.

C. Pits that would present a hazard to wildlife or livestock will be backfilled when the rig is released and removed.

D. Completion of the well is planned during 1995. Rehabilitation will commence following completion of the well. If the wellsite is to be abandoned, all disturbed areas will be recontoured to the natural contour as soon as possible.

### **11. SURFACE OWNERSHIP:**

The wellsite, access roads and flowlines are on State and Federal lands. The operator shall contact the State of Utah, DOGM, at (801) 538-5340 and the BLM at (801) 789-1362 between 24 and 48 hours prior to construction activities.

### **12. OTHER INFORMATION:**

A. The well is located in hilly and sandy terrain. Vegetation consists of sagebrush and natural grasses around the location. The soil is a poorly developed, semi-arid, thin topsoil layer over the Uintah Formation.

B. Surface use activities other than the oil and gas well facilities consist of grazing.

C. There are no occupied dwellings near the wellsite.

D. Archeological clearance has been recommended per Senco-Phenix Report SP-UT-160q (U94SC693bs).

**RED WASH UNIT #322 - THIRTEEN POINT SURFACE USE PLAN**

**13. COMPANY REPRESENTATIVE:**

Mr. J. T. Conley  
11002 East 17500 South  
Vernal, UT 84078  
(801) 781-4301

I hereby certify that I, or persons under my direct supervision, have inspected the proposed drillsite and access route; that I am familiar with the conditions which presently exist; that the statements made in this plan are, to the best of my knowledge, true and correct; and, that the work associated with the operations proposed herein will be performed by Chevron USA Production Co., Inc. and its contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved.

11-22-94  
Date

J. T. Conley  
J. T. Conley  
Red Wash Area Team Leader

CHEVRON USA PRODUCTION CO.

RED WASH UNIT #322  
1320' FNL, 1320' FEL  
CNE-S16-T8S-R24E  
UINTAH COUNTY, UTAH

EIGHT POINT DRILLING PLAN

1. ESTIMATED FORMATION TOPS:

Uinta	Surface
Green River	~ 1682'
Oil Shale	~ 2725-3025'
Wasatch	~ 4540
Mesaverde	~ 6980'
Sego	~ 8490'
Buck Tongue	~ 9042'
Castlegate	~ 9104'

2. ESTIMATED DEPTHS OF TOP AND BOTTOM OF WATER, OIL, GAS, OR OTHER MINERAL BEARING FORMATIONS AND PLAN FOR PROTECTION:

**Deepest Fresh Water:** ~ 2000', Green River Formation.

**Oil Shale:** Oil shale is expected at a depth of approximately ~ 2725-3025'.

**Oil:** None expected.

**Gas:** Expected in the Green River Fm. from ~ 3300' to the top of the Wasatch Fm. Expected in the Wasatch Fm., exact depths unknown. Expected in the Mesaverde Fm., likely depths listed as the Segos and Castlegate, above.

**Protection of oil, gas, water, or other mineral bearing formations:** Protection shall be accomplished by cementing surface casing, protection casing and production casing back to the surface or to depths sufficient to isolate required formations. Please refer to casing and cement information for protection plans.

## RED WASH UNIT #322 - EIGHT POINT DRILLING PLAN

### 3. PRESSURE CONTROL EQUIPMENT:

**For drilling 17.5" surface hole:**

No BOP equipment required.

**For drilling through 13.375" surface casing:**

Maximum anticipated surface pressure  $\leq 3000$  psi.

Pressure control equipment shall be in accordance with BLM minimum standards for 3000 psi equipment.

A casing head with an 13.625", 3000 psi flange shall be welded onto the 13.375" surface casing.

BOP stack will consist of a double gate preventor and an annular preventor. The double gate will be equipped with pipe rams on bottom and blind rams on top. The choke and kill lines will be connected to outlets between the bottom and top rams, utilizing either the ram body outlets or a drilling spool with side outlets. The BOP stack will be minimum 11" bore, 3000 psi working pressure. The choke and kill lines will be as per BLM minimum standards for 3000 psi working pressure. Please refer to attached schematics.

Test procedure and frequency shall be in accordance with BLM minimum standards for 3000 psi equipment.

**For drilling through 8.625" protection casing:**

Maximum anticipated surface pressure  $\leq 5000$  psi. Upcoming DST data in well Red Wash #305 may determine MASP to be  $< 3,000$  psi. If so, a sundry may be submitted that reflects that data in BOPE configuration and surface casing design.

Pressure control equipment shall be in accordance with BLM minimum standards for 5000 psi equipment.

A 13.625", 3000 psi X 11", 5000 psi casing head will be installed on top of the 13.625" SOW casing head.

## RED WASH UNIT #322 - EIGHT POINT DRILLING PLAN

BOP stack will consist of a double gate preventor and an annular preventor. The double gate will be equipped with pipe rams on bottom and blind rams on top. The choke and kill lines will be connected to outlets between the bottom and top rams, utilizing either the ram body outlets or a drilling spool with side outlets. The BOP stack will be minimum 11" bore, 5000 psi working pressure. The choke and kill lines will be as per BLM minimum standards for 5000 psi working pressure. Please refer to attached schematics.

Test procedure and frequency shall be in accordance with BLM minimum standards for 5000 psi equipment.

A rotating head will be used while drilling below the Wasatch Formation for control of gas cut mud.

### 4. SUPPLEMENTAL DRILLING EQUIPMENT AND CASING INFORMATION:

#### Casing Information:

Casing	Conn.	New/ Used	Stage Tool	Centralizers
13.375"	STC	New	NA	Three - One 10' up from shoe and on 1st and 3rd collars.
8.625"	STC	New	2500'	Six - One 10' above shoe, and on 1st, 2nd, 4th, 6th 8th collars
4.5"	LTC	New	NA	Per Chevron

#### Cement Information:

##### 13.375" Casing:

**Cement Type and Method:** Oilfield type cement circulated in. No plug used. Allowed to set under pressure.

## RED WASH UNIT #322 - EIGHT POINT DRILLING PLAN

**Slurry, Density and Fill:** Single slurry, 222 cf (188 sx @ 1.18 cf/sx) minimum plus excess as required. 15.6 ppg, Premium (Type A) + other additives as required. Fill - 320' to surface.

### 8.625" Casing:

**Cement Type and Method:** Oilfield type cement circulated in. Tail plug used. Allowed to set under pressure.

#### **Slurry, Density and Fill:**

**Primary Lead:** 127 cf (34 sx @ 3.82 cf/sx) minimum plus excess as required. 11 ppg, Premium (Type A) + 16% gel + extender + LCM + other additives as required. Fill - 3000' to 2500' (fill to stage tool).

