

UTAH OIL AND GAS CONSERVATION COMMISSION

REMARKS: WELL LOG ELECTRIC LOGS FILE WATER SANDS LOCATION INSPECTED SUB. REPORT/abd.

000830 LA'D, etc 8-28-00!

DATE FILED JUNE 5, 1998

LAND: FEE & PATENTED FEE STATE LEASE NO.

PUBLIC LEASE NO.

INDIAN

DRILLING APPROVED: SEPTEMBER 1, 1998

SPUDED IN:

COMPLETED: PUT TO PRODUCING:

INITIAL PRODUCTION:

GRAVITY A.P.I.

GOR:

PRODUCING ZONES:

TOTAL DEPTH:

WELL ELEVATION:

DATE ABANDONED: 8-28-00 LA'D

FIELD: WILDCAT

UNIT:

COUNTY: SUMMIT

WELL NO. YELLOW CREEK DEEP 5-1

API NO. 43-043-30319

LOCATION 2330 FNL FT. FROM (N) (S) LINE. 1154 FEL

FT. FROM (E) (W) LINE. SE NE

1/4 - 1/4 SEC. 5

TWP.	RGE	SEC.	OPERATOR	TWP.	RGE.	SEC.	OPERATOR
5N	8E	5	UNION PACIFIC RES.				



INTER-OFFICE CORRESPONDENCE

TO: Drilling Foremen **OFFICE:** Ft. Worth
FROM: Rene R. St. Pierre **DATE:** 5/18/98
SUBJECT: Drilling Program
Yellow Creek Deep 5-1
Yellow Creek Field

SURFACE LOCATION: ²³³⁰ ~~1,136'~~ FNL & ¹¹⁵⁴ ~~1,098'~~ FEL SECTION 5-T5N-R8E
BOTTOMHOLE LOCATION: ~~1,100'~~ FNL & 100' FEL SECTION 5-T5N-R8E
³⁰⁰⁰

COUNTY: Summit County, ^{UTAH} Wyoming	PROPOSED DEPTH: 12,925' TVD
AFE: A7031	13,000' MD
DHC: \$3,129M	GRADED ELEVATION: 7,195'
CWC: \$6,000 M	KB ELEVATION: 7,215'
RIG: TBD	UPRC WI: 0.00%
	API NUMBER: TBD

ANTICIPATED PRODUCTIVE FORMATION: Phosphoria @ +/- 11,975' TVD
Weber @ +/- 12,775' tvd

DIRECTIONS TO LOCATION: Beginning at the Evanston exit from I-80 West in Evanston, Wyoming, proceed south on Yellow Creek Road (County Road 151), a distance of 6.0 miles. Turn right (west) through a gate bearing an Anschutz Cave Creek sign and proceed along a dirt road approximately 4 miles to the location (follow rig signs).

GENERAL OVERVIEW: This well is to be drilled as a southwest extension of the Yellow Creek Deep Field, Uinta County, Wyoming. The well will test the Phosphoria and Weber formations 200' downdip rom the Anschutz Land & Livestock 14-33 with a TD of 12,945' MD. The AL&L14-33 IP'd in the Weber Interval from 12,820'-12,900' MD at 9MMCFD, 714BFPD with 1,360# FTP.

1. Build location and access roads suitable to accomodate drilling rig. Preset 70' of 30" conductor. MI & RU drilling rig.
2. Drill a 26" hole to 1,500' MD. Run and cement 20" surface casing. NU 20-3/4" 3M annular BOP (diverter assembly). ^{TVD?}

3. Drill a 17-1/2" hole to 6,150' TVD (+/- 100' into Twin Creek). Run and cement 13-3/8" intermediate casing. NU 13-5/8" 5M, 3 ram stack with Hydril.
4. Drill a 12-1/4" hole to TD @ 13,000 MD ^{TVD?} (-5,800' SS). Log and evaluate open hole section. If commercial pay exists, run and cement 7" X 7-5/8" production casing.
5. Prepare to complete well. Completion procedure to follow.

MD = ?

cc: M. J. Walker
S. J. Bosworth
C. W. Cook
T. Martinez
C. Cooper-Day
L. E. Woelich
Well File

STATE OF UTAH
DIVISION OF OIL, GAS AND MINING

5. Lease Designation and Serial No.	FEE
6. If Indian, Allottee or Tribe Name	NA
7. Unit Agreement Name	NA
8. Farm or Lease Name	Yellow Creek Deep
9. Well Name	5-1
10. Field and Pool, or Wildcat	Yellow Creek Deep
11. QQ, Sec., T., R., M., or Block and Survey or Area	(NENE) Sec. 5, T5N-R8E

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1 a. Type of Work
 DRILL DEEPEN PLUG BACK

b. Type of Well
 Oil Well Gas Well Other Single Zone Multiple Zone

2. Name of Operator
 UNION PACIFIC RESOURCES COMPANY

3. Address of Operator
 P. O. Box 7 MS 3006 Fort Worth, Texas 76101-0007

4. Location of Well (Report location clearly and in accordance with any State requirements)

At Surface (NENE) '1136' FNL, 1098' FEL Sec. 5, T5N-R8E, SLBM

At Proposed Producing Zone (NENE) 1100' FNL, 100' FEL Sec. 5, T5N-R8E, SLBM

CONFIDENTIAL

J. Moravek

14. Distance in miles and direction from nearest town or post office
 25 miles southwest of Evanston, Wyoming

12. County or Parish 13. State
 Summit Utah

15. Distance from proposed location to nearest property or lease line, Ft. 1098'

16. No. of acres in lease 642.84

17. No. of acres assigned to this well Hearing pending

18. Distance from proposed location to nearest well, drilling, completed, or applied for, on this lease, Ft. NA

19. Proposed Depth 12,925' TVD

20. Rotary or cable tools Rotary

21. Elevations (Show whether DP, RT., GR., etc.) 7195' MSL (GR); 7215' MSL (KB)

22. Approx. date work will start Upon Approval

23. PROPOSED CASING AND CEMENTING PROGRAM

Size of Hole	Size of Casing	Weight per Foot	Setting Depth	Quantity of Cement
26"	20	106.5	K-55 1500'	NA
17-1/2"	13-3/8"	72#	L-80 6150'	NA
12-1/4"	7-5/8"	39#	L-80 13000'	NA

Union Pacific Resources Company (UPRC) proposes drilling this well in accordance with the attached Drilling Procedures. Operations with regard to drilling and operating of this well will be conducted under State-wide Bond No. 2447222

Please consider all submittals pertaining to this well as "COMPANY CONFIDENTIAL". If additional information is needed, please contact the undersigned at (817) 877-6739, FAX (817) 877-7942.

*495184.9
4560741.0*

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: if proposal is to deepen or plug back, 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.

