

UTAH OIL AND GAS CONSERVATION COMMISSION

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

DATE FILED **JUNE 20, 1995**

LAND: FEE & PATENTED \_\_\_\_\_ STATE LEASE NO. **ML-42793** PUBLIC LEASE NO. \_\_\_\_\_ INDIAN \_\_\_\_\_

DRILLING APPROVED: **JULY 14, 1995**

SPUDED IN: \_\_\_\_\_

COMPLETED: \_\_\_\_\_ PUT TO PRODUCING: \_\_\_\_\_

INITIAL PRODUCTION: \_\_\_\_\_

GRAVITY A.P.I. \_\_\_\_\_

GOR: \_\_\_\_\_

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

TOTAL DEPTH: \_\_\_\_\_

WELL ELEVATION: \_\_\_\_\_

DATE ABANDONED: **LOCATION ABANDONED APD EXPIRED EFFECTIVE SEPTEMBER 12, 1996**

FIELD: **WILDCAT FIELD**

UNIT: **NA**

COUNTY: **UINTAH**

WELL NO. **STATE 2-13-25** API NO. **43-047-32706**

LOCATION **1874' FNL** FT. FROM (N) (S) LINE. **683' FWL** FT. FROM (E) (W) LINE. **LOT 5 NW NW** 1/4 - 1/4 SEC. **2**

TWP.	RGE.	SEC.	OPERATOR	TWP.	RGE.	SEC.	OPERATOR
13S	25E	2	AMOCO PRODUCTION CO				

Amoco Pre-site

state 2-13-75

43-047-32706



Amoco Pre-site

State 2-13-25

43-047-32706

Looking North



Amoco Pre-site

State 2-13-25

43-047 32706

Looking South



Amoco Pre-site

state 2-13-25

43-047-32706

Looking ~~to~~ East



Amoco Pre-site  
state 2-13-25  
43-047 32706

Looking west

STATE OF UTAH  
DIVISION OF OIL, GAS AND MINING

<b>APPLICATION FOR PERMIT TO DRILL OR DEEPEN</b>		5. Lease Designation and Serial Number: <b>ML-42793</b>	
		6. If Indian, Allottee or Tribe Name:	
1A. Type of Work:      DRILL <input checked="" type="checkbox"/> DEEPEN <input type="checkbox"/>		7. Unit Agreement Name:	
B. Type of Well:    OIL <input type="checkbox"/> GAS <input checked="" type="checkbox"/> OTHER:      SINGLE ZONE <input checked="" type="checkbox"/> MULTIPLE ZONE <input type="checkbox"/>		8. Farm or Lease Name: State	
2. Name of Operator: <b>Amoco Production Company</b>		9. Well Number: <b>02-13-25</b>	
3. Address and Telephone Number: <b>P.O. Box 800, Denver, Colorado 80201      303-830-6003</b>		10. Field and Pool, or Wildcat: <b>Wildcat</b>	
4. Location of Well (Footages) At Surface: <b>1874FNL &amp; 683FWL</b> At Proposed Producing Zone: <b>Lot 6</b>		11. Cir/Ctr, Section, Township, Range, Meridian: <b>Sec. 2, T13S-R25E</b>	
14. Distance in miles and direction from nearest town or post office: <b>40 miles from Bonanza, UT</b>		12. County: <b>Uintah</b>	13. State: <b>UTAH</b>
15. Distance to nearest property or lease line (feet):	16. Number of acres in lease: <b>711.16</b>	17. Number of acres assigned to this well: <b>195.85 NW/4</b>	
18. Distance to nearest well, drilling, completed, or applied for, on this lease (feet):	19. Proposed Depth: <b>5950'</b>	20. Rotary or cable tools: <b>Rotary</b>	
21. Elevations (show whether DF, RT, GR, etc.): <b>7175' GR</b>		22. Approximate date work will start: <b>July 10,</b>	

23. **PROPOSED CASING AND CEMENTING PROGRAM**

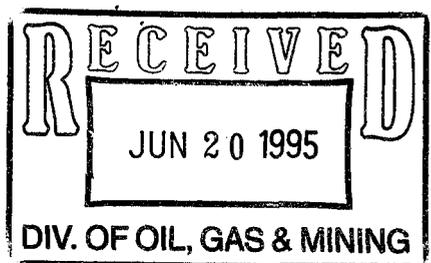
SIZE OF HOLE	GRADE, SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
12 1/4"	J-55 9 5/8"	36#	450'	283cf
8 3/4"	N-80 7"	23#	4981'	1042cf
6 1/4"	WC75 4 1/2"	11.6#	5950'	151cf

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.

Amoco Production Company proposes to drill a well to a depth of 5950' to test the Mancos formation. If productive, casing will be run and the well completed.

All operations will be covered under Amoco's Statewide Bond No. 86-67-68

Lease Description: T13S-R25E:  
Sec 2: ALL.



24. Name & Signature: Julie L. Acevedo *Julie L. Acevedo* Title: Sr. Staff Assistant Date: 6/18/95

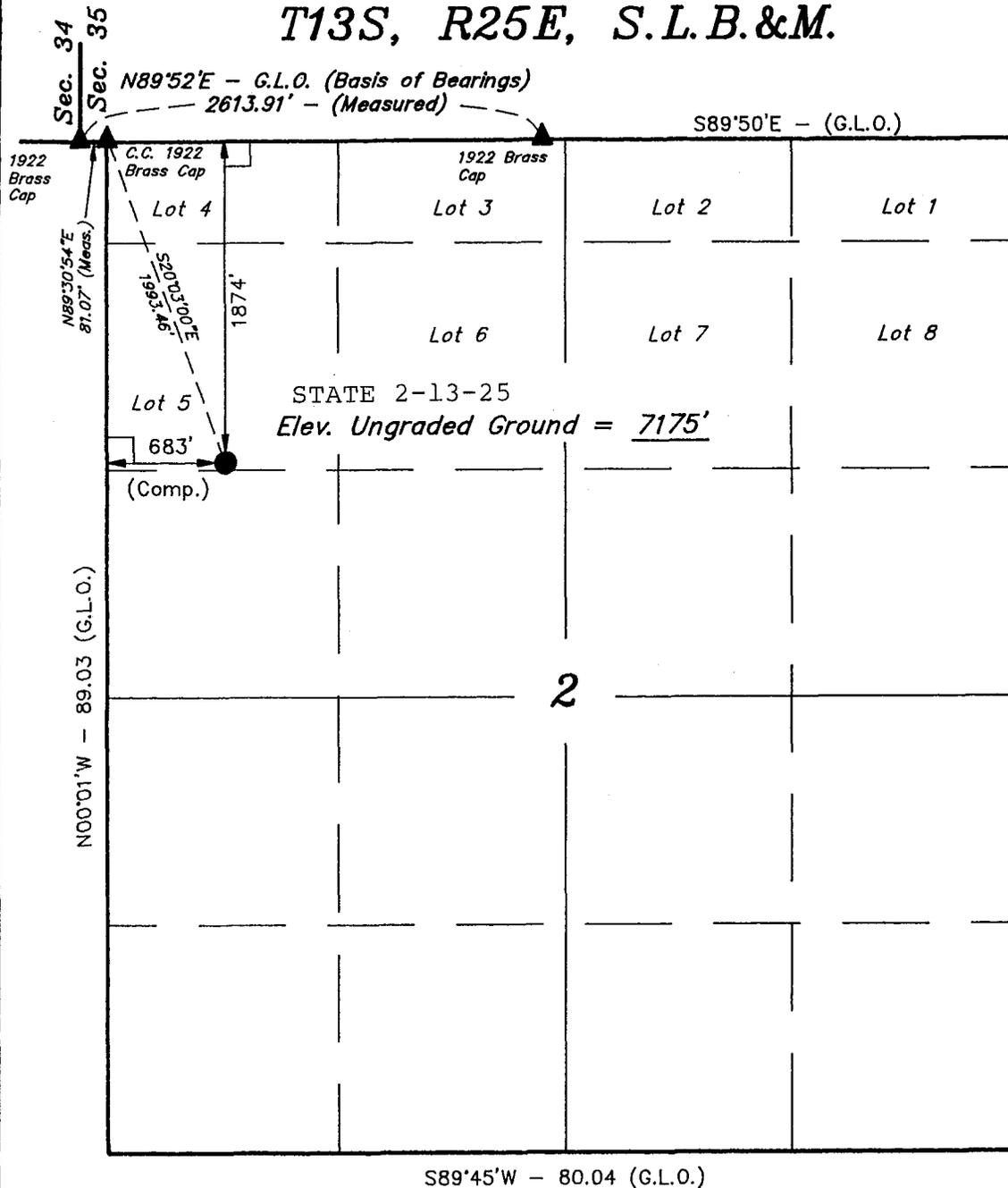
(This space for State use only)  
API Number Assigned: 43-047-32706