**Primary Tail:** 229 cf (194 sx @ 1.18 cf/sx) minimum plus excess as required. 15.6 ppg, Premium (Type A) + other additives as required. Fill - 3900' to 3000'.

**Stage Single Slurry:** 706 cf (185 sx @ 3.82 cf/sx) minimum plus excess as required. 11.0 ppg, Premium (Type A) + 16% gel + extender + LCM + other additives as required. Fill - 2500' to surface.

### 4.5" Casing:

**Cement Type and Method:** Oilfield type cement circulated in. Tail plug used. Allowed to set under pressure.

**Slurry, Density and Fill:** Single slurry, 1244 cf (1063 sx @ 1.17 cf/sx) minimum with excess as required. 14.2 ppg, Premium (Class H)/pozmix + additives as required. Fill - 9250' to 3800'.

### **Drilling Equipment:**

Nothing special.

## RED WASH UNIT #322 - EIGHT POINT DRILLING PLAN

### 5. CIRCULATING MEDIUM, MUD TYPE, MINIMUM QUANTITIES OF WEIGHT MATERIAL, AND MONITORING EQUIPMENT:

Entire well will be drilled with gyp water, brine water or water based drilling fluids consisting primarily of fresh or brine water, bentonite, attapulgite (salt gel), lignite, caustic, lime, soda ash and polymers. No chromates will be used.

No minimum quantity of weight material will be required to be kept on location.

PVT/Flow Show will be used from base of surface casing to TD.

Gas detector will be used from base of surface casing to TD.

### 6. ANTICIPATED TYPE AND AMOUNT OF TESTING, LOGGING, AND CORING:

#### Logging:

Mud logging	6500' to TD.
Gamma Ray	TD-Surface Casing Shoe
Induction	TD-Surface Casing Shoe
Density/Neutron	TD-3300'
Sonic	TD-Surface Casing Shoe
Others	Tenative

#### Coring:

None planned.

#### Testing:

None planned.

**RED WASH UNIT #322 - EIGHT POINT DRILLING PLAN**

**7. EXPECTED BOTTOM HOLE PRESSURE AND ANY ANTICIPATED ABNORMAL PRESSURE, TEMPERATURES, OR OTHER HAZARDS (H<sub>2</sub>S, STEAM, ETC.) AND ASSOCIATED CONTINGENCY PLANS:**

Normal pressure gradient to top of Green River Fm. Some slightly over-pressured gas and/or oil zones from top to base of Green River Fm. Some slightly overpressured gas zones from top of Wasatch Fm. to TD. All sands typically tight - drill underbalanced with water or unweighted mud.

Maximum expected BHP @ 9250': ~5087 psi (0.55 psi/ft.).

Maximum expected BHT @ 9250': ~168° F.

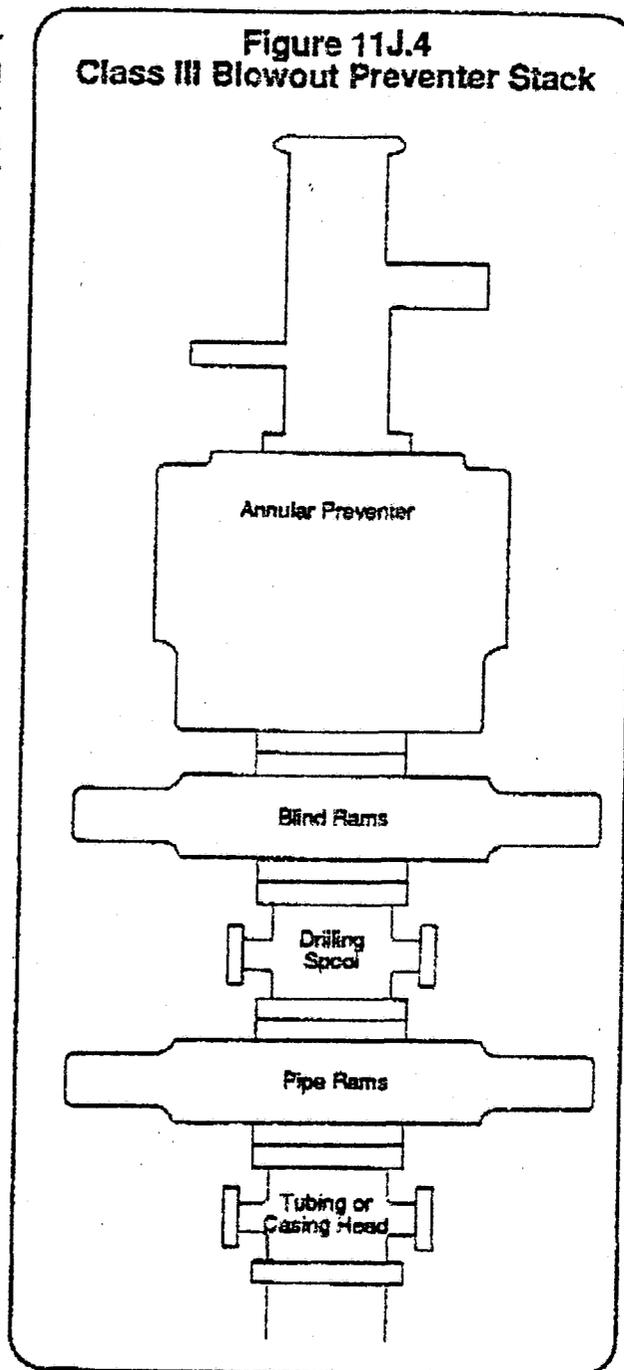
No other abnormal hazards are anticipated and no contingency plans are required.

**8. OTHER:**

None.

E. CLASS III BLOWOUT PREVENTER STACK:

The Class III preventer stack is designed for drilling or workover operations. It is composed of a single hydraulically operated annular preventer on top, then a blind ram preventer, a drilling spool, and a single pipe ram preventer on bottom. The choke and kill lines are installed onto the drilling spool and must have a minimum internal diameter of 2". All side outlets on the preventers or drilling spool must be flanged, studded, or clamped. An emergency kill line may be installed on the wellhead. A double ram preventer should only be used when space limitations make it necessary to remove the drilling spool. In these instances, the choke manifold should be connected to a flanged outlet between the preventer rams only. In this hookup, the pipe rams are considered master rams only, and cannot be used to routinely circulate out a kick. The Class III blowout preventer stack is shown to the right in Figure 11J.4.