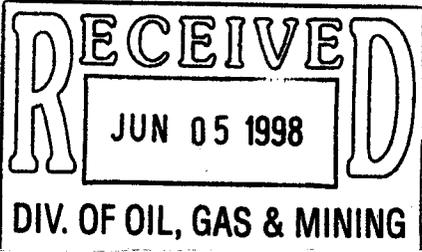
24. I hereby certify that this report is true and complete to the best of my knowledge

Signed: Dorothy Moravek *Dmoravek* Title: Regulatory Analyst Date: 6/3/98

API No. 43-043-30319 Approval Date _____

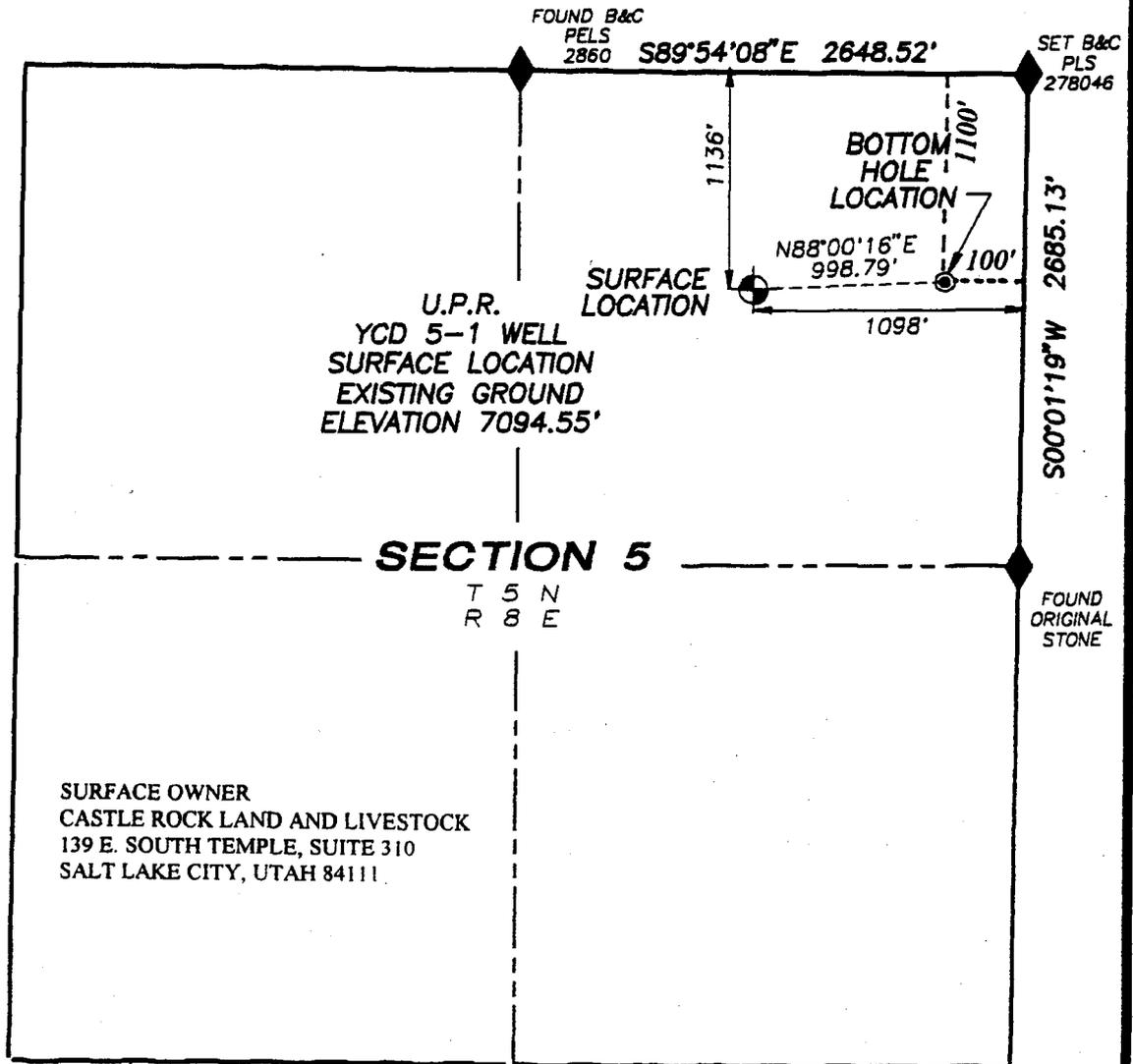
Approved by _____ Title _____ Date _____

Conditions of approval, if any:
 (3/89)



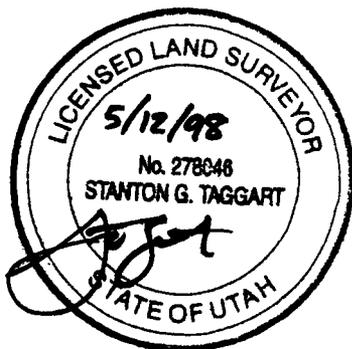
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SCALE: 1" = 1000'



LOCATION MAP

SURVEYED UNDER MY SUPERVISION
IN MAY 1998



**MAP to ACCOMPANY
APPLICATION for PERMIT to DRILL
U.P.R. YCD 5-1 WELL
1136' FNL 1098' FEL
SECTION 5, T5N, R8E, SLB&M
SUMMIT COUNTY, UTAH**

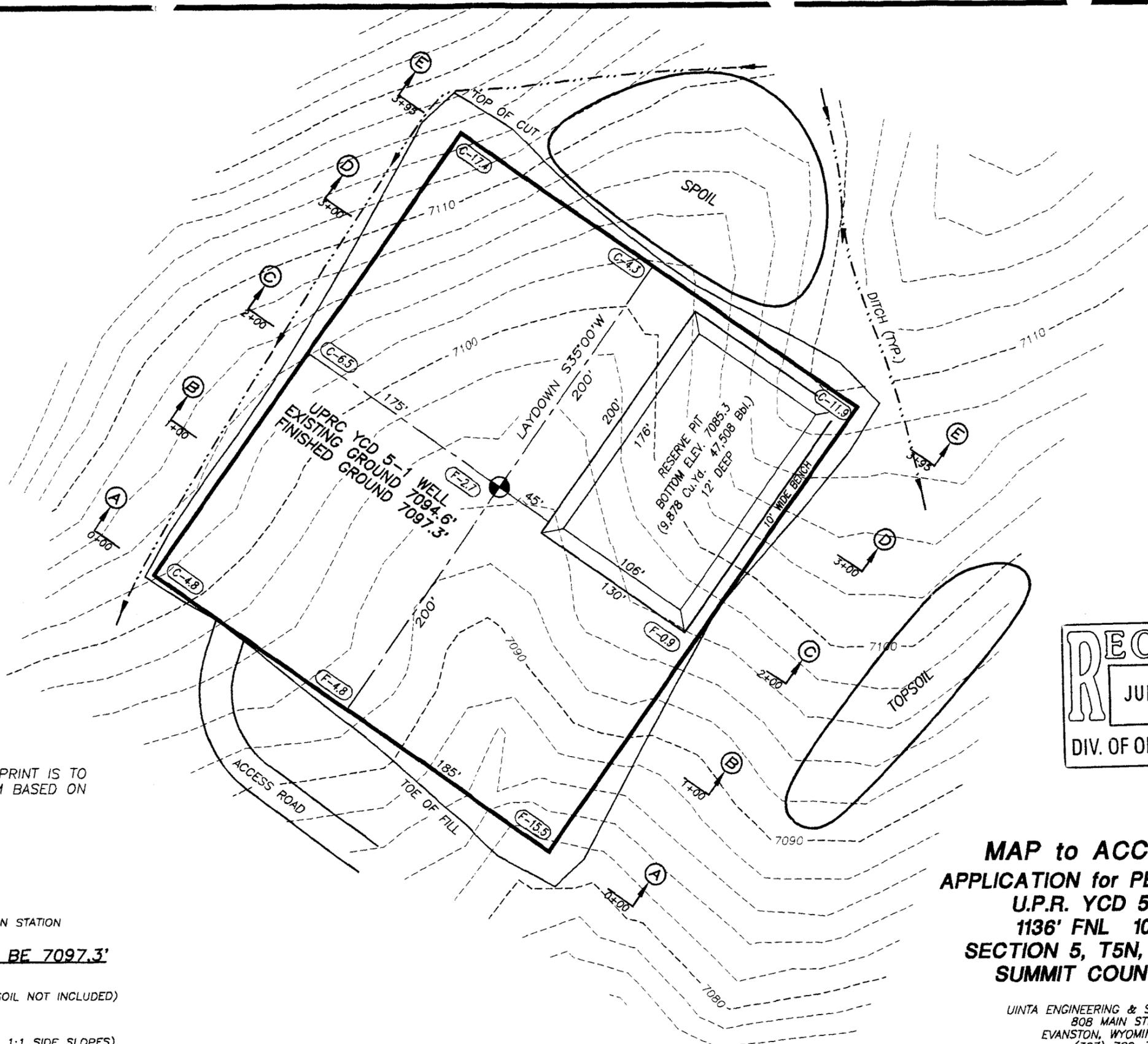
UINTA ENGINEERING & SURVEYING, INC.
808 MAIN STREET
EVANSTON, WYOMING 82930
(307) 789-3602