Approval: *[Signature]*  
**Associate Director**  
**7/14/95**

# T13S, R25E, S.L.B.&M.

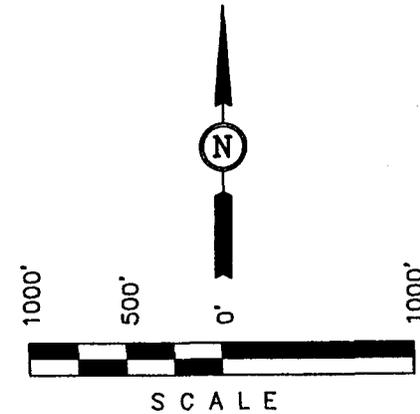
# AMOCO PRODUCTION COMPANY

Well location, STATE 2-13-25 located as shown in Lot 5 of Sec. 2, T13S, R25E, S.L.B.&M. Uintah County, Utah.



## BASIS OF ELEVATION

SPOT ELEVATION AT A ROAD INTERSECTION LOCATED IN THE NW 1/4 OF SECTION 16, T13S, R25E, S.L.B.&M. TAKEN FROM THE BURNT TIMBER CANYON QUADRANGLE, UTAH, UINTEAH COUNTY, 7.5 MINUTE QUAD. (TOPOGRAPHIC MAP) PUBLISHED BY THE UNITED STATES DEPARTMENT OF THE INTERIOR, GEOLOGICAL SURVEY. SAID ELEVATION IS MARKED AS BEING 7409 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. Hay*  
REGISTERED LAND SURVEYOR  
REGISTRATION NO. 187619  
STATE OF UTAH

**UINTAH ENGINEERING & LAND SURVEYING**  
85 SOUTH 200 EAST - VERNAL, UTAH 84078  
(801) 789-1017

## LEGEND:

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

SCALE 1" = 1000'	DATE SURVEYED: 5-1-95	DATE DRAWN: 5-3-95
PARTY B.B. G.S. G.O. C.B.T.	REFERENCES G.L.O. PLAT	
WEATHER WARM	FILE AMOCO PRODUCTION COMPANY	

STATE OF UTAH  
DIVISION OF OIL, GAS & MINING (OGM)  
ON-SITE PREDRILL EVALUATION AND REVIEW

OPERATOR: AMOCO PRODUCTION COMPANY

WELL NO: STATE 02-13-25 LEASE NO: ML-42793

API NUMBER: 43 - 047 - 32706 LEASE TYPE: STATE X FEE         
PROPOSED LOCATION: C O N F I D E N T I A L

SURFACE: 1874 FNL 0683 FWL

SURFACE: QTR/QTR: LOT 5 SEC: 02 TWP: 13S RNG: 25E

BOTTOM HOLE: 1874 FNL 0683 FWL

BOTTOM HOLE: QTR/QTR: LOT 5 SEC: 02 TWP: 13S RNG: 25E

COUNTY: UINTAH FIELD: CODE/NAME: WILDCAT

GPS COORDINATES: 4398120 N 663460 E

SURFACE OWNER: STATE OF UTAH SURFACE AGREEMENT(Y/N):       

LOCATION AND SITING:

Y Plat        R649-2-3. Unit:       

Y Bond Sta Y Fee               R649-3-2. General

Number: 86-67-68 Y R649-3-3. Exception

N Potash (Y/N)        UCA 40-6-6. Drilling Unit

N Oil Shale (Y/N)        Cause No:       

Y Water Permit 49-1550 Date:       

Y RDCC Review       

ARCHEOLOGICAL AND PALEONTOLOGY SURVEY RECEIVED: (Y/N) YES

SITE PROBLEMS: NONE

Onsite Participants: DAVID W. HACKFORD (DOGM), GARY STREETER (UINTAH ENGINEERING AND LAND SURVEY), BENNY BENFIELD (AMOCO).

Regional Setting/Topography: SITE IS ON A FLAT TOPPED RIDGE RUNNING SOUTH TO NORTH WITH STEEP SIDED CANYONS 0.5 MILES EAST AND WEST. SANDSTONE LEDGE IS 200 FEET WEST. GROUND SLOPES TO THE EAST.

**DRILLING PROGRAM:**

1. Surface Formation and Estimated Tops/Geologic Markers  
GREEN RIVER 13'  
WASATCH 430'  
MESAVERDE 2230'  
CASTLEGATE 4238  
MANCOS SHALE 4598'  
MANCOS "B" 5231'  
BASE OF MANCOS 5738'

2. Estimated Depths of Anticipated Water, Oil, Gas or other Mineral Bearing Zones

<u>Substance</u>	<u>Formation</u>	<u>Depth</u>
Oil/Gas	<u>WASATCH</u>	<u>430'</u>
Gas	<u>MESAVERDE</u>	<u>2230'</u>
Gas	<u>CASTLEGATE</u>	<u>4238'</u>
Gas	<u>MANCOS "B" SAND</u>	<u>5231'</u>

All fresh water sands encountered during drilling shall be recorded and reported to the Division on Form 7.

3. Well Control Equipment & Testing Procedures  
SEE APD.

4. Proposed Casing and Cementing Program  
A 4.5" LINER WILL BE USED IF WATER AND/OR GAS INTERFERES WITH THE DRILLING OF THE MANCOS B SAND DRY. IF HOLE STAYS DRY 5.5" CASING WILL BE RUN TO TD.

5. Mud Program and Circulating Medium - include mud components and weights, when drilling with air also include length and location of blooie line  
LSND MUD TO DRILL SURFACE, AIR/AIR MIST OR MUD IF NECESSARY

6. Coring, Logging, and Testing Program  
HIGH RESOLUTION INDUCTION DFL  
SPECTRAL DENSITY  
EPITHERMAL NEUTRON  
4-ARM CALIPER  
SP WILL BE RUN IF HOLE CONTAINS MUD.

7. Abnormal Conditions, Bottom Hole Pressures and Potential Hazards, also list anticipated lost circulation zones, abnormal temperature zones and possible hydrogen sulfide bearing zones  
NONE.

**SURFACE USE PLAN:**

Current Surface Use: LIVESTOCK AND WILDLIFE GRAZING. TIMBERING.

Proposed Surface Disturbance: 225' WIDE AND 425' LONG WITH A RESERVE PIT 215'X 115'.

1. Existing Roads  
31.4 MILES SOUTH OF BONANZA , UTAH. 0.9 OF A MILE OF ADDITIONAL ROAD NEEDS UPGRADING.
2. Planned Access Roads - include length of new road, length of existing road to be upgraded, maximum disturbed and travel surface widths, maximum grades, turnouts, surface materials, drainage, cattleguards  
NEW ACCESS 2.5 MILES.
3. Location of existing wells within one-mile radius of proposed location, include water, injection, producing, drilling with present status of each well  
NONE SHOWN
4. Location of Production Facilities and Pipelines  
ON THE LOCATION.
5. Location and Type of Water Supply (include Division of Water Rights approval or identifying number)  
WATER WILL BE OBTAINED FROM A PRIVATELY PERMITTED WATER SOURCE SECURED THROUGH A WATER HAULING COMPANY.
6. Source of Construction Material  
NO OFF SITE MATERIALS WILL BE NECESSARY FOR THE LOCATION.
7. Waste Management Plan  
CUTTINGS, DRILLING FLUIDS, AND PRODUCED FLUIDS WILL BE CONTAINED IN THE RESERVE PIT AND BE ALLOWED TO EVAPORATE. THE RESERVE PIT WILL BE FENCED ON THREE SIDES AND THE 4TH SIDE WILL BE FENCED UPON REMOVAL OF THE RIG. THE PITS WILL BE ALLOWED TO SIT FOR 1 YEAR TO DRY AND THEN PULLED AS REQUIRED. PRODUCED WATER WILL BE DISPOSED OF AT AN APPROVED DISPOSAL SITE. SANITARY FACILITIES AND A STEEL MESH PORTABLE TRASH CONTAINER WILL REMAIN ON LOCATION THROUGHOUT DRILLING OPERATIONS AND WILL THEN BE REMOVED TO A DESIGNATED DISPOSAL AREA THE WELL SITE WILL BE CLEANED WHEN COMPLETED.