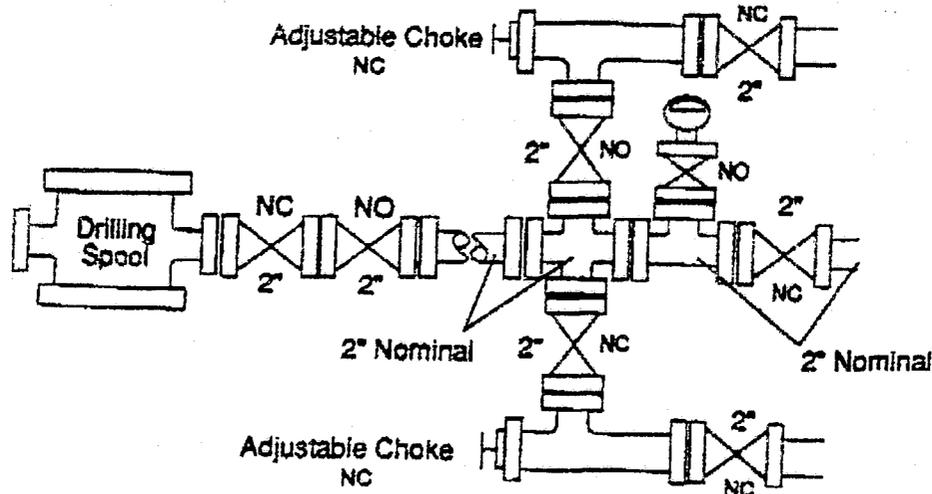
**D. CLASS III CHOKE MANIFOLD**

The Class III choke manifold is suitable for Class III workovers and drilling operations. The Standard Class III choke manifold is shown in Figure 11J.8 below. Specific design features of the Class III manifold include:

1. The manifold is attached to a drilling spool or the top ram preventer side outlet.
2. The minimum internal diameter is 2" (nominal) for outlets, flanges, valves and lines.
3. Includes two steel gate valves in the choke line at the drilling spool outlet. The inside choke line valve may be remotely controlled (HCR).
4. Includes two manually adjustable chokes which are installed on both side of the manifold cross. Steel isolation gate valves are installed between both chokes and the cross, and also downstream of both chokes.
5. Includes a bleed line which runs straight through the cross and is isolated by a steel gate valve.
6. Includes a valve isolated pressure gauge suitable for drilling service which can display the casing pressure within view of the choke operator.
7. Returns through the choke manifold must be divertible through a mud-gas separator and then be routed to either the shale shaker or the reserve pit through a buffer tank or manifold arrangement.
8. If the choke manifold is remote from the wellhead, a third master valve should be installed immediately upstream of the manifold cross.

**Figure 11J.8 - Class III Choke Manifold**

NC = Normally Closed  
 NO = Normally Open

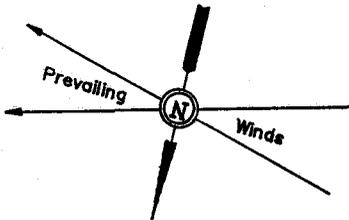


Rev. 1/1/89

CHEVRON USA., INC.

LOCATION LAYOUT FOR

RED WASH UNIT #322  
SECTION 16, T8S, R24E, S.L.B.&M.  
1320' FNL 1320' FEL



SCALE: 1" = 50'  
DATE: 11-2-94  
Drawn By: C.B.T.

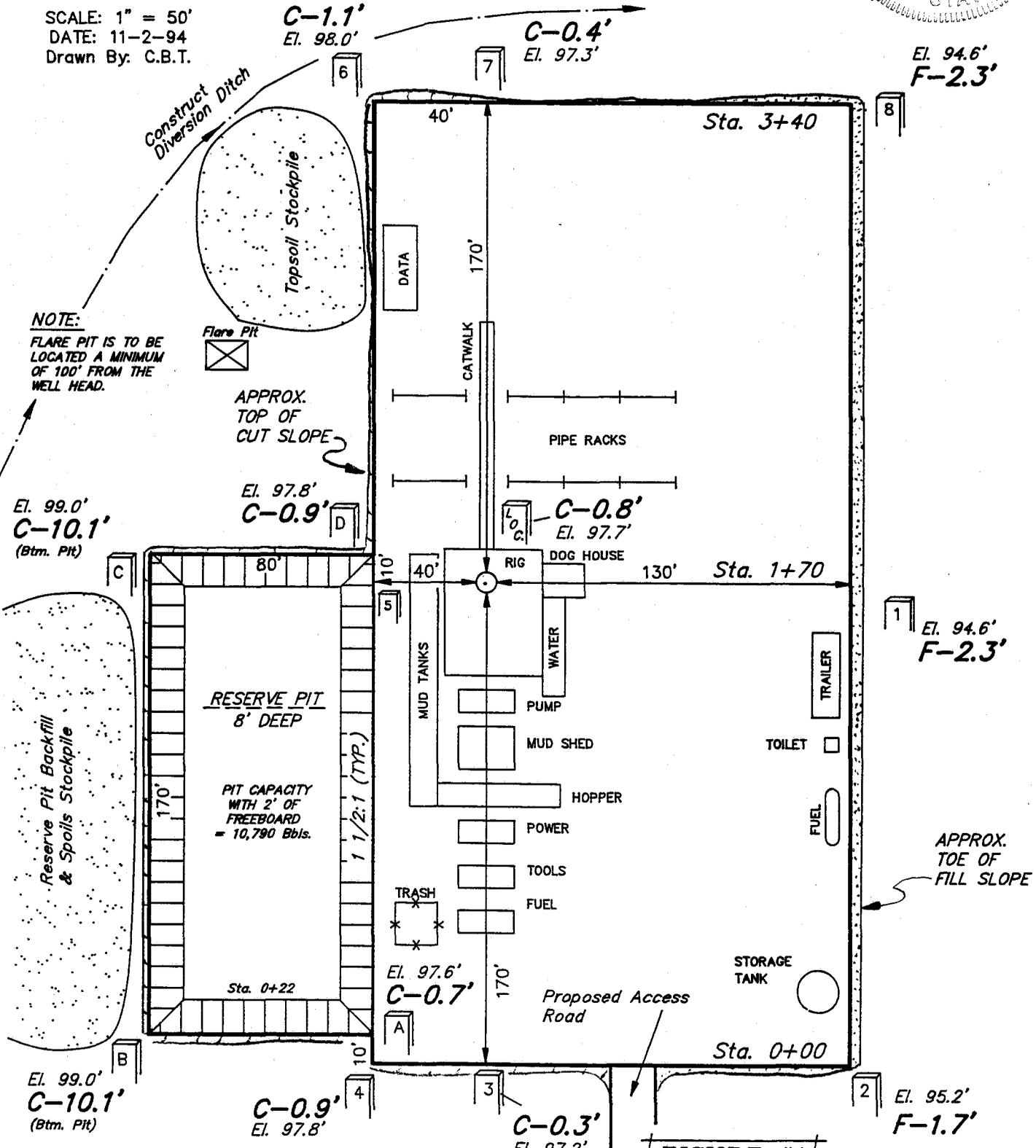
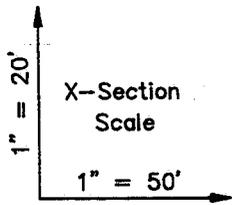
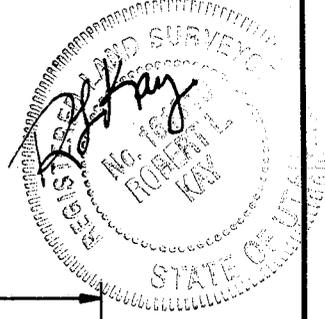