DATE: 03/09/98 JOB #: 98-28-03
DISK #: WELL10 FILE: 98-28-03

REVISED 5/12/98

DRAWN BY: Travis Martinez

SHEET 1 OF 4



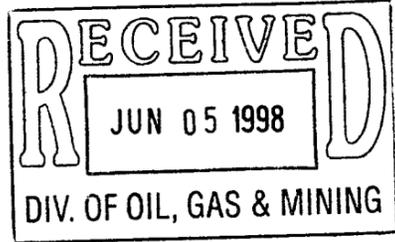
NOTE:
FILL MATERIAL UNDER RIG FOOT PRINT IS TO BE COMPACTED TO 95% MAXIMUM BASED ON MODIFIED PROCTOR.

BASIS OF ELEVATION
ELEVATIONS BASED ON USGS TRIANGULATION STATION "EVANSTON" ELEVATION 7022'

FINISHED PAD ELEVATION TO BE 7097.3'

WELL PAD QUANTITIES
EXCAVATION = 15,053 C.Y. (PIT AND TOPSOIL NOT INCLUDED)
EMBANKMENT = 13,895 C.Y.
SPOIL = 1,159 C.Y.
RESERVE PIT = 9,878 C.Y. (12' DEEP W/ 1:1 SIDE SLOPES)
TOPSOIL = 3,375 C.Y. (CALCULATED AT 6" DEEP)

ALL CUT SLOPES ARE 1.5:1 (UNLESS OTHERWISE NOTED)
ALL FILL SLOPES ARE 1.5:1 (UNLESS OTHERWISE NOTED)

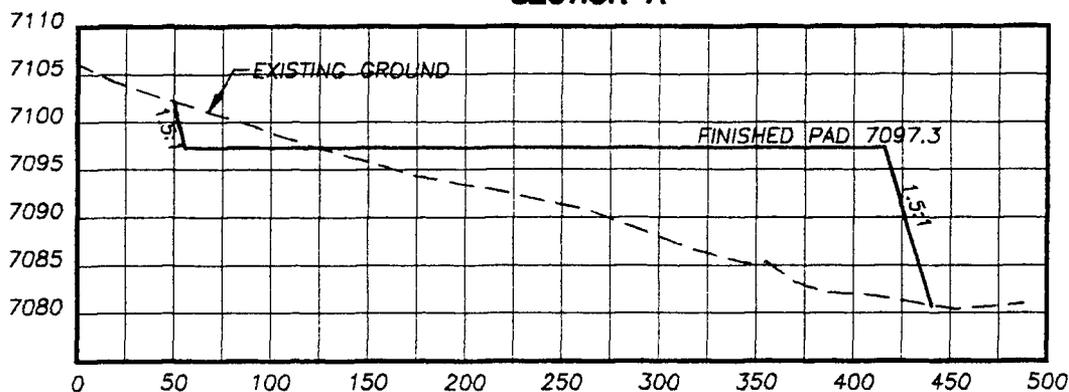


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1136' FNL 1098' FEL
SECTION 5, T5N, R8E, SLB&M
SUMMIT COUNTY, UTAH

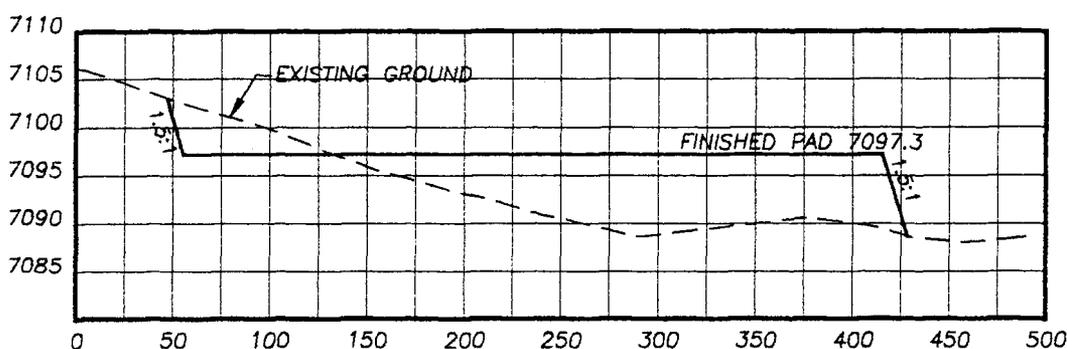
UINTA ENGINEERING & SURVEYING, INC.
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EVANSTON, WYOMING 82930
(307) 789-3602

DATE: 03/09/98 JOB #: 98-26-03
DISK #: WELL10 FILE: 98-26-03
DRAWN BY: Travis Martinez SHEET 2 OF 4

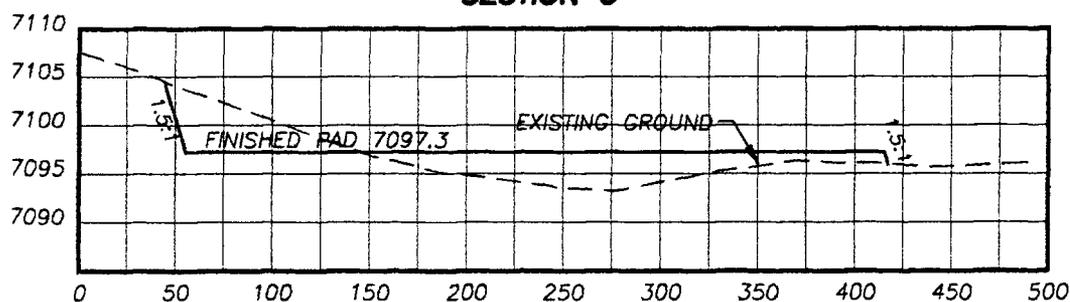
SECTION A



SECTION B



SECTION C



HORIZ. SCALE: 1" = 100'
 VERT. SCALE: 1" = 20'

**MAP to ACCOMPANY
 APPLICATION for PERMIT to DRILL
 U.P.R. YCD 5-1 WELL
 1136' FNL 1098' FEL
 SECTION 5, T5N, R8E, SLB&M
 SUMMIT COUNTY, UTAH**

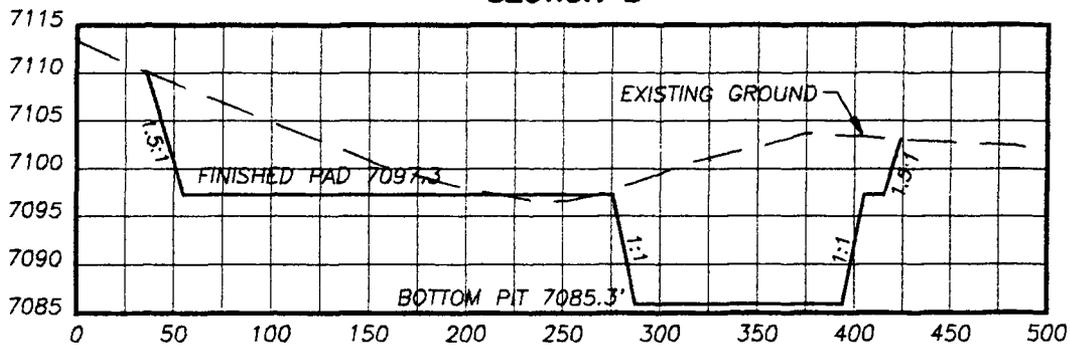
UINTA ENGINEERING & SURVEYING, INC.
 808 MAIN STREET
 EVANSTON, WYOMING 82930
 (307) 789-3602