8. Ancillary Facilities  
NO ANCILLARY FACILITIES WILL BE NEEDED AT THIS TIME.
9. Well Site Layout  
SEE ATTACHED DIAGRAM. ALL EQUIPMENT WILL BE CONTAINED ON LOCATION.
10. Surface Restoration Plans  
RESTORATION OF THE SURFACE WILL BE CONDUCTED AFTER THE RESERVE PIT HAS DRIED. THE PIT WILL THEN BE CLEANED UP AND BACK FILLED AND THE ENTIRE DISTURBED AREA WILL BE RECONTOURED. THE TOPSOIL STOCKPILE WILL THEN BE UNIFORMLY PLACED OVER THIS AREA AND RESEEDING OF THE SITE WILL BE CARRIED OUT AS INSTRUCTED BY THE APPROPRIATE MANAGEMENT AGENCY. METHODS TO PROTECT AGAINST EROSION WILL BE EMPLOYED. AFTER FINAL ABANDONMENT, ADDITIONAL RESTORATION EFFORTS WILL BE APPLIED.

#### ENVIRONMENTAL PARAMETERS:

##### Affected Floodplain and/or Wetlands:

Is a 404 dredge and fill permit required? (Any activity which will change the bottom elevation of the "waters of the United States" including wetlands, natural and artificially created waters, and even some drainages may require a permit from the Army Corps of Engineers) NO FLOODPLAINS OR WETLANDS WILL BE AFFECTED BY THIS SITE OR ACCESS ROAD.

##### Flora/Fauna:

Briefly describe the flora found on the proposed site and the fauna evidenced or sighted on or near the proposed location JUNIPER, DOUGLAS FIR, PINION, OAKBRUSH, WILDFLOWERS, NATIVE GRASSES. DEER, ELK, COYOTES, SMALL RODENTS, RAPTORS, REPTILES, SONGBIRDS, BLACK BEAR, COUGAR.

#### SURFACE GEOLOGY

Soil Type and Characteristics: LIGHT BROWN SANDY LOAM, VERY ROCKY.

Surface Formation & Characteristics: GREEN RIVER FORMATION. SANDSTONE OUTCROPPINGS ADJACENT TO SITE.

Erosion/Sedimentation/Stability: NO SIGN OF EROSION OR SEDIMENTATION AT PRESENT. SHOULD NOT BE A PROBLEM.

Paleontological Potential Observed: NONE OBSERVED.

#### RESERVE PIT

Characteristics: PROPOSED RESERVE PIT WILL BE RECTANGULAR  
IN SHAPE WITH APPROXIMATE DIMENSIONS OF 215' BY 115' AND 10'  
DEEP. PIT WILL BE CONSTRUCTED ENTIRELY IN CUT SOUTHWEST OF  
WELLBORE.

Lining (Site ranking form attached): \_\_\_\_\_  
A 12 MIL SYNTHETIC LINER WILL BE REQUIRED.

OTHER OBSERVATIONS

Cultural Resources/Archaeology (if proposed location is on State  
land, has an archaeology clearance been obtained?): AN APPROVED  
ARCHAEOLOGIST WILL FORWARD ARCHEOLOGIST'S REPORT TO ALL  
APPROPRIATE MANAGEMENT AGENCIES.

Comments: THIS PROPOSED LOCATION IS LARGER THAN AMOCO USUALLY  
USES IN THIS AREA. THERE IS A POSSIBILITY AMOCO WILL ATTEMPT TO  
DRILL ANOTHER DIRECTIONAL WELL FROM THIS SITE.

DAVID W. HACKFORD

7/3/95 2:00 PM

OGM Representative

Date and Time

OGM Review of ApSTATEMENTSof BASISt to Drill (APD)

**ENGINEERING/LOCATING and SITING:**

THE PROPOSED LOCATION MEETS THE LOCATING AND SITING REQUIREMENTS OF R649-3-3. PROPOSED CASING, CEMENTING, AND DRILLING PLAN APPEAR TO BE CONSISTENT WITH ACCEPTED INDUSTRY STANDARDS. A CASING DESIGN SAFETY CHECK IS ATTACHED. BLOW OUT PREVENTION MONITORING AND CONTINGENCY PLANS ARE ADEQUATE.

Signature F. R. MATTHEWS Date 7/5/95

**GEOLOGY/GROUND WATER:**

The surface geology at the proposed well is the Green River Formation. Water may be encountered throughout the Green River Formation. The proposed casing and cement program will adequately protect any underground source of drinking water.

Signature D. Jarvis Date 7-12-95

**SURFACE:**

THE PRE-SITE INVESTIGATION OF THE SURFACE HAS BEEN PERFORMED BY FIELD PERSONNEL. THE PROPOSED PLAN FOR CONSTRUCTION OF THE LOCATION APPEARS TO BE ENVIRONMENTALLY SOUND.

Signature DAVID HACKFORD Date 7/3/95

**STIPULATIONS for APD Approval:**

1. The Reserve pit shall be lined with a 12 mil minimum thickness liner. The liner will have a proper smooth supportive foundation. Level 1 ranking.

2. Pit shall be located on the Southwest portion of the well site.

**ATTACHMENTS:**

PICTURES ARE AVAILABLE

Evaluation Ranking Criteria and Ranking Score  
For Reserve and Onsite Pit Liner Requirements

Site-Specific Factors	Ranking Score	Final Ranking Score
<p>Distance to Groundwater (feet)</p> <p>&gt;2002 100 to 200 75 to 100 25 to 75 &lt;25 or recharge area</p>	<p>0 5 10 15 20</p>	<p>0</p>
<p>Distance to Surf. Water (feet)</p> <p>&gt;1000 300 to 1000 200 to 300 100 to 200 &lt; 100</p>	<p>0 2 10 15 20</p>	<p>0</p>
<p>Distance to Nearest Municipal Well (feet)</p> <p>&gt;5280 1320 to 5280 500 to 1320 &lt;500</p>	<p>0 5 10 20</p>	<p>0</p>
<p>Distance to Other Wells (feet)</p> <p>&gt;1320 300 to 1320 &lt;300</p>	<p>0 10 20</p>	<p>0</p>
<p>Native Soil Type</p> <p>Low permeability Mod. permeability High permeability</p>	<p>0 10 20</p>	<p>20</p>

<b>Fluid Type</b>  Air/mist Fresh Water TDS >5000 and <10000 TDS >10000 or Oil Base Mud  Fluid containing significant levels of hazardous constituents	0 5 10 15  20	10
<b>Drill Cuttings</b>  Normal Rock Salt or detrimental	0 10	0
<b>Annual Precipitation (inches)</b>  <10 10 to 20 >20	0 5 10	0
<b>Affected Populations</b>  <10 10 to 30 30 to 50 >50	0 6 8 10	0
<b>Presence of Nearby Utility Conduits</b>  Not Present Unknown Present	0 10 15	0
<b>Final Score</b>		30

The summation of all of the above ranking scores will yield one value which shall be used to determine the appropriate type of containment, on a case-by-case basis. The sensitivity levels are as follows:

- Level I Sensitivity: For scores totaling  $\geq 20$
- Level II Sensitivity: For scores totaling 15 to 19
- Level III Sensitivity: For scores totaling  $< 15$

**Containment Requirements According to Sensitivity Level**

Level I: Requires total containment by synthetic liner, concrete structure or other type of total containment structure or

material.

Level II: Bentonite or other compatible lining is discretionary depending on the fluid to be contained and environmental sensitivity.

Level III: No specific lining requirements.

OTHER GUIDELINES FOR PITS

1. Unlined pits shall not be constructed on areas of fill materials.
2. A pit shall not be constructed in a drainages or floodplain of flowing or intermittent streams.
3. Synthetic liners used for lining reserve pits, shall be of 12 mil thickness or greater and shall be compatible with the fluid to be contained. Synthetic liners used for lining onsite pits with a longer expected life shall be a minimum of 30 mil thickness or as approved by the Division.
4. Synthetic liners shall be installed over smooth fill material which is free of pockets, loose rocks or other materials which could damage the liner.
5. Monitoring systems for pits or closed mud systems may be required for drilling in sensitive areas.