FIGURE #1

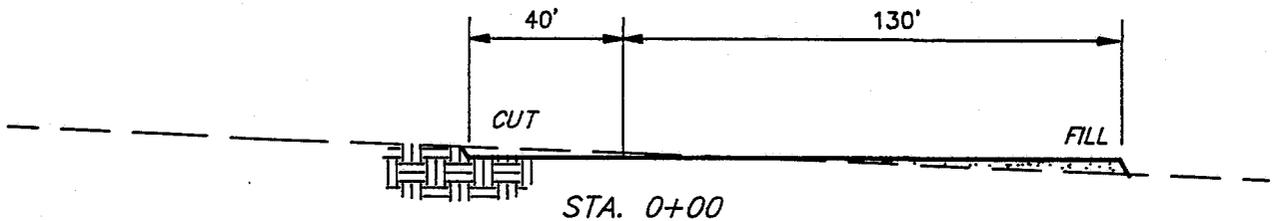
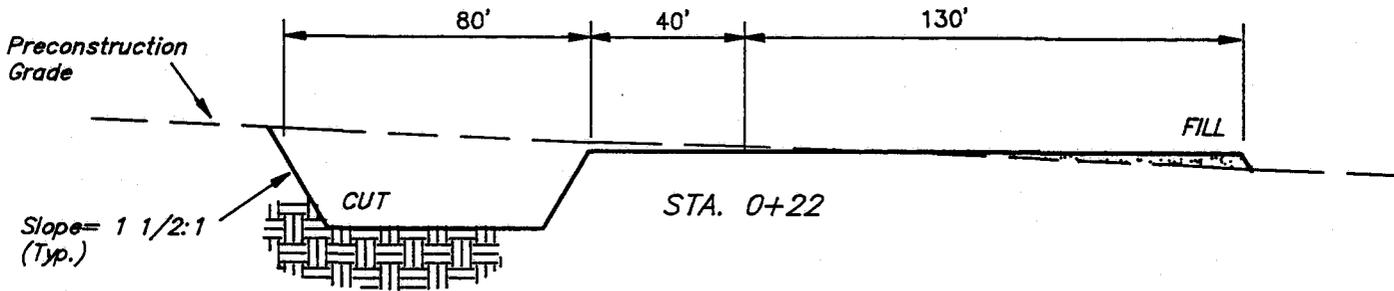
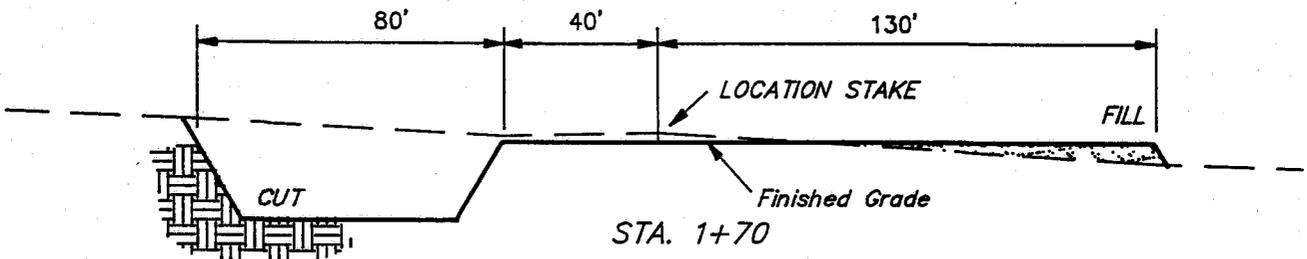
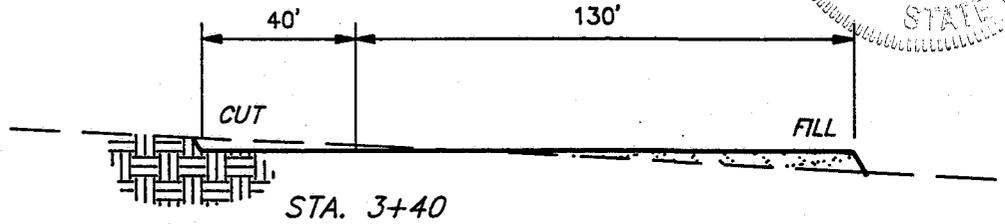
CHEVRON USA, INC.

TYPICAL CROSS SECTIONS FOR

RED WASH UNIT #322  
SECTION 16, T8S, R24E, S.L.B.&M.  
1320' FNL 1320' FEL



DATE: 11-2-94  
Drawn By: C.B.T.