DATE: 03/09/98 JOB #: 98-26-03
 DISK #: WELL10 FILE: 98-26-03

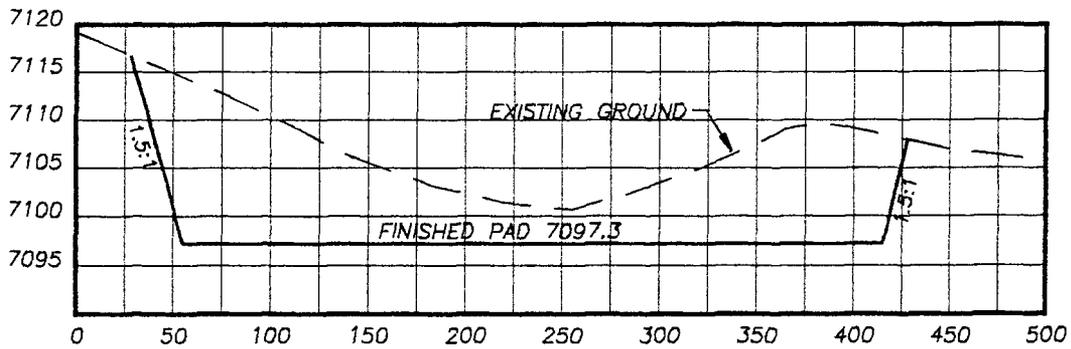
DRAWN BY: Travis Martinez

ALL CUT SLOPES ARE 1.5 : 1 (UNLESS OTHERWISE NOTED)
 ALL FILL SLOPES ARE 1.5 : 1 (UNLESS OTHERWISE NOTED)

SECTION D



SECTION E



HORIZ. SCALE: 1" = 100'
VERT. SCALE: 1" = 20"

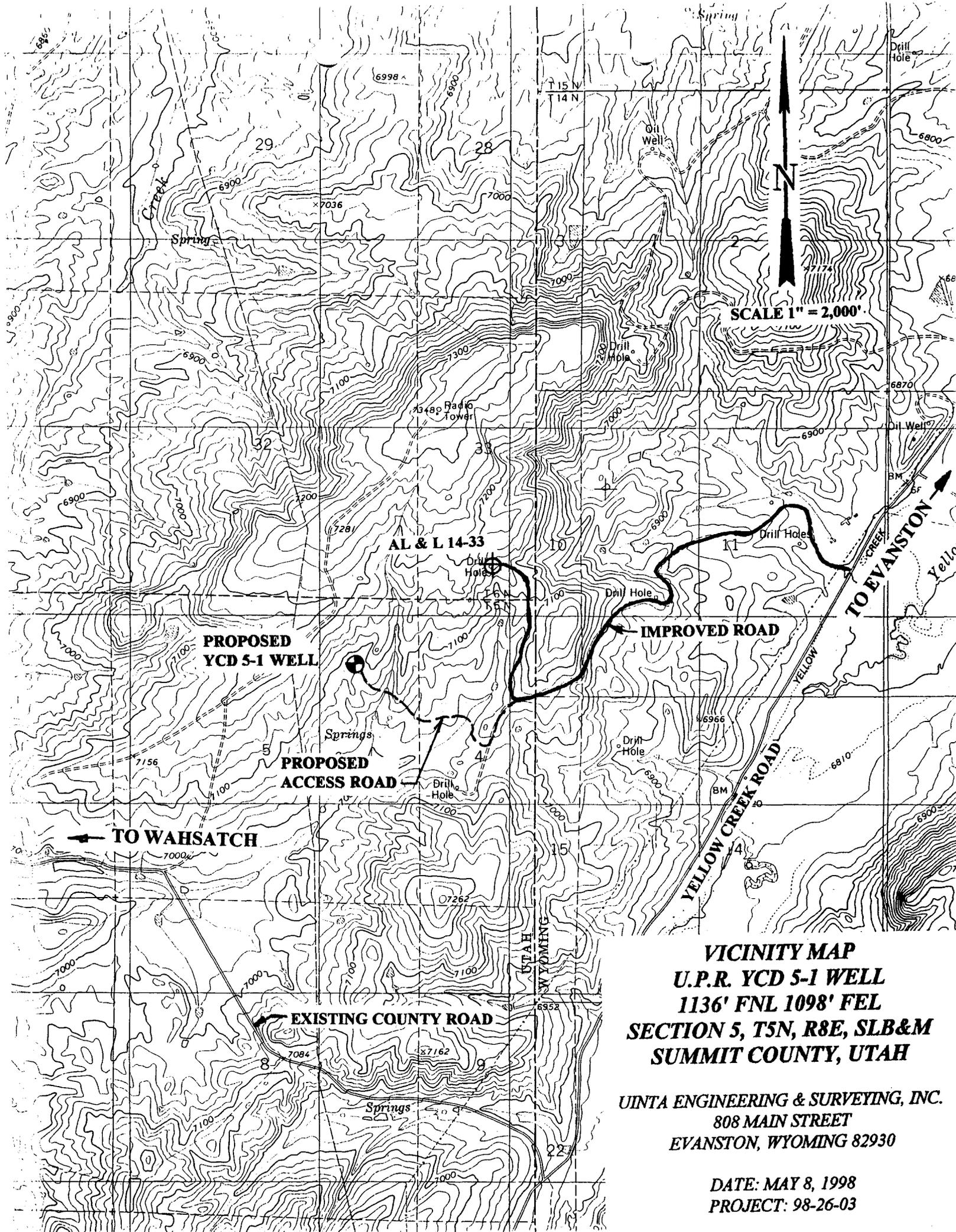
**MAP to ACCOMPANY
APPLICATION for PERMIT to DRILL
U.P.R. YCD 5-1 WELL
1136' FNL 1098' FEL
SECTION 5, T5N, R8E, SLB&M
SUMMIT COUNTY, UTAH**

UINTA ENGINEERING & SURVEYING, INC.
808 MAIN STREET
EVANSTON, WYOMING 82930
(307) 789-3602

DATE: 03/09/98 JOB #: 98-26-03
DISK #: WELL10 FILE: 98-26-03
DRAWN BY: Travis Martinez

ALL CUT SLOPES ARE 1.5 : 1 (UNLESS OTHERWISE NOTED)
ALL FILL SLOPES ARE 1.5 : 1 (UNLESS OTHERWISE NOTED)