State of Utah  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF WILDLIFE RESOURCES

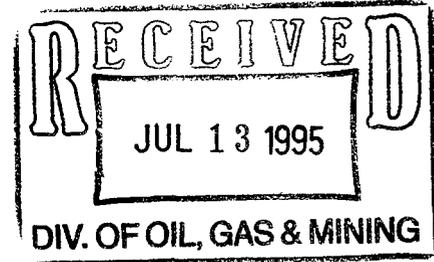
Michael O. Leavitt  
Governor

Ted Stewart  
Executive Director

Robert G. Valentine  
Division Director

Northeastern Region  
152 East 100 North  
Vernal, UT 84078-2126  
801-789-3103  
801-789-8343 (Fax)

July 12, 1995



Utah Division of Oil, Gas and Mining  
355 West North Temple  
3 Triad Center  
Salt Lake City, UT 84180-1203

Subject: Applications for Permit to Drill (Atchee Ridge State #17-12-25, Utah-Colo-Oil Corp. #25-12-25, Texas Creek #14-22, State #2-13-25)(State Actions #UT950630-020, 030, 040, 050 respectively)

Dear Sirs:

The Utah Division of Wildlife Resources has reviewed the subject APD's and offers the following recommendations.

Recent studies have shown that prudent access management can have beneficial effects to big game populations by providing or safeguarding security/escape cover for deer and elk. The protection of these cover types results in higher survivability and a greater proportion of mature male animals without drastically increasing total population size. We are concerned that the proliferation of new access roads associated with new locations will allow increased public access and would request that new roads be gated and locked during the big game hunting seasons.

We would also request that new access roads and locations be rehabilitated and reseeded immediately after site abandonment.

Thank you for the opportunity to comment and your concern for Utah's wildlife.

Sincerely,

Walt Donaldson  
Regional Supervisor



KMH

STATE ACTIONS

Mail to:  
RDCC Coordinator  
116 State Capitol  
Salt Lake City, Utah 84114

1. ADMINISTERING STATE AGENCY  
OIL, GAS AND MINING  
355 West North Temple  
3 Triad Center, Suite 350  
Salt Lake City, Utah 84180-1203

2. STATE APPLICATION IDENTIFIER NUMBER:  
(assigned by State Clearinghouse)

3. APPROXIMATE DATE PROJECT WILL START:  
Upon approval

4. AREAWIDE CLEARING HOUSE(S) RECEIVING STATE ACTIONS:  
(to be sent out by agency in block 1)  
Uintah Basin Association of Governments

5. TYPE OF ACTION:  Lease  Permit  License  Land Acquisition  
 Land Sale  Land Exchange  Other \_\_\_\_\_

6. TITLE OF PROPOSED ACTION:  
Application for Permit to Drill

7. DESCRIPTION:  
Amoco Production Company proposes to drill the State #2-13-25 well (wildcat) on state lease ML-42793, Uintah County, Utah. This action is being presented to RDCC for consideration of resource issues affecting state interests. The Division of Oil, Gas and Mining is the primary administrative agency in this action and must issue approval before operations commence.

8. LAND AFFECTED (site location map required) (indicate county)  
Lot 5, Section 2, Township 13 South, Range 25 East, Uintah County, Utah

9. HAS THE LOCAL GOVERNMENT(S) BEEN CONTACTED?

10. POSSIBLE SIGNIFICANT IMPACTS LIKELY TO OCCUR:  
Degree of impact is based on the discovery of oil or gas in commercial quantities.

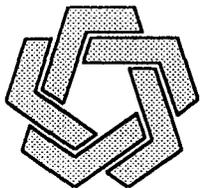
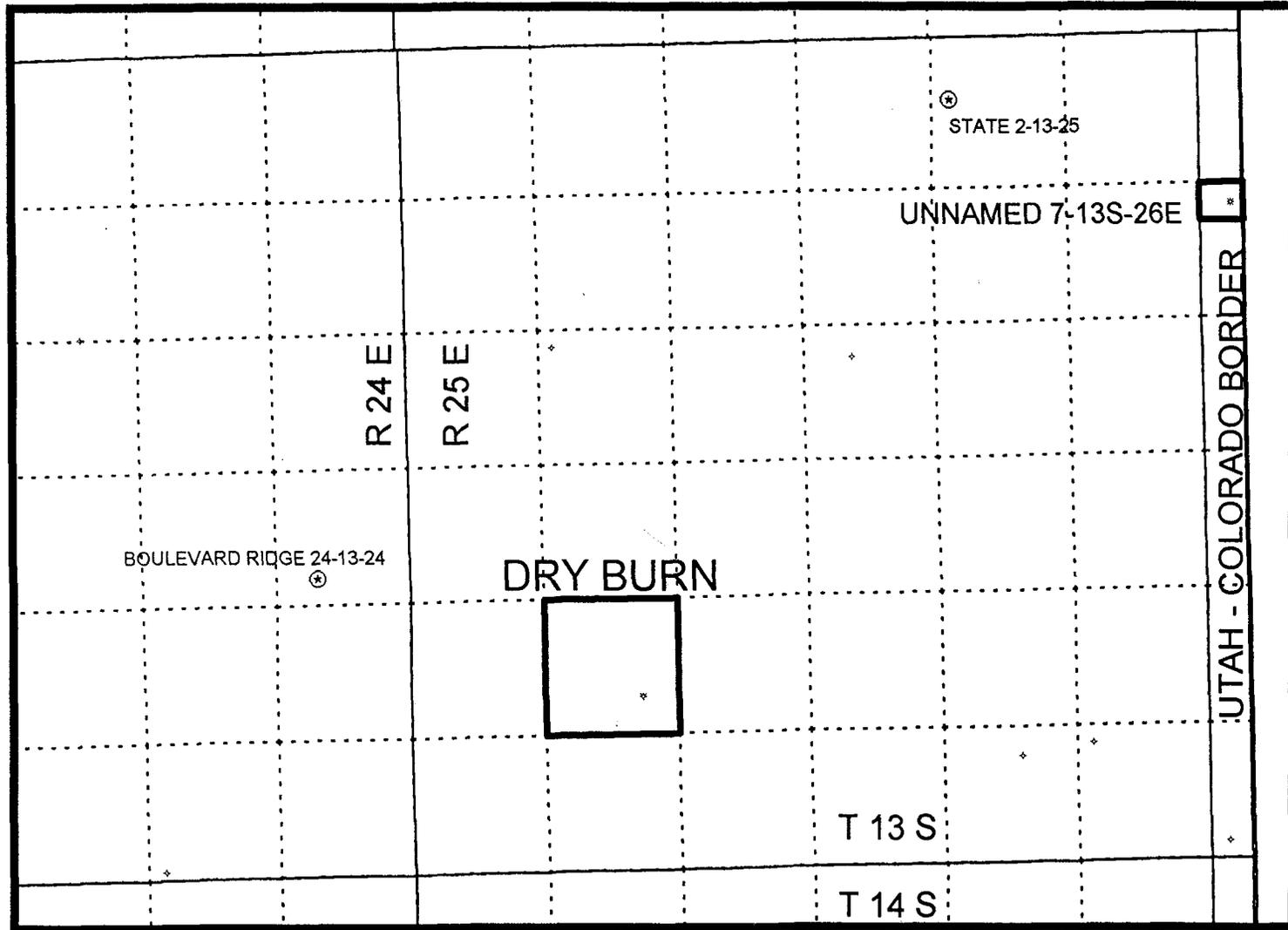
11. NAME AND PHONE NUMBER OF DISTRICT REPRESENTATIVE FROM YOUR AGENCY NEAR PROJECT SITE, IF APPLICABLE:

12. FOR FURTHER INFORMATION, CONTACT: 13. SIGNATURE AND TITLE OF AUTHORIZED OFFICIAL:  
Frank R. Matthews  
PHONE: 538-5340  
DATE: 6-28-95  
*FR Matthews*  
Petroleum Engineer

WOI187

# 47950630-050

AMOCO PRODUCTION CO.  
EXPLORATORY DRILLING  
UINTAH COUNTY, NO SPACING



**AMOCO PRODUCTION COMPANY  
DRILLING AND COMPLETION PROGRAM**

FINAL COPY

Lease: County: UINTAH, UTAH  
Former name: Consolidated #1

Well No. State 2-13-25  
Location: 1874 FNL, 683 FWL, S 2, T13S, R25E  
Field: Atchee Ridge Mancos "B"