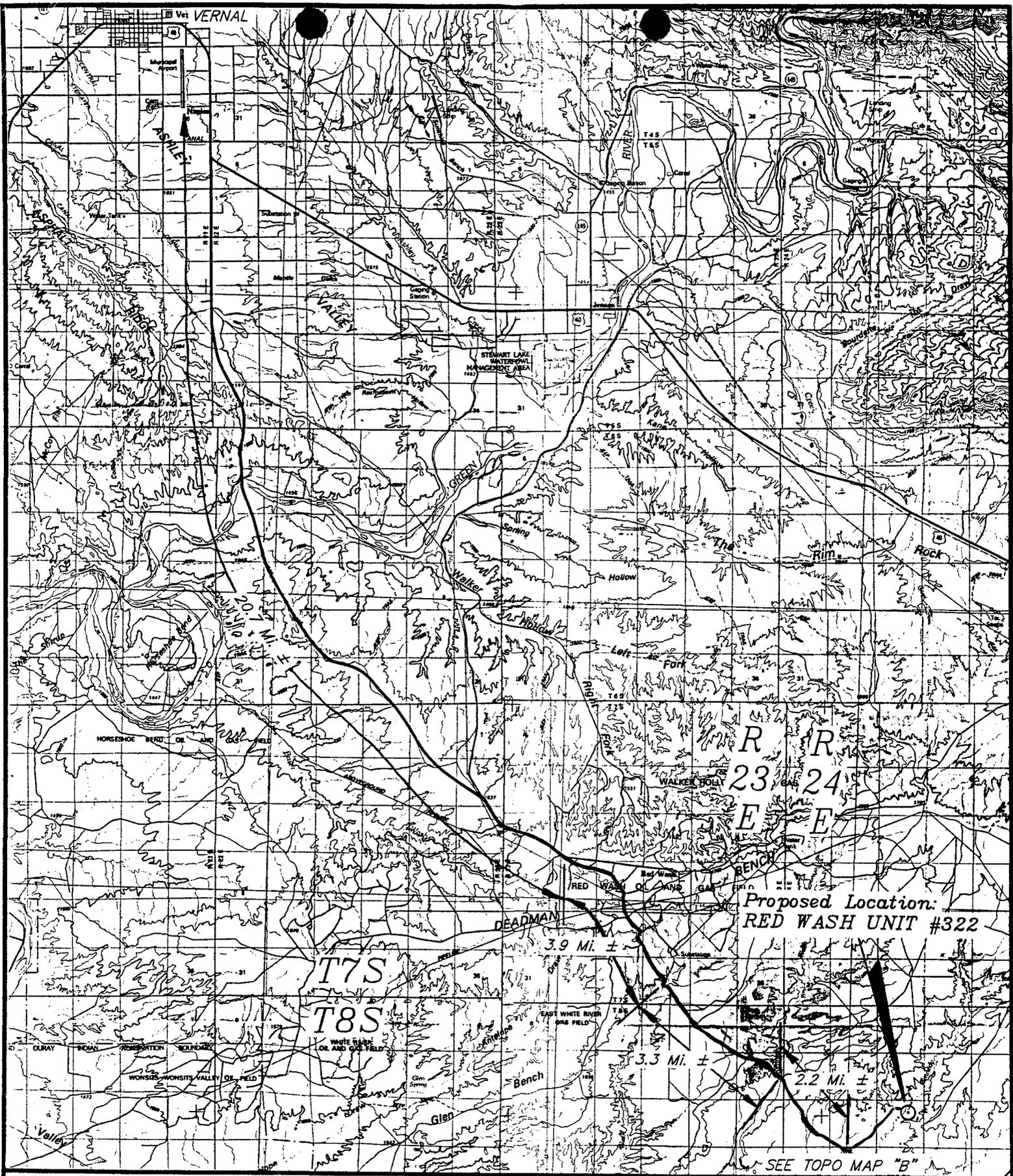
**FIGURE #2**

APPROXIMATE YARDAGES

CUT	
(6") Topsoil Stripping	= 1,320 Cu. Yds.
Remaining Location	= 3,800 Cu. Yds.
<b>TOTAL CUT</b>	<b>= 5,120 CU.YDS.</b>
<b>FILL</b>	<b>= 2,090 CU.YDS.</b>

EXCESS MATERIAL AFTER 5% COMPACTION	= 2,920 Cu. Yds.
Topsoil & Pit Backfill (1/2 Pit Vol.)	= 2,920 Cu. Yds.
EXCESS CUT MATERIAL	= 0 Cu. Yds.

**UINTAH ENGINEERING & LAND SURVEYING**  
85 So. 200 East • Vernal, Utah 84078 • (801) 789-1017



Proposed Location:  
**RED WASH UNIT #322**

SEE TOPO MAP "B"

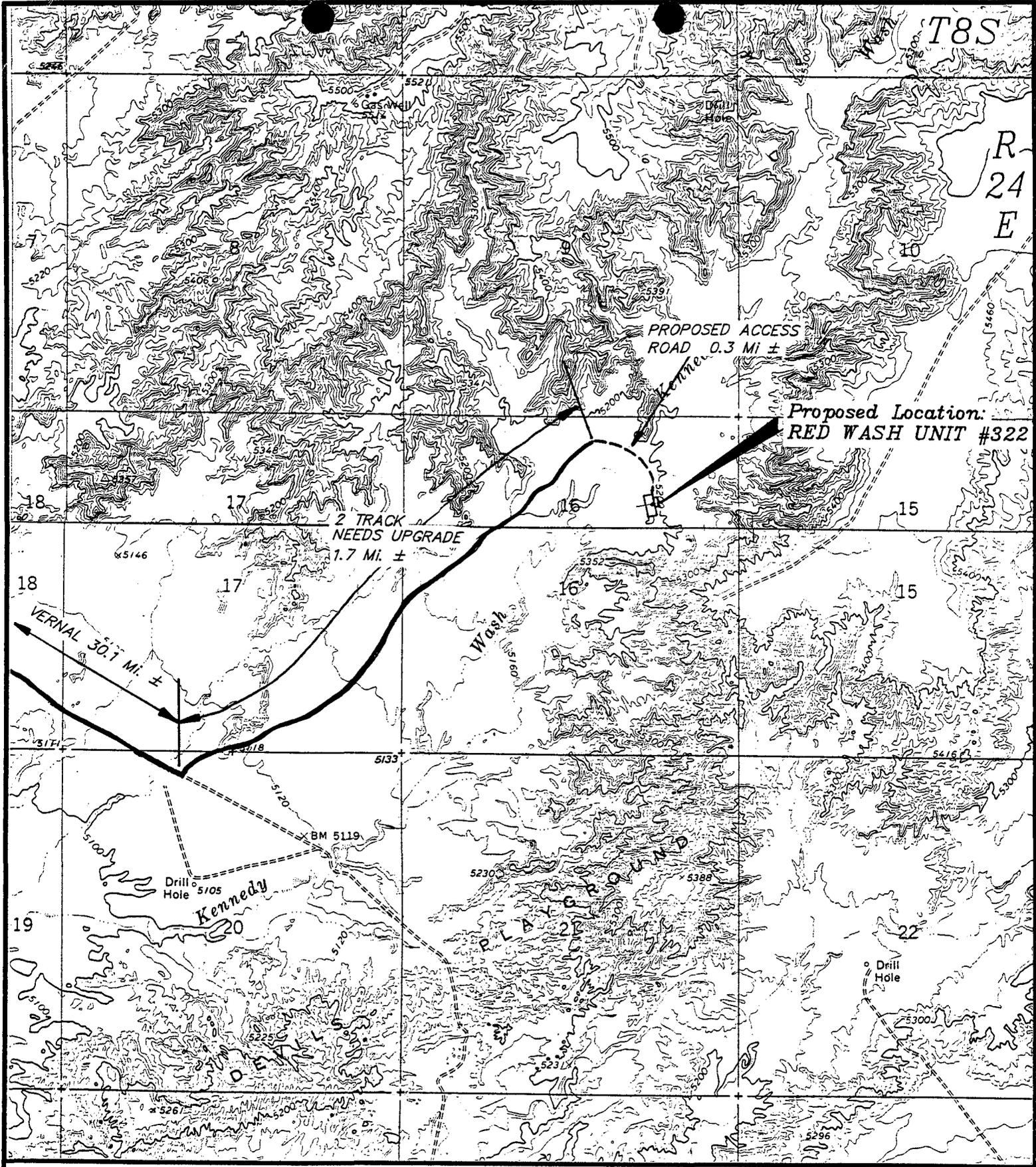
TOPOGRAPHIC  
 MAP "A"