SHEET 4 OF 4



**VICINITY MAP
U.P.R. YCD 5-1 WELL
1136' FNL 1098' FEL
SECTION 5, T5N, R8E, SLB&M
SUMMIT COUNTY, UTAH**

**UINTA ENGINEERING & SURVEYING, INC.
808 MAIN STREET
EVANSTON, WYOMING 82930**

**DATE: MAY 8, 1998
PROJECT: 98-26-03**

STATE OF UTAH
DIVISION OF OIL, GAS AND MINING

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK			5. Lease Designation and Serial No. FEE	
1 a. Type of Work <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> DEEPEN <input type="checkbox"/> PLUG BACK			6. If Indian, Allottee or Tribe Name NA	
b. Type of Well <input type="checkbox"/> Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other <input type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone			7. Unit Agreement Name NA	
2. Name of Operator UNION PACIFIC RESOURCES COMPANY			8. Farm or Lease Name Yellow Creek Deep	
3. Address of Operator P. O. Box 7 MS 3006 Fort Worth, Texas 76101-0007			9. Well Name 5-1	
4. Location of Well (Report location clearly and in accordance with any State requirements) At Surface (NENE) '1136' FNL, 1098' FEL Sec. 5, T5N-R8E, SLBM <i>336 336</i>			10. Field and Pool, or Wildcat Yellow Creek Deep	
At Proposed Producing Zone (NENE) 1100' FNL, 100' FEL Sec. 5, T5N-R8E, SLBM <i>336 31</i>			11. QQ, Sec., T., R., M., or Block and Survey or Area (NENE) Sec. 5, T5N-R8E	
14. Distance in miles and direction from nearest town or post office 25 miles southwest of Evanston, Wyoming			12. County or Parish Summit	13. State Utah
15. Distance from proposed location to nearest property or lease line, Ft. 1098' <small>(Also to nearest drilling line, if any)</small>		16. No. of acres in lease 642.84	17. No. of acres assigned to this well Hearing pending	
18. Distance from proposed location to nearest well, drilling, completed, or applied for, on this lease, Ft. NA		19. Proposed Depth 12,925' TVD	20. Rotary or cable tools Rotary	
21. Elevations (Show whether DP, RT., GR., etc.) 7195' MSL (GR); 7215' MSL (KB)			22. Approx. date work will start Upon Approval	
23 PROPOSED CASING AND CEMENTING PROGRAM				
Size of Hole	Size of Casing	Weight per Foot	Setting Depth	Quantity of Cement
26"	20	106.5	K-55 1500'	NA
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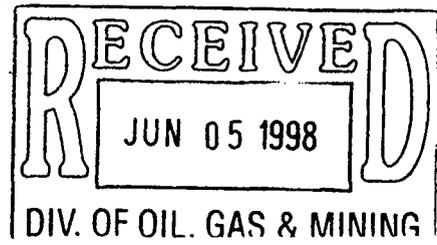
IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: if proposal is to deepen or plug back, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

24 I hereby certify that this report is true and complete to the best of my knowledge

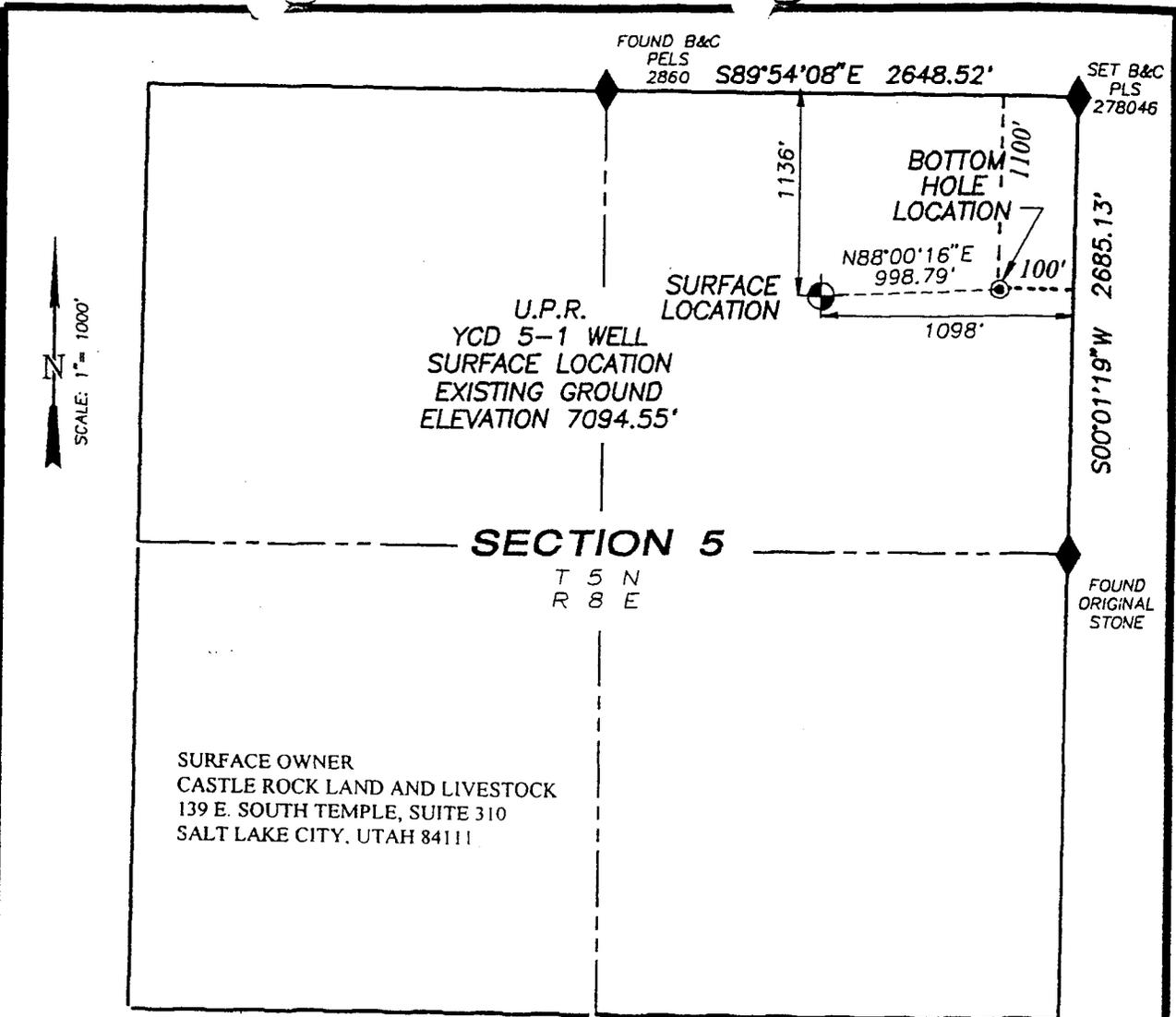
Signed: Dorothy Moravek *Dmoravek* Title: Regulatory Analyst Date: 6/3/98

API No. _____ Approval Date _____
Approved by _____ Title _____ Date _____

Conditions of approval, if any:
(3/89)



*495489.7
4560741.1*



LOCATION MAP

SURVEYED UNDER MY SUPERVISION
IN MAY 1998



**MAP to ACCOMPANY
APPLICATION for PERMIT to DRILL
U.P.R. YCD 5-1 WELL
1136' FNL 1098' FEL
SECTION 5, T5N, R8E, SLB&M
SUMMIT COUNTY, UTAH**

UINTA ENGINEERING & SURVEYING, INC.
808 MAIN STREET
EVANSTON, WYOMING 82930
(307) 789-3602

DATE: 03/09/98 JOB #: 98-26-03
DISK #: WELL10 FILE: 98-26-03
DRAWN BY: Travis Martinez