File No.: STATE\_2.XLS  
Date: 6/13/95

25 13

**OBJECTIVE:** Exploit Mancos "B" Formation

METHOD OF DRILLING		APPROXIMATE DEPTHS OF GEOLOGICAL MARKER		
TYPE OF TOOLS	DEPTH OF DRILLING	Actual GL-----Estimated KB	7175	7188
Rotary	0 - TD	Marker	Depth (ft.)	SS Elev. (ft.)
<b>LOGGING PROGRAM</b>	DEPTH	Green River	13	7,175
TYPE		Wasatch*	430	6,758
		Mesaverde*	2,230	4,958
High Resolution Induction DFL		Castlegate*	4,238	2,950
Spectral Density	SFC--ICP--TD	Mancos Shale	4,598	2,590
Epithermal Neutron		Mancos "B" Sand**	5,231	1,957
4-arm caliper		Base of Mancos "B"	5,738	1,450
SP *				

**REMARKS:**  
\* SP will only be run if hole contains mud  
Logging program will be serviced by Halliburton

TOTAL DEPTH 5,950 1,238

\* Possible pay  
\*\* Probable completion  
**GREEN RIVER, WASATCH & MESAVERDE  
POSSIBLE USEABLE WATER**

SPECIAL TESTS		DRILL CUTTING SAMPLES		DRILLING TIME	
TYPE	DEPTH INTERVAL, ETC	FREQUENCY	DEPTH	FREQUENCY	DEPTH
None		None	**10'	Geolograph	0 - TD
<b>Remarks:</b>		Mud Logging Program: Rocky Mtn. Geo-Engineering Coring Program: None			

**MUD PROGRAM:**

Approx. Interval	Type Mud	Weight, #/gal	Vis, sec/qt.	W/L, cc's/30 min.
0---SCP	SPUD	8.5-9.0	Sufficient to clean hole.*	NC
SCP--ICP	Air/Air-mist/Aerated Mud	1.0-8.5**	Suff. to clean hole and maintain integrity f/ logs.	> 10
ICP--TD	Air***	N/A		

**REMARKS:**  
\* Probable to set surface with "dry-hole digger".  
\*\* Attempt to maintain a minimum underbalance to readily detect gas shows.  
\*\*\* Should the intermediate hole not produce water and/or gas in sufficient quantities to interfere with drilling the Mancos "B" sand dry; no intermediate casing will be run, the hole will be drilled to TD with an air-air/mist circulating medium and 5 1/2" casing will be set and cemented. The cementing program will have adequate strength to protect the water sands and to test any upper prospective gas/oil shows.

**CASING PROGRAM:**

Casing String	Estimated Depth (KB)	Liner Top	Casing Size	Hole Size	Landing Point, Cement, Etc
Conductor					
Surface	450		9 5/8"	12 1/4 "	1,2
Intermediate	4,981		7 "	8 3/4"	1,2,3
Production Liner	5,950	4746	4 1/2"	6 1/4"	4

**Remarks:**

- Circulate cement to surface.
- Piceance Basin Drilling Team to design cement programs.
  - Cement will be circulated to surface utilizing stage tools or reverse circulation method if necessary.
  - Cement will have adequate strength to protect water sands and to perforate and test any upper prospective gas/oil shows.
- Casing set 250' Above Top of Mancos "B".
- Liner top set 235' above intermediate landing point and cement will be circulated to liner top.

**GENERAL REMARKS:**  
Piceance Basin Completion Team to design completion program.

Form 46 Reviewed by: Logging program reviewed by:

<b>PREPARED BY:</b> Bilyeu/Feldcamp/Kendrick	<b>APPROVED:</b>	<b>APPROVED:</b>
Form 46 7-84bw	For Production Dept	For Exploration Dept.

**AMOCO PRODUCTION COMPANY**

Cementing Procedure/form 46

Well Name: **State 2-13-25**

1874 FNL, 683 FWL, S 2, T13S, R25E

Atchee Ridge Mancos "B"

Amoco proposes to drill the well to develop the Mancos "B" reservoir.

The well will be drilled to the surface casing point and casing set utilizing a "dry-hole digger".

The well will then be drilled to the intermediate casing point with an air/air-mist/aerated water/non-dispersed mud system.

The production hole will be drilled with air through the Mancos "B" Sand.

**Surface Casing:**

Depth (ft)	Size (in)	Description	Cement program
<b>450</b>	9 5/8"	36#, J-55, STC	282 cf Type 5 Halliburton Cement, 2% CaCl2 + 0.25 #/sk Flocele. 1.15 cf/sx, 15.8 ppg
Hole Size: 12 1/4"		Excess cement: 100%	(150% excess if boulders or drilling losses occur) <b>245 sacks</b>

**Intermediate Casing:**

Depth (ft)	Size (in)	Description	Cement program
<b>4981</b>	7"	23#, N-80, LTC * 1st Stg lead	* 2 stage 37 cf 50/50 Type 5 Halliburton Cement/Blended Silicalite w/ 4% Gel (total) 1.0% EX-1, 0.4% Halad-344, 4% CaCl2, & 0.5 #/sk Flocele 4.4 cf/sx, 10.1 ppg.
		* 1st Stg Tail:	204 cf 50/50 Type 5 Halliburton Cement/Blended Silicalite w/ 2.0% Gel (total), 0.5% Versaset, 0.4% Halad-344, 2.0% CaCl2, & 0.25#/sk Flocele 2.04 cf/sx, 12.0 ppg.
Top of upper Castlegate Sand	<b>4238</b>	ft	<b>100 sacks</b>
Stage tool depth	<b>3838</b>	ft, 400' above top of upper Castlegate Sand.	
		* 2nd Stg Lead:	584 cf 50/50 Type 5 Halliburton Cement/Blended Silicalite w/ 4% Gel (total) 1.0% EX-1, 0.4% Halad-344, 4% CaCl2, & 0.5 #/sk Flocele 4.4 cf/sx, 10.1 ppg. <b>133 sacks</b>
		* 2nd Stg Tail:	204 cf 50/50 Type 5 Halliburton Cement/Blended Silicalite w/ 2.0% Gel (total), 0.5% Versaset, 0.4% Halad-344, 2.0% CaCl2, & 0.25#/sk Flocele 2.04 cf/sx, 12.0 ppg.
Hole size: 8 3/4"		Excess cement: 40%	(60% + 5-10 #/sk of gilsonite if drilling losses occur) <b>100 sacks</b>

**Production Casing (LINER):**

Depth (ft)	Top of Liner	Size (in)	Description	Cement program
<b>5950</b>	<b>4746</b>	4 1/2"	11.6#, WC75, LTC	
* 1st Stg Tail:				150 50/50 Type 5 Halliburton Cement/Poz A w/ 2.0% Gel (total), 5#/sk Gilsomite, 0.4% Halad-344, 10% NaCl2 (bwow), 0.25 #/sk Flocele 1.32 cf/sx, 13.8 ppg.
Hole size: 6 1/4"		Excess cement: 25%	(50% if drilling losses occur or no cement job - open hole completion) <b>114 sacks</b>	
<b>Note:</b> If caliper logs are run, utilize caliper volume per AMOCO DOC specifications.				
BY: BILYEU/PEISER/KENDRICK <span style="float: right;">06/13/95</span>				

**PICEANCE BASIN  
MANCOS "B" FORMATION  
PRESSURE CONTROL EQUIPMENT  
WITH NO INTERMEDIATE CASING**

**Background**

The objective Mancos "B" formation bottom hole pressure is estimated to be approximately 0.2 psi/ft with a maximum surface pressure of less than 1,000 psig based on shut-in surface pressures from wells in the region. Pressures of any of the other possible producing zones are estimated to be less than 0.3 psi/ft based on studies of the region; resulting in less than 1,000 psi surface shut-in pressure. Pressure control equipment working pressure minimum requirements are therefore 2,000 psi. Equipment to be used will conform to API RP-53 (Figure 2.C.2) for a 2,000 psi system per Federal Onshore Order No. 2. Due to the available conventional equipment within the area, 3,000 psi rated pressure control equipment will typically be utilized in a double ram type arrangement. Regional drilling rigs to be utilized have substructure height limitations which exclude use of an annular preventer; therefore a rotating head will be installed above these rams. A blooie line, gas buster and choke manifold will be efficiently installed to allow switching from air/mist to an aerated system should water flows occur. This pressure control equipment will be utilized for the proposed air, air/mist or aerated water drilling below surface casing to Total Depth. No abnormal temperature, pressure or Hydrogen Sulfide gas is anticipated.