DATE: 11-3-94 J.D.S.



CHEVRON U.S.A. INC.

RED WASH UNIT #322  
 SECTION 16, T8S, R24E, S.L.B.&M.  
 1320' FNL 1320' FEL



TOPOGRAPHIC

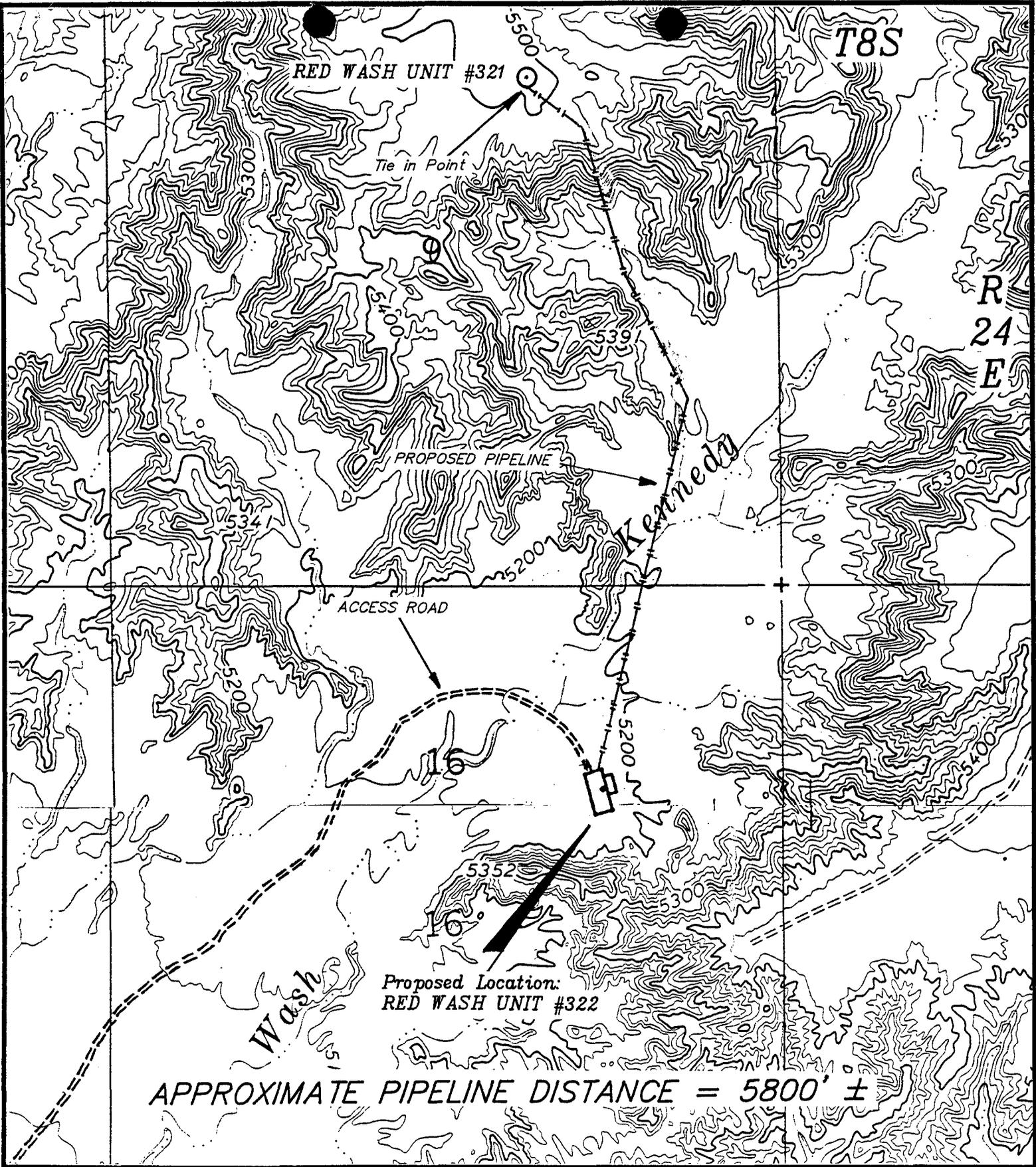
MAP "B"

SCALE: 1" = 2000'  
 DATE: 11-3-94 J.D.S.



CHEVRON U.S.A. INC.

RED WASH UNIT #322  
 SECTION 16, T8S, R24E, S.L.B.&M.  
 1320' FNL 1320' FEL



TOPOGRAPHIC  
MAP "C"

LEGEND:

- EXISTING PIPELINE
- |-|-|-|- Proposed Pipeline



**CHEVRON U.S.A. INC.**

RED WASH UNIT #322  
SECTION 16, T8S, R24E, S.L.B.&M.

DATE: 11-3-94 J.D.S.