REVISED 5/12/98

GENERAL DRILLING PROCEDURE

1. Build location and construct access roads as per proposed survey plat information. Fence reserve pit on the 3 outside walls.
2. Drilling foreman to complete "Storm Water Pollution Prevention Plan" and submit a copy to the Fort Worth Office. Retain original on rig.
 - * Have dirt contractor sign "Table E-1" following the completion of location.
 - * Modify Exhibit "C3" to reflect diversion ditches.
 - * Maintain "Maintenance Inspection Report".
3. Set and cement 30" conductor at about 70' below ground level. **NOTIFY UTAH CONSERVATION DEPARTMENT 24 HOURS PRIOR TO SPUD.** Note on report person(s) contacted. Post copy of regulatory permit in the doghouse. Erect a state approved well location sign and move in gate guard.
4. Move in and rig up rotary tools. Report GL to KB measurement and conductor casing depth on PERC and IADC tour sheets. Have rig source water checked by cementing company for cement compatibility.
5. Spud well with a new 26" mill tooth bit and shock sub on a 60'/90' stabilized BHA utilizing 3 Pt near bit roller reamer for stabilization. Drill a 26" hole to surface casing depth at 1,500' using fresh water and gel/polymer sweeps. Run Totco surveys every 270' or less. Do not exceed 3° inclination. Circulate hole clean. Strap out of hole.
 - * Drill with a fresh water spud mud with high vis gel/lime sweeps as required to insure adequate hole cleaning. Maintain pump rates at +1,000 GPM if possible.
 - * Some offset wells experienced lost circulation in this interval. If needed sweep hole with high vis pill containing 30-40 ppb LCM. Fibrous material, mica, and sized Calcium Carbonate should be made available on location.
 - * Keep mud weight as low as possible by running all solids removal equipment, centrifuge and size screens on dual flowline cleaner's as tight as possible.
 - * Mud Weight: 8.6 - 8.8 ppg.
 - * Viscosity: 35 - 50 sec/qt. (higher if necessary)
 - * Fluid Loss: No Control
6. Rig up casing crew and run 20" 106.50# K-55, BTC surface casing. Casing is to have been previously cleaned, drifted, and strapped. Run casing as follows:
 - * 20" guide shoe
 - * 1 Joint 20" 106.50# K-55 BTC casing
 - * 20" float collar
 - * 20" 106.50# K-55 BTC casing to surface.
 - * Consider 5" DP inner string if tools available.

UPRC Y.C.D. 5-1
Yellow Creek Deep Field
Page 2

Thread-lok guide shoe and float collar. Strap weld float joint and tac weld guide shoe. Install one centralizer on the shoe joint and every 4th joint to surface. **Note: Coordinate casing and wellhead delivery from Fort Worth office.**

7. Circulate and condition mud for a minimum 1-1/2 casing volumes with rig pump. Rig up cementers and cement surface casing as ~~per attached procedure~~ using a top wooden plug only. Do not reciprocate pipe during job and displace with mud. Do not over displace. Notify Fort Worth office immediately if cement is not circulated to surface. If cement level should fall, perform a top out job with 1" work string to 80' KB with 150 sx Class G + 2% CaCl. ?
8. Wait on cement 6 hours. Rough and final cut 30" and 20" casing to accommodate 20" SOW with 36" OD baseplate x 1-1/2" thick w/4ribs 1-1/2" thick. Baseplate to set 2'-3' below ground level. Install FMC C-29-ET 20" SOW x 20-3/4" 3,000 flanged psi wellhead with a bullplug on one outlet and a S.E. 2-1/16" 3,000# W.P. trim R psi gate valve on the other outlet. Base plate should set squarely on 30" conductor. Pressure test weld to 600 psi. **Note: Use hot-head preheat to 400° F for 20" weld.**
9. Nipple up 20-3/4" 3M annular with 6" NCR diverter lines. Test lines, annular, and valve to 250 psi and 1,500 psi. Install FMC wear bushing (17-1/2" bits) in starting head. **Note: Notify State 24 hours prior to diverter test.**
10. Run in hole with 17-1/2" bit and slick BHA. Tag float collar and pressure test casing to 1475 psi using rig pump. Drill out float collar, shoe joint and 10' new formation.
11. Trip for 17-1/2" insert bit, shock sub, and 60/90 BHA (Monel bottomhole collar) stabilized with 3-pt near bit roller reamers. Drill ahead taking single shot surveys every 270' and on bit trips. Deviation not to exceed 3°. Should deviation approach 3°, begin taking surveys at shorter intervals and attempt to correct using less WOB or higher RPM, new bits, or alternate stabilization. If unable to control deviation, trip for a steerable mud motor and MWD. Drill out and dump all contaminated fluid. Drill with a low bentonite/polymer mud as per attached mud program. While drilling in the Preuss Salt, the chloride increase should be tolerated and no additional salt should be added to the mud. Top of Preuss is expected at 4,545' with top of salt zone at 5,700'. **Note: Have mud loggers rigged up and operational by 5,000'.**

to surface per R-649-3-8

Interval	MW	Vis	P.V.	Yld.Pt.	W.L.	PH
<u>TVD</u>	<u>(Ppg)</u>	<u>(sec)</u>	<u>(cps)</u>	<u>(#/100sf)</u>	<u>(cc)</u>	<u></u>
1,200-6,150	8.6-8.8	35-45	8-10	10-12	10-15	8.5-9.0

- * Maintain sufficient supplies of LCM material on location. If needed sweep hole with high vis pill containing 20-25 ppb fibrous LCM.
- * Sized Calcium Carbonate may also be used in sweeps (80 Bbls, 30-50 ppb) to reduce the fluid loss to permeable zones.

UPRC Y.C.D. 5-1
Yellow Creek Deep Field
Page 3

- * Discontinue use of PHPA polymer while drilling in salt section. Use yellow/white starch to control fluid loss.
 - * Keep mud weight as low as possible by running all available solids removal equipment. Size screens as necessary for fine cut.
 - * Ensure rig crews are familiar with well control procedures. Run BOP drills (diverter) weekly and note on IADC/Morning Reports.
 - * Only 10-20' of pure salt is expected at this well location. Short trip at 12-18 hour intervals (as necessary) if salt flow or tite hole is experienced drilling this lower section.
 - * Prehydrate fresh gel in mud system if necessary.
12. At casing point, (6,150' TVD, or $\pm 100'$ into top of Twin Creek) pump gel/polymer pill and circulate the hole clean. Make wiper trip to surface casing shoe. Circulate bottoms up. Run Multishot gyro survey (if necessary) tool from TD to surface. Pull out of hole SLM to run pipe. Retrieve wear bushing.
13. Rig up casing crew. Casing is to have been previously cleaned, drifted, and strapped. Run casing as follows:
- * 13-5/8" differential fill float shoe
 - * 2 joints 13-5/8" 88.2 ppf HCL-80 BTC casing
 - * 13-5/8" differential fill float collar
 - * 13-5/8" 88.2 ppf HCL-80 BTC casing to $\pm 5,350'$ (800' of pipe)
 - * 13-3/8" 72# ppf L-80 BTC casing to surface
 - * Thread-lok shoe and collar. Install centralizers on 2-joint shoe joint. One centralizer should be placed against float shoe with a stop ring and one placed in the middle of the float joint with stop rings on either side. Run one centralizer per joint for the next four joints. Run two centralizers per joint thru the gross salt interval and thereafter every 4 joints into the 20" casing.
14. Circulate and condition mud for a minimum of 1-1/2 casing volumes with rig pump. Cement 13-3/8" x 13-5/8" casing as per attached cement program using a top and bottom plug. With 2-3 bbls cement left in tub, drop top plug. Pump last 2-3 bbls cement and displace with water. Cement volume is designed to bring cement to 3,000' with 100% excess.
15. Pick up and lay out 20-3/4" annular. Remove 6" diverter lines and HCR. Set full buoyed string weight of 13-3/8" casing on FMC C-29 casing hanger. **Record buoyant weight of 13-3/8" casing.** Rig up cementers on casing head valve. Establish injection rate into 20"x13-3/8" annulus. Squeeze annulus with 500sx cement and displace cement 100' below GL. Cut casing and install FMC C-29-ET 20-3/4" 3000 psi x 13-5/8" 5,000 psi wellhead. Pressure test void to 1,000 psi (for 15 minutes using FMC). Nipple up 13-5/8" 5,000 psi BOP's; test rams and manifold to 250 and 5,000 psi; annular to 250 and 1,500 psi. **Notify Utah State Agency 24 hours prior to BOP test.**

**UPRC Y.C.D. 5-1
Yellow Creek Deep Field
Page 4**

16. Install wear bushing and run in hole with 12-1/4" insert bit, shock sub, monel DC, and 60/90 BHA stabilized with 3-pt near bit roller reamers. Pressure test casing to 1500 psi for 30 minutes. Drill out float collar, shoe joint and float shoe.
17. Drill ahead taking single shot directional surveys every 180' and on bit trips. Drill ahead with fresh water using gel sweeps for hole cleaning as long as hole conditions allow (top of Ankareh). At +/- 8,800', convert to a low bentonite/polymer mud system as per attached mud program. Inspect all BHA components including HW drill pipe every 200 rotating hours.