**Equipment Specification**

**Interval**

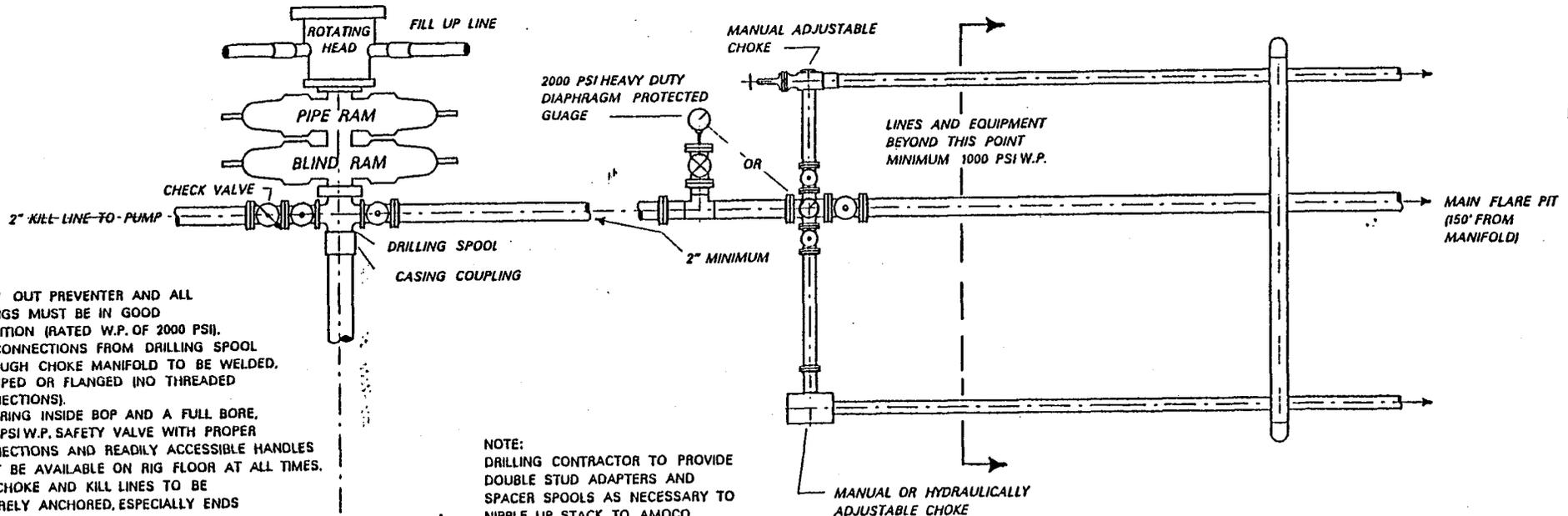
Below surface casing to total depth

**BOP Equipment**

11" or 9", 3,000 psi double ram  
preventer with rotating head

All ram preventers and related control equipment will be hydraulically tested to 250 psi (low pressure) and 2,000 psi (high pressure) upon installation, following any repairs or equipment replacements, or at 30 day intervals. Accessories to BOP Equipment will include kelly cock, floor safety valve with appropriate handles stored in readily available areas and the choke manifold. This equipment will also be tested to the equivalent pressures at the those intervals as specified above.

**MINIMUM BLOW-OUT PREVENTER REQUIREMENTS**  
**7<sup>7</sup>/<sub>16</sub>" , 9" OR 11" (NOMINAL) 2,000 PSI W.P.**  
 Typical Mancos "B" /Dakota Air/Mud (SRBU)



**NOTE:**

1. BLOW OUT PREVENTER AND ALL FITTINGS MUST BE IN GOOD CONDITION (RATED W.P. OF 2000 PSI).
2. ALL CONNECTIONS FROM DRILLING SPOOL THROUGH CHOKE MANIFOLD TO BE WELDED, CLAMPED OR FLANGED INTO THREADED CONNECTIONS).
3. A STRING INSIDE BOP AND A FULL BORE, 2000 PSI W.P. SAFETY VALVE WITH PROPER CONNECTIONS AND READILY ACCESSIBLE HANDLES MUST BE AVAILABLE ON RIG FLOOR AT ALL TIMES.
4. ALL CHOKE AND KILL LINES TO BE SECURELY ANCHORED, ESPECIALLY ENDS OF CHOKE LINES.
5. KILL LINE MUST BE CONNECTED AT ALL TIMES.
6. EQUIPMENT THROUGH WHICH BIT MUST PASS SHALL BE AS LARGE AS INSIDE DIAMETER OF THE CASING BEING DRILLED THROUGH.
7. MUST HAVE UPPER AND LOWER KELLY COCK ON KELLY.
8. BLOW-OUT PREVENTER CLOSING EQUIPMENT SHALL HAVE SUFFICIENT CAPACITY TO FULFILL REQUIREMENTS OF CURRENT FEDERAL REGISTER (43 CFR) DATED NOV. 1988.
9. NO COLLECTOR BOTTLES, SURGE TANKS OR BUFFER CHAMBERS DOWNSTREAM OF THE CHOKE MANIFOLD.
10. ALL TURNS TO BE MADE WITH TARGETED TEES (18-24" MIN.). NO BENDS OR SWEEPS IN LINE FROM BOP TO CHOKE MANIFOLD.
11. IF A FLEXIBLE HOSE IS TO BE USED AS A CHOKE LINE, IT MUST BE APPROVED BY AMOCO PRIOR TO RIGGING UP.
12. LOCK TO BE INSTALLED ON BLIND RAM CONTROL.

**NOTE:**  
 DRILLING CONTRACTOR TO PROVIDE DOUBLE STUD ADAPTERS AND SPACER SPOOLS AS NECESSARY TO NIPPLE UP STACK TO AMOCO WELLHEAD (BRADEN HEAD OR CASING SPOOL).

**NOTE:**  
 1. ALL UNMARKED VALVES TO BE FULL-OPENING GATE OR PLUG VALVES, METAL TO METAL SEAL, 2000 PSI W.P.

**NOTE:**

1. CHOKE ASSEMBLY VERTICAL FOR ILLUSTRATION ONLY, SHOULD BE HORIZONTAL ON RIG. ANCHOR ALL LINES SECURELY EVERY 30' AND WITHIN 5' OF END OF LINE.
2. DRILLING CONTRACTOR TO BE RESPONSIBLE FOR PROVIDING ALL LINES AND VALVES.

# PICEANCE MULTIPOINT REQUIREMENTS

## 1. Existing Roads

- A. The proposed location is staked as shown on the Certified Plat.
- B. Route and distance from nearest town is identified on the form 3160-3, item #14 (also, see Exhibit A).
- C. Access road(s) to location are identified on Exhibits A and B.
- D. Not applicable unless exploratory well.
- E. All existing roads within one-mile radius of the well site are shown on Exhibit B.
- F. Improvement and/or maintenance of existing roads may be done as deemed necessary for Amoco's operations, or as required by the surface management agency.

## 2. Access Roads

- A. Width, maximum grades and turnouts will be determined at the onsite inspection by the BLM.
- B. Drainage will be used as required.
- C. Size and location of culverts, if needed, will be determined at the onsite inspection or during construction.
- D. Surfacing materials may be applied to the proposed road and/or location if the conditions merit it.
- E. Gates and/or cattle guards will be installed at fence crossings if deemed necessary by the land owner or the surface management agency.
- F. The proposed new access road is center-line flagged if applicable

## 3. Location of Existing Wells

A-H. All existing wells, to the best of our knowledge, are identified on Exhibit C (9 section plat).

## 4. Location of Existing and/or Proposed Facilities

- A. All existing facilities owned or controlled by Amoco are shown on Exhibits D and E.
- B. If this proposed well is productive, Amoco will own or have control of these facilities on location: storage tanks, wellhead, production unit, and if applicable, a pump jack and/or compressor. Also there will be buried production lines from the wellhead to the production unit and/or storage tanks. Amoco will submit a Sundry Notice when off-pad plans are finalized.
- C. Rehabilitation, whether the well is productive or not, will be made on all unused areas in accordance with surface owner or manager approval.

## 5. Location and Type of Water Supply

A. Water will be obtained from a privately permitted water source secured through a contract water hauling company. It will be hauled in vacuum trucks via the access road (Exhibit A). The appropriate permits for this activity have been obtained by the water transporter.

## 6. Source of Construction Materials

A. - D. No off-site materials will be needed to build the proposed location or access road. Off site materials may be used if deemed necessary by Amoco and the surface management agency.