WORKSHEET  
APPLICATION FOR PERMIT TO DRILL

APD RECEIVED: 11/25/94

API NO. ASSIGNED: 43-047-32598

WELL NAME: RED WASH UNIT #322  
OPERATOR: CHEVRON USA PROD. CO. INC (N0210)

PROPOSED LOCATION:  
CNE 16 - T08S - R24E  
SURFACE: 1320-FNL-1320-FEL  
BOTTOM: 1320-FNL-1320-FEL  
UINTAH COUNTY  
UNDESIGNATED FIELD (002)

INSPECT LOCATION BY: 12/12/94		
TECH REVIEW	Initials	Date
Engineering		
Geology		
Surface		

LEASE TYPE: STA  
LEASE NUMBER: ML-3044

PROPOSED PRODUCING FORMATION: MVRD

RECEIVED AND/OR REVIEWED:

Y Plat  
Y Bond: Federal  State  Fee   
(Number U-89-75-81-34)  
N Potash (Y/N)  
N Oil shale (Y/N)  
Y Water permit  
(Number 44-2153)  
N RDCC Review (Y/N)  
(Date: \_\_\_\_\_)

LOCATION AND SITING:

R649-2-3. Unit: ULTU63010B  
 R649-3-2. General.  
 R649-3-3. Exception.  
 Drilling Unit.  
Board Cause no: \_\_\_\_\_  
Date: \_\_\_\_\_

COMMENTS: NOT APPROVED AS A UNIT WELL

STIPULATIONS: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



**STATE OF UTAH**

<b>Operator: CHEVRON UAS PRODUCTION</b>	<b>Well Name: RED WASH UNIT #322</b>
<b>Project ID: 43-047-32598</b>	<b>Location: SEC. 16 - T08S - R24E</b>

Design Parameters:

Mud weight ( 8.50 ppg) : 0.442 psi/ft  
 Shut in surface pressure : 1942 psi  
 Internal gradient (burst) : 0.047 psi/ft  
 Annular gradient (burst) : 0.442 psi/ft  
 Tensile load is determined using buoyed weight  
 Service rating is "Sweet"

Design Factors:

Collapse : 0.800  
 Burst : 1.00  
 8 Round : 1.80 (J)  
 Buttress : 1.60 (J)  
 Other : 1.50 (J)  
 Body Yield : 1.50 (B)

\*\*\* WARNING \*\*\* Design factor for collapse exceeded in design!

Length (feet)	Size (in.)	Weight (lb/ft)	Grade	Joint	Depth (feet)	Drift (in.)	Cost				
1	3,900	8.625	24.00	J-55	ST&C	3,900	7.972				
	<b>Collapse</b>	<b>Load</b>	<b>Strgth</b>	<b>S.F.</b>	<b>Burst</b>	<b>Min Int</b>	<b>Yield</b>	<b>Tension</b>	<b>Load</b>	<b>Strgth</b>	<b>S.F.</b>
	(psi)	(psi)			(psi)	(psi)		(kips)	(kips)		
1	1722	1370	0.796	1942	2950	1.52	81.44	244	3.00	J	

Prepared by : FRM, Salt Lake City, UT  
 Date : 02-13-1995  
 Remarks :

Minimum segment length for the 3,900 foot well is 1,000 feet.  
 SICP is based on the ideal gas law, a gas gravity of 0.69, and a mean gas temperature of 94°F (Surface 74°F , BHT 113°F & temp. gradient 1.000°/100 ft.)  
 Surface/Intermediate string:  
 Next string will set at 3,900 ft. with 10.50 ppg mud (pore pressure of 2,127 psi.) The frac gradient of 1.000 psi/ft at 3,900 feet results in an injection pressure of 3,900 psi Effective BHP (for burst) is 2,127 psi, the BHP load is 405 psi (using an annular mud of 8.50 ppg) and the differential gradient is -0.390 psi/ft.  
 The minimum specified drift diameter is 7.900 in.

**NOTE:** The design factors used in this casing string design are as shown above. As a general guideline, Lone Star Steel recommends using minimum design factors of 1.125 - Collapse (with evacuated casing), 1.0 - Burst, 1.8 - 8 Round Tension, 1.6 - Buttress Tension, and 1.5 - Body Yield. Collapse strength under axial tension was calculated based on the Westcott, Dunlop and Kemler curve. Engineering responsibility for use of this design will be that of the purchaser. Costs for this design are based on a 1987 pricing model. (Version 1.06)

**STATE OF UTAH**

<b>Operator: CHEVRON USA PRODUCTION</b>	<b>Well Name: RED WASH UNIT #322</b>
<b>Project ID: 43-047-32598</b>	<b>Location: SEC. 16 - T08S - R24E</b>

Design Parameters:

Mud weight (10.58 ppg) : 0.549 psi/ft  
 Shut in surface pressure : 4134 psi  
 Internal gradient (burst) : 0.102 psi/ft  
 Annular gradient (burst) : 0.000 psi/ft  
 Tensile load is determined using buoyed weight  
 Service rating is "Sweet"

Design Factors:

Collapse : 1.125  
 Burst : 1.00  
 8 Round : 1.80 (J)  
 Buttress : 1.60 (J)  
 Other : 1.50 (J)  
 Body Yield : 1.50 (B)

Length (feet)	Size (in.)	Weight (lb/ft)	Grade	Joint	Depth (feet)	Drift (in.)	Cost
1	9,250	4.500	11.60	P-110	LT&C	9,250	3.875
	Collapse Load Strgth S.F. (psi) (psi)		Burst Load Strgth S.F. (psi) (psi)	Min Int Strgth S.F. (psi)	Yield S.F.	Tension Load Strgth S.F. (kips) (kips)	
1	5082	7580	1.492	5082	10690	2.10	89.95 279 3.10 J

Prepared by : FRM, Salt Lake City, UT  
 Date : 02-13-1995  
 Remarks :

Minimum segment length for the 9,250 foot well is 1,000 feet.  
 SICP is based on the ideal gas law, a gas gravity of 0.69, and a mean gas temperature of 120°F (Surface 74°F, BHT 166°F & temp. gradient 1.000°/100 ft.)  
 The mud gradient and bottom hole pressures (for burst) are 0.549 psi/ft and 5,082 psi, respectively.

**NOTE:** The design factors used in this casing string design are as shown above. As a general guideline, Lone Star Steel recommends using minimum design factors of 1.125 - Collapse (with evacuated casing), 1.0 - Burst, 1.8 - 8 Round Tension, 1.6 - Buttress Tension, and 1.5 - Body Yield. Collapse strength under axial tension was calculated based on the Westcott, Dunlop and Kemler curve. Engineering responsibility for use of this design will be that of the purchaser. Costs for this design are based on a 1987 pricing model. (Version 1.06)



State of Utah  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

Michael O. Leavitt  
Governor

Ted Stewart  
Executive Director

James W. Carter  
Division Director

355 West North Temple  
3 Triad Center, Suite 350  
Salt Lake City, Utah 84180-1203  
801-538-5340  
801-359-3940 (Fax)  
801-538-5319 (TDD)

February 13, 1995

Chevron USA Production Company  
11002 East 17500 South  
Vernal, Utah 84078-8526

Re: Red Wash Unit #322 Well, 1320' FNL, 1320' FEL, C/NE, Sec. 16, T. 8 S., R. 24 E., Uintah County, Utah

Gentlemen:

Pursuant to the provisions and requirements of Utah Code Ann. 40-6-1 et seq., Utah Admin. R. 649-3-1 et seq., and the attached Conditions of Approval, approval to drill the referenced well is granted.