NOTE: The H₂S safety procedures defined in the attached H₂S Contingency Plan will be adhered to at all times. Rig up H₂S safety equipment and train all personnel in H₂S safety practices prior to reaching 11,000' TVD (1,000' above the Phosphoria Formation).

NOTE: Offset well data and indicated structure assumes a natural walk tendency to the east. The well will be allowed to follow this tendency with a planned bottom hole displacement of +/- 1,000' to the east'. Directional surveys will be monitored closely . Should the walk tendency be in the wrong direction, or off line, the well will be drilled with directional tools easterly to a terminus at 1,100' FNL and 100' FEL of Section 5 at -5,800' SS.

NOTE: The Twin Creek and Nugget formations may be pressure depleted (fractured) at this location. Mud weight must be kept to a minimum while drilling this interval to minimize lost circulation. We will attempt to drill to TD without setting an intermediate casing string. However, if losses are severe and the hole cannot be stabilized a 9-5/8" intermediate casing will be set to protect the loss zones. If losses can be controlled the hole size will be downsized to 9-7/8" into the Ankareh section.

Interval TVD	MW (Ppg)	Vis (sec)	P.V. (cps)	Yld.Pt. (#/100sf)	W.L. (cc)	PH
6,150-8,800	Fresh Water					
8,800-TD	8.6-8.8	27-45	8-10	16-20	10-12	8.5-11.0

- * Drill as deep as hole conditions will allow with fresh water to maximize penetration rate. Pump Gel/polymer sweeps as necessary for hole cleaning.
- * The Twin Creek and Nugget intervals may be pressure depleted. Calcium Carbonate sweeps may be used seal off seepage losses and prevent tight hole and stuck pipe.
- * Maintain sufficient supplies of LCM material on location. If needed sweep hole with high vis pill containing 20-25 ppb of various size LCM. Liquid casing has been used with success in this interval.

specs

UPRC Y.C.D. 5-1
Yellow Creek Deep Field
Page 5

- * At the top of the Ankareh, or sooner if hole conditions dictate, convert to a low bentonite/polymer system as per mud program. Add 6-10 ppb high yield gel, .15 ppb Pac to lower fluid loss and .25-.5 ppb PHPA polymer to help stabilize shale sections in the Ankareh.
 - * Gas may be encountered in the Ankareh and below. Increases in connection and/or trip gas should be tested for the presence of H₂S. If needed treat fluid with 1-2 ppb Zinc Carbonate (1-2 ppb will control 800-1000 ppm H₂S) and raise PH to 11.0.
 - * The Phosphoria is known to contain H₂S and CO₂. Pretreat system with 2 ppb zinc carbonate and increase PH to 11 prior to drilling the Phosphoria. Discontinue additions of PHPA polymer when PH is increased. Test drilling mud for residual zinc at regular intervals to help maintain safe concentration of the material.
 - * A Garret Gas Train will be used for chemical analysis of the fluid to determine H₂S and CO₂ content.
 - * Treat Anhydrite contamination with soda ash and control rheology with polymer thinners and Desco-CF.
 - * Use lime to control fluid alkalinities.
 - * Keep mud weight as low as possible by running all solids removal equipment.
 - * Maintain sufficient barite on location to raise MW to 10.0 ppg if necessary.
 - * Ensure rig crews are familiar with H₂S safety and well control procedures. Run BOP drills weekly and note on IADC/Morning Reports and in PERC system.
18. Continue drilling to Total Depth at 13,000' MD / 12,925' TVD. Pump sweep and circulate bottoms up. Short trip to 13-3/8" intermediate casing. Circulate bottoms up. Drop multishot directional survey if no full record from MWD. Pull out of hole to run logs.
19. Rig up wireline services. Rig up lubricator if hole conditions warrant. Run the following logs:
- * DIL/Sonic/GR : TD to 13-3/8" shoe.
 - * LDT/CNL/GR : TD to 13-3/8" shoe.
 - * FMI-Dipmeter : TD to 13-3/8" shoe.
 - * No tool insurance required.
 - * Fax logs in to Ft. Worth as soon as possible.
 - * Record Loggers' TD on IADC tour sheet.
20. If commercial pay exists, install 7" casing rams in top BOP and test bonnet door to 1,000 psi. Make a conditioning trip to TD. Circulate and condition hole for casing. Pull out of hole standing pipe in derrick. Lay down BHA, Retrieve wear bushing.

UPRC Y.C.D. 5-1
Yellow Creek Deep Field
Page 6

21. Rig up casing crew. Casing is to have been previously cleaned, drifted, and strapped. Run casing as follows:
 - * 7" differential fill float shoe
 - * 2 joints 7" 32.0 ppf L-80 AB Modified casing
 - * 7" differential fill float collar
 - * 7" 32.0 ppf L-80 AB Modified to $\pm 3500'$
 - * 7" AB Modified Pin X 7-5/8" SLX Box XO'
 - * 7-5/8" 39 ppf L-80 SLX to surface
 - * Thread-lok bottom three joints to include float equipment. Centralization to be determined based upon pay intervals.