## 7. Methods of Handling Waste Disposal

A. Cuttings, drilling fluids, and produced fluids will be contained in the reserve pit and be allowed to evaporate. The reserve pit will be fenced on three sides and the 4th side will be fenced upon removal of the rig. The pits will be allowed to sit for 1 year to dry and then pulled as required. Produced water will be disposed of at an approved injection well or an evaporation site. Sanitary facilities and a steel mesh portable trash container will remain on location throughout drilling operations and will then be removed to a designated disposal area. The well site will be properly cleaned up upon removal of the rig.

## 8. Ancillary Facilities.

A. To the best of our knowledge, no ancillary facilities will be needed at this time.

## 9. Well Site Layout

A-C. Cross-sections, etc. - See Exhibit D. Exact location of rig related equipment will be determined when Amoco contracts a drilling rig; however, all this equipment will be contained on location. The location diagram reflects actual area of well pad. Total disturbed area will vary due to cut and fill slopes.

D. Reserve pit(s):

Will be lined with (8-10 mil reinforced plastic, size sufficient to cover pit area and fit underneath a rig tank.) or unlined. This will be as required by the surface management agency and will be determined at the onsite.

## 10. Plans for Restoration of Surfaces

A. Restoration of the surface will be conducted after the reserve pit has dried. The pit will then be cleaned up and back filled and the entire disturbed area will be re-contoured. The topsoil stockpile will then be uniformly placed over this area and reseeded of the site will be carried out as instructed by the appropriate management agency. Methods to protect against erosion will be employed. After final abandonment, additional restoration efforts will be applied.

## 11. Surface Ownership

A. The surface owner is \_\_\_\_\_

*State of Utah*

## 12. Other Information

### A. General Description

1. Archeological clearance, topography, soil character, and flora and fauna are detailed in the archeologist's report forwarded by an approved contract archaeologist to the appropriate management agency.
2. Land uses include recreation, grazing and oil and gas development.

## 13. Operator's Representative and Certification

Amoco Production Company  
Kurt W. Unger  
Drilling Superintendent  
P.O. Box 800  
Denver, Colorado 80201-0800

(303) 830-6036

I hereby certify that I, or persons under my direct supervision, have inspected the proposed drill site 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 AMOCO PRODUCTION COMPANY and its contractors and sub-contractors in conformity with this plan and the terms and conditions under which it is approved.

Date:

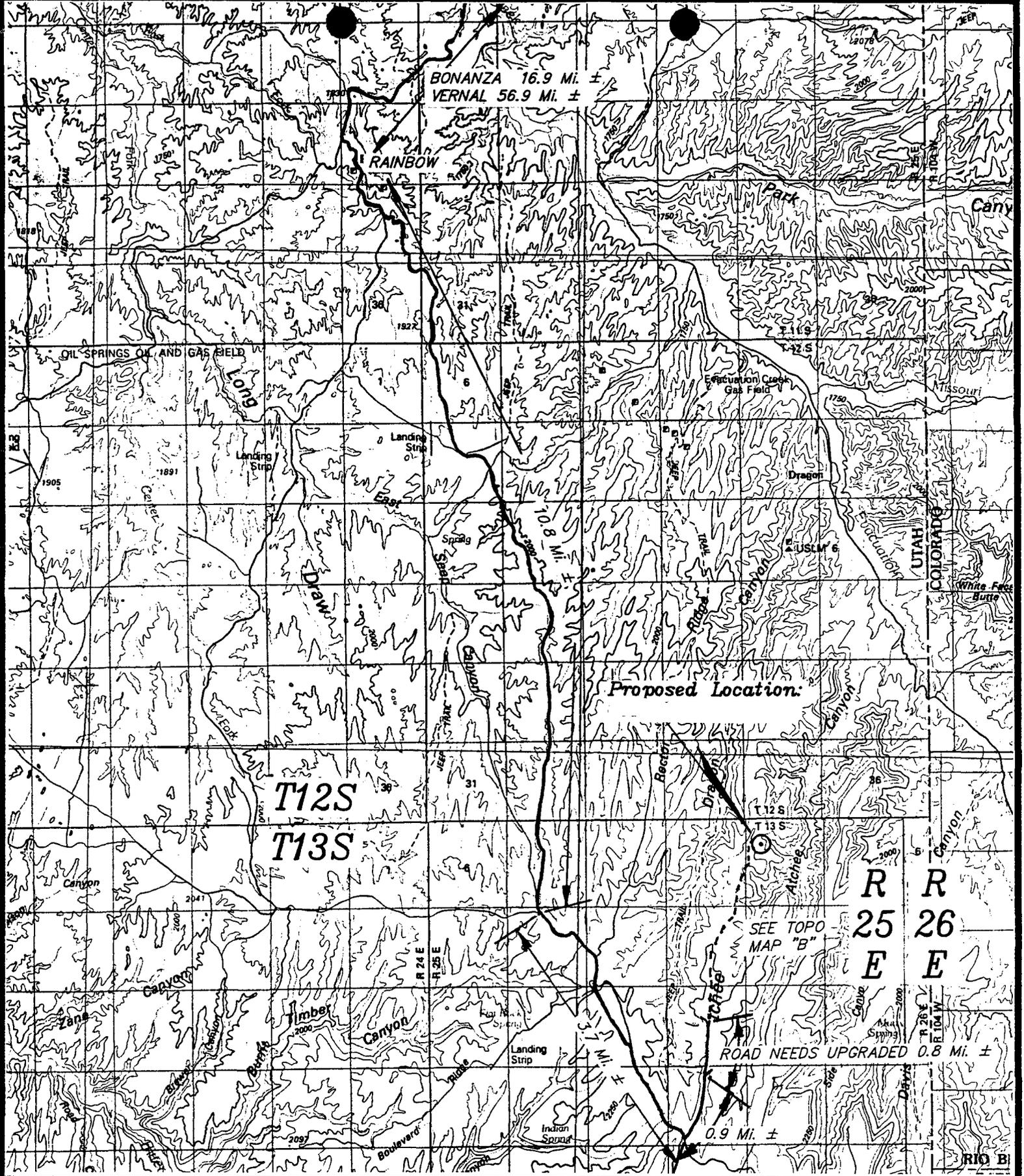
2 June 1995



Kurt W. Unger, Drilling Superintendent







TOPOGRAPHIC  
 MAP "A"

DATE: 5-4-95 C.B.T.