This approval shall expire one year from the above date unless substantial and continuous operation is underway, or a request for extension is made prior to the expiration date. The API identification number assigned to this well is 43-047-32598.

Sincerely,

A handwritten signature in black ink, appearing to read 'R. J. Firth'.

R. J. Firth  
Associate Director

ldc

Enclosures

cc: Uintah County Assessor

Bureau of Land Management, Vernal District Office

WAPD



**Operator:** Chevron USA Production Company

**Well Name & Number:** Red Wash Unit #322

**API Number:** 43-047-32598

**Lease:** State ML-3044

**Location:** C/NE Sec. 16 T. 8 S. R. 24 E.

### **Conditions of Approval**

**1. General**

Compliance with the requirements of Utah Admin. R. 649-1 et seq., the Oil and Gas Conservation General Rules, and the applicable terms and provisions of the approved Application for Permit to Drill.

**2. Notification Requirements**

Notify the Division within 24 hours following spudding the well or commencing drilling operations. Contact Jimmie Thompson at (801)538-5340.

Notify the Division prior to commencing operations to plug and abandon the well. Contact Frank Matthews or Mike Hebertson at (801)538-5340.

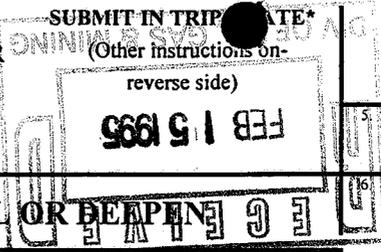
**3. Reporting Requirements**

All required reports, forms and submittals shall be promptly filed with the Division, including but not limited to the Entity Action Form (Form 6), Report of Water Encountered During Drilling (Form 7), Weekly Progress Reports for drilling and completion operations, and Sundry Notices and Reports on Wells requesting approval of change of plans or other operational actions.

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

SUBMIT IN TRIP DATE\*  
(Other instructions on reverse side)

Form approved.  
Budget Bureau No. 1004-0136  
Expires December 31, 1991



LEASE DESIGNATION AND SERIAL NO.  
ML-3044

IF INDIAN, ALLOTTEE OR TRIBE NAME

APPLICATION FOR PERMIT TO DRILL OR DEEPEN

1a. TYPE OF WORK  
 DRILL  DEEPEN

b. TYPE OF WELL  
 OIL WELL  GAS-WELL  OTHER \_\_\_\_\_  
 SINGLE ZONE  MULTIPLE ZONE

2. NAME OF OPERATOR  
 CHEVRON USA PRODUCTION CO., INC.

3. ADDRESS AND TELEPHONE NO.  
 11002 EAST 17500 SOUTH, VERNAL, UT 84078-8526 (801) 781-4300

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements)\*  
 At surface  
 1320' FNL, 1320' FEL, C/NE  
 At proposed prod. zone  
 SAME

7. UNIT AGREEMENT NAME  
 RED WASH UNIT

8. FARM OR LEASE NAME, WELL NO.  
 #322

9. API WELL NO.  
 42-047-32598

10. FIELD AND POOL, OR WILDCAT  
 RED WASH  
 MESAVERDE

11. SEC., T., R., M., OR BLOCK AND SURVEY OR AREA  
 SEC. 16-T8S-R24E, SLB&M

12. COUNTY OR PARISH  
 UINTAH

13. STATE  
 UTAH

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE\*  
 32.1 miles from Vernal, UT.

15. DISTANCE FROM PROPOSED\* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any) 1320'

16. NO. OF ACRES IN LEASE  
 320

17. NO. OF ACRES ASSIGNED TO THIS WELL  
 NA

18. DISTANCE FROM PROPOSED LOCATION\* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT. NA

19. PROPOSED DEPTH  
 9250'

20. ROTARY OR CABLE TOOLS  
 ROTARY

21. ELEVATIONS (Show whether DF, RT, GR, etc.)  
 5198' (UNGRADED GROUND)

22. APPROX. DATE WORK WILL START\*  
 12/10/94

PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	GRADE, SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
17.5"	13.375" H-40	48#	320'	222 cuft. (188 sx.), shoe to surface
11"	8.625" J-55	24#	3900'	1062 cuft. (413 sx.), shoe to surface
7.875"	4.5" P-110	11.6	9250'	1244 cuft. (1063 sx.), shoe to 3800'

We propose to drill a 9250' well to test the Mesaverde Formation at this location. Enclosures:

- Certified Plat
- Thirteen Point Surface Use Plan With Attachments
- Eight Point Drilling Plan With Attachments
- Self-Certification Statement

NOV 25 1994

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

24. SIGNED [Signature] TITLE TEAM LEADER DATE 11-22-94

(This space for Federal or State office use)

PERMIT NO. \_\_\_\_\_ APPROVAL DATE \_\_\_\_\_

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

CONDITIONS OF APPROVAL, IF ANY:

APPROVED BY ACCEPTED BY BLM FOR UNIT PURPOSES ONLY TITLE \_\_\_\_\_ DATE FEB 14 1995

\*See Instructions On Reverse Side

UT 84078-8526



State of Utah  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

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355 West North Temple  
3 Triad Center, Suite 350  
Salt Lake City, Utah 84180-1203  
801-538-5340  
801-359-3940 (Fax)  
801-538-5319 (TDD)

April 10, 1996

Chevron USA Production Company, Inc.  
11002 East 17500 South  
Vernal, Utah 84078-8526

Re: Red Wash Unit 322 Well, Sec. 16, T. 8 S., R. 24 E., Uintah County, Utah  
API No. 43-047-32598

Gentlemen:

Due to excessive time delay in commencing drilling operations, approval to drill the subject well is hereby rescinded, effective immediately.

Please note that a new Application for Permit to Drill must be filed with this office for approval prior to the commencement of any future work on the subject location.

If any previously unreported operations have been performed on this well location, it is imperative that you notify the Division of Oil, Gas and Mining immediately.

Sincerely,

Don Staley  
Administrative Manager  
Oil and Gas

lwp

cc: R.J. Firth  
Well file

WO1219