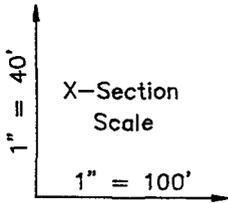
AMOCO PRODUCTION COMPANY

SECTION 2, T13S, R25E, S.L.B.&M.  
 1874' FNL 683' FWL

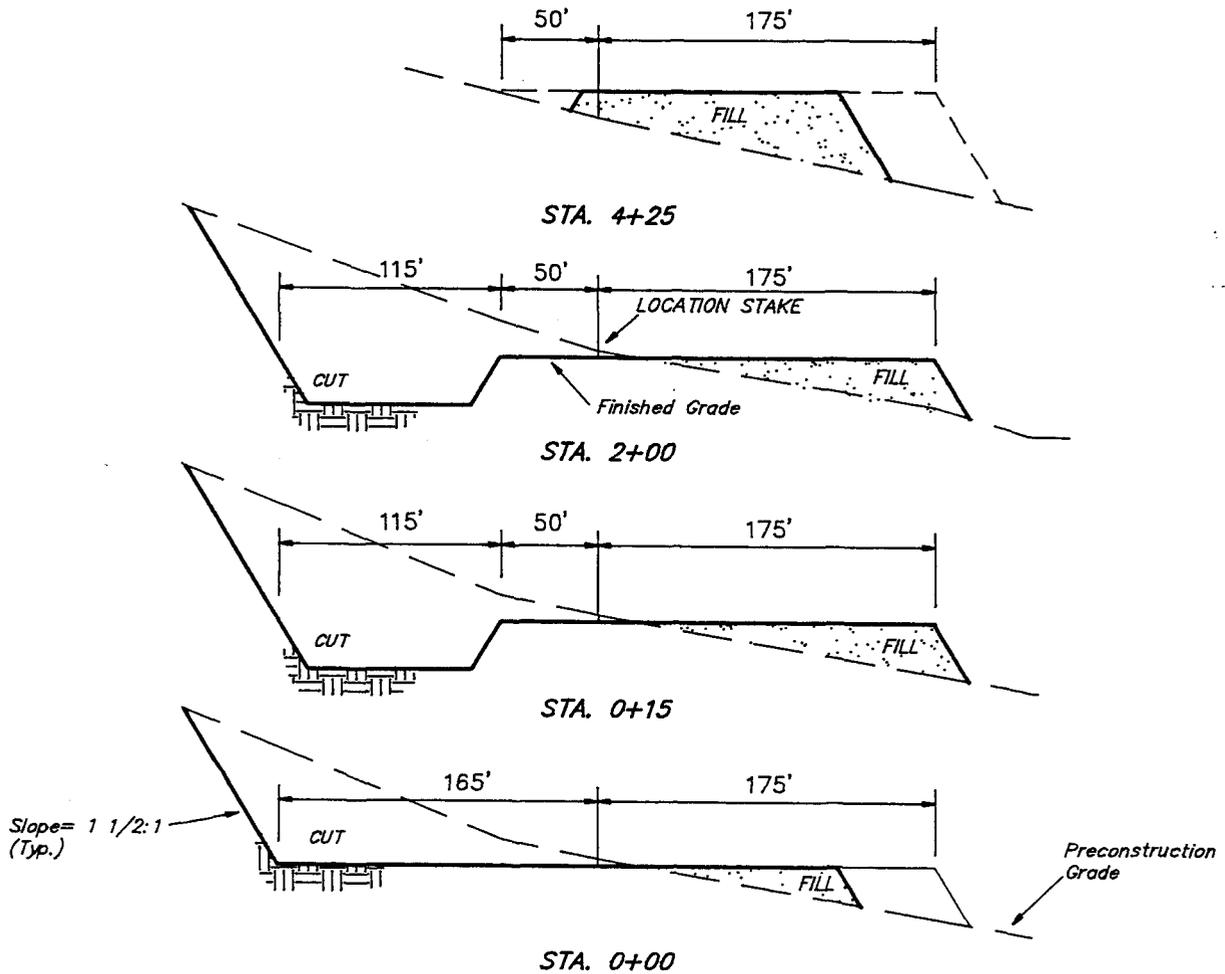
# AMOCO PRODUCTION COMPANY

## TYPICAL CROSS SECTIONS FOR

SECTION 2, T13S, R25E, S.L.B.&M.  
1874' FNL 683' FWL



DATE: 5-4-95  
Drawn By: C.B.T.



**NOTE:**

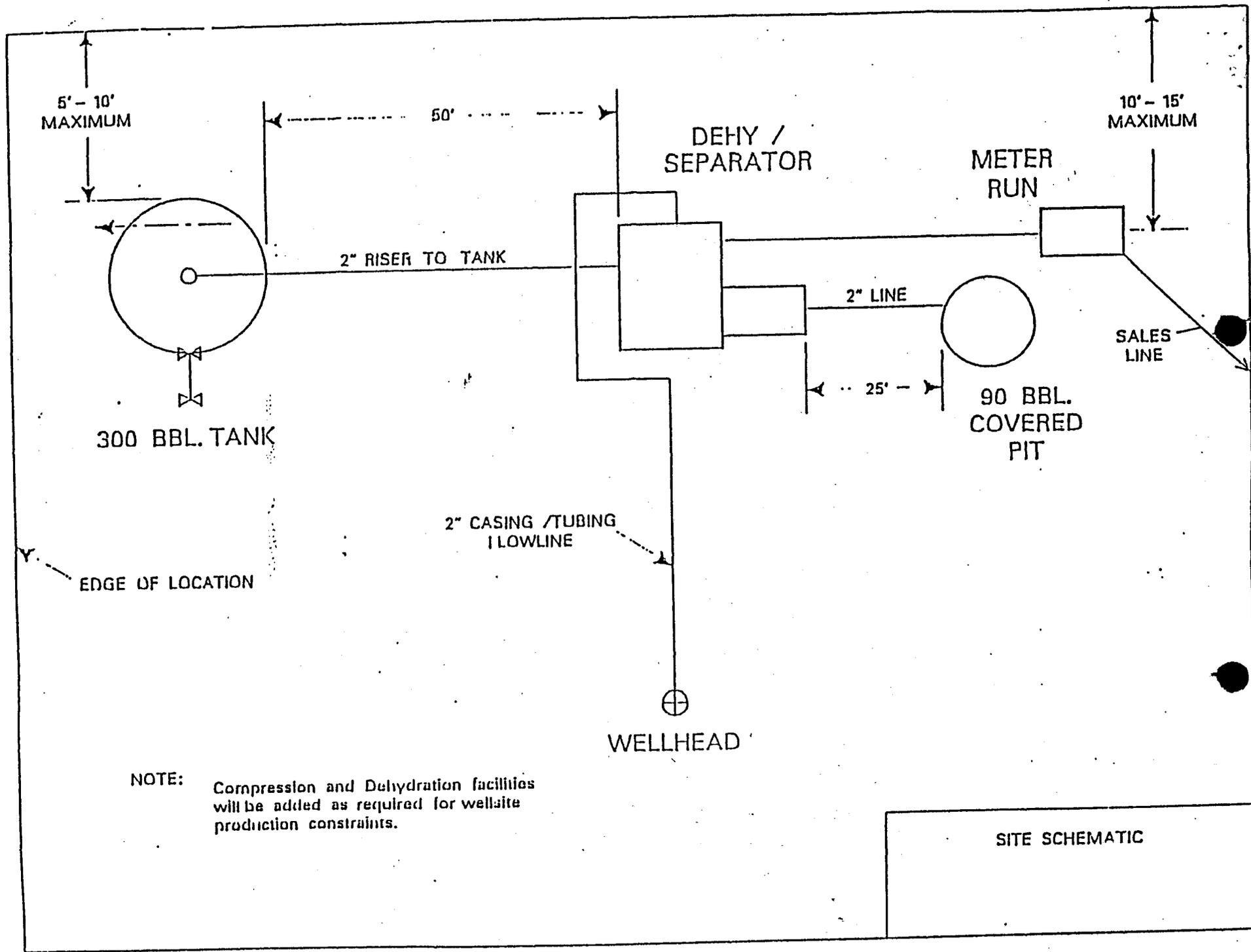
Topsoil should not be Stripped Below Finished Grade on Substructure Area.

**APPROXIMATE YARDAGES**

(6") Topsoil Stripping	=	2,690 Cu. Yds.
Remaining Location	=	27,670 Cu. Yds.
<b>TOTAL CUT</b>	<b>=</b>	<b>30,360 CU.YDS.</b>
<b>FILL</b>	<b>=</b>	<b>22,750 CU.YDS.</b>

EXCESS MATERIAL AFTER 5% COMPACTION	=	6,410 Cu. Yds.
Topsoil & Pit Backfill (1/2 Pit Vol.)	=	6,410 Cu. Yds.
EXCESS UNBALANCE (After Rehabilitation)	=	0 Cu. Yds.

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



NOTE: Compression and Dehydration facilities will be added as required for wellsite production constraints.

SITE SCHEMATIC



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)

July 14, 1995

Amoco Production Company  
P. O. Box 800  
Denver, Colorado 80201

Re: State #2-13-25 Well, 1874' FNL, 683' FWL, Lot 5, Sec. 2, T. 13 S., R. 25 E.,  
Uintah County, Utah

Gentlemen:

Pursuant to the provisions and requirements of Utah Code Ann. 40-6-1 et seq., Utah Administrative Code R649-3-1 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 43-047-32706.

Sincerely,

R. J. Firth  
Associate Director

ldc

Enclosures

cc: Uintah County Assessor  
Bureau of Land Management, Vernal District Office  
WAPD



Operator: Amoco Production Company

Well Name & Number: State 2-13-25

API Number: 43-047-32706

Lease: State ML-42793

Location: Lot 5 Sec. 2 T. 13 S. R. 25 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.

4. Onsite Inspection

Compliance with the requirements and stipulations of the On-site Pre-drill Evaluation and Review.



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)

September 12, 1996

Julie Acevedo  
Amoco Production Company  
P.O. Box 800  
Denver, Colorado 80201

Re: State 02-13-25 Well, Sec. 2, T. 13 S., R. 25 E., Uintah County, Utah, API No. 43-047-32706

Dear Ms. Acevedo:

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,

A handwritten signature in cursive script that reads "Don Staley".

Don Staley  
Administrative Manager  
Oil and Gas

lwp

cc: R. J. Firth, Associate Director  
K. M. Hebertson  
Well file

WO1219