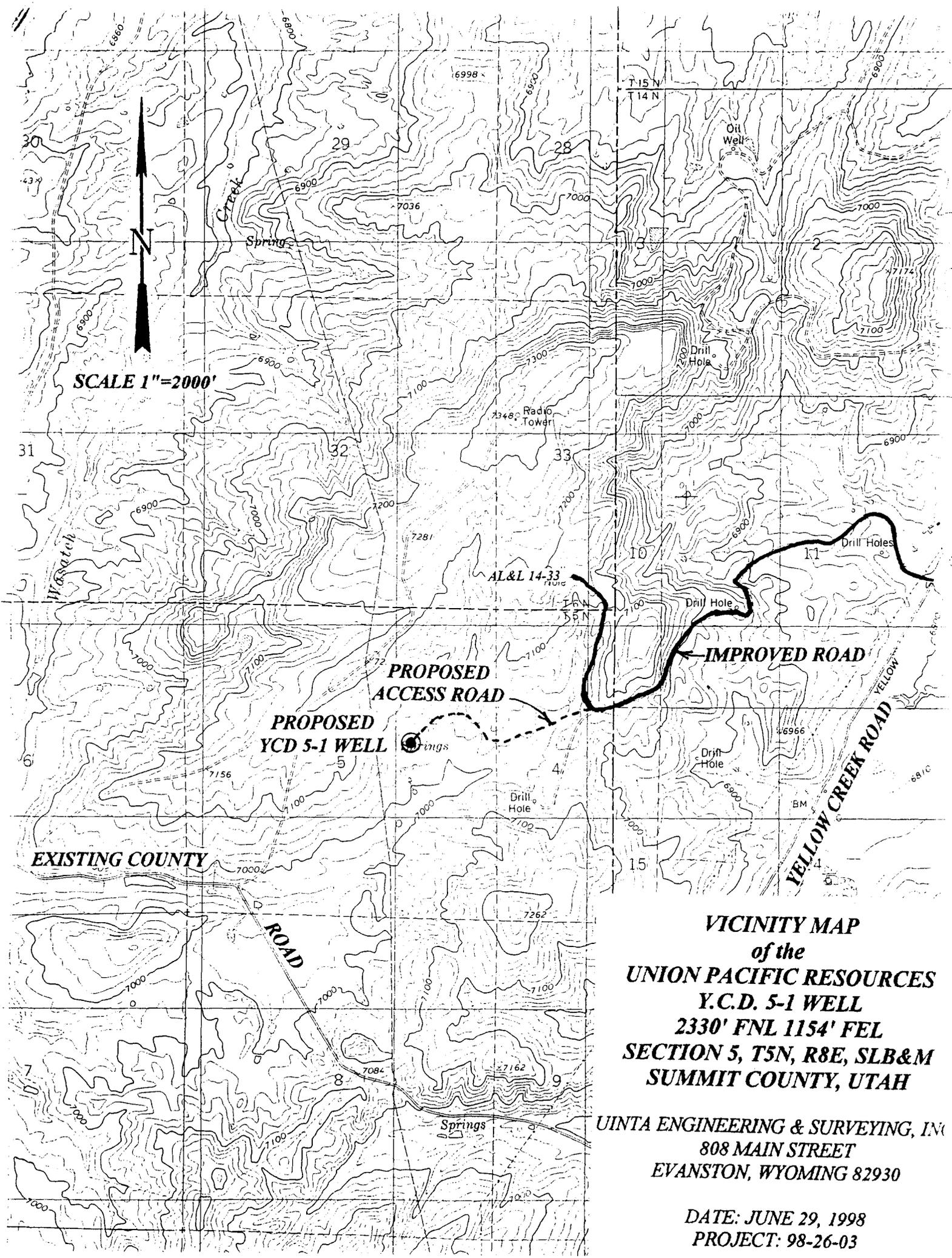
22. Circulate and condition mud for a minimum of 1-1/2 casing volumes with rig pump. Cement casing as per attached program using a top and bottom plug (7"). Displace cement with fresh water and bump plug. Do not over displace.

23. Wait on cement a total of 8 hours prior to nipping down BOP's.

24. Nipple down BOP's and set 7-5/8" FMC casing slips with pipe in full tension. Machine 7-5/8" cutoff for metal-to-metal tubing head installation.

25. Lay down drill pipe and prepare to complete well with drilling rig.

26. Completion procedure to follow.



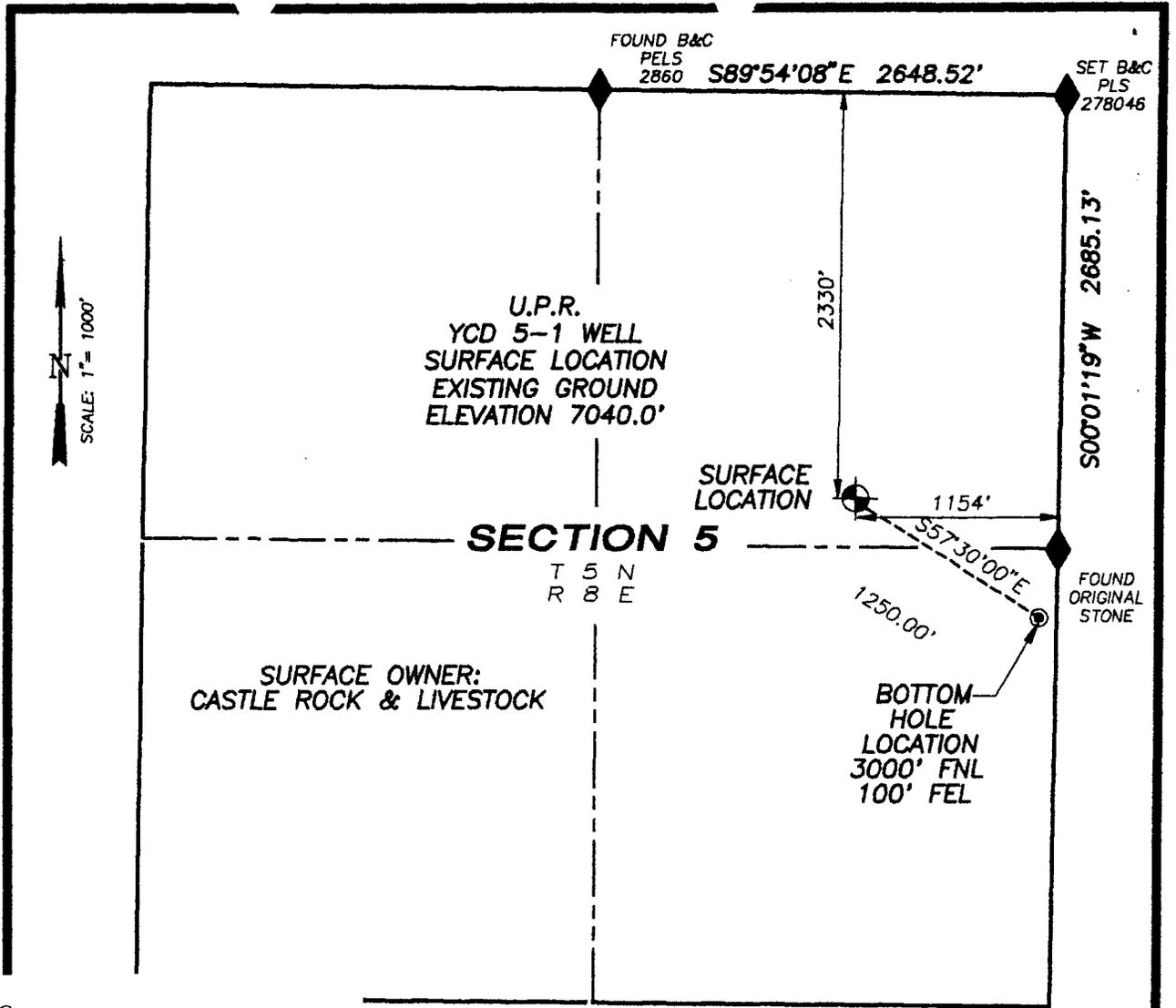
SCALE 1"=2000'



**VICINITY MAP
of the
UNION PACIFIC RESOURCES
Y.C.D. 5-1 WELL
2330' FNL 1154' FEL
SECTION 5, T5N, R8E, SLB&M
SUMMIT COUNTY, UTAH**

**UINTA ENGINEERING & SURVEYING, INC
808 MAIN STREET
EVANSTON, WYOMING 82930**

**DATE: JUNE 29, 1998
PROJECT: 98-26-03**



Union Pacific Resources Company

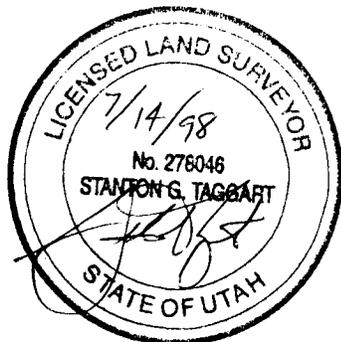
Lyle E. Woelich
Drilling Operations
Supervisor

2515 Foothill Blvd.
Suite 300
Rock Springs, WY 82901
(307) 352-6024 (307) 352-6071 fax
(307) 389-5231 cellular



LOCATION MAP

PERVISION



**MAP to ACCOMPANY
APPLICATION for PERMIT to DRILL
U.P.R. YCD 5-1 WELL
2330' FNL 1154' FEL
SECTION 5, T5N, R8E, SLB&M
SUMMIT COUNTY, UTAH**

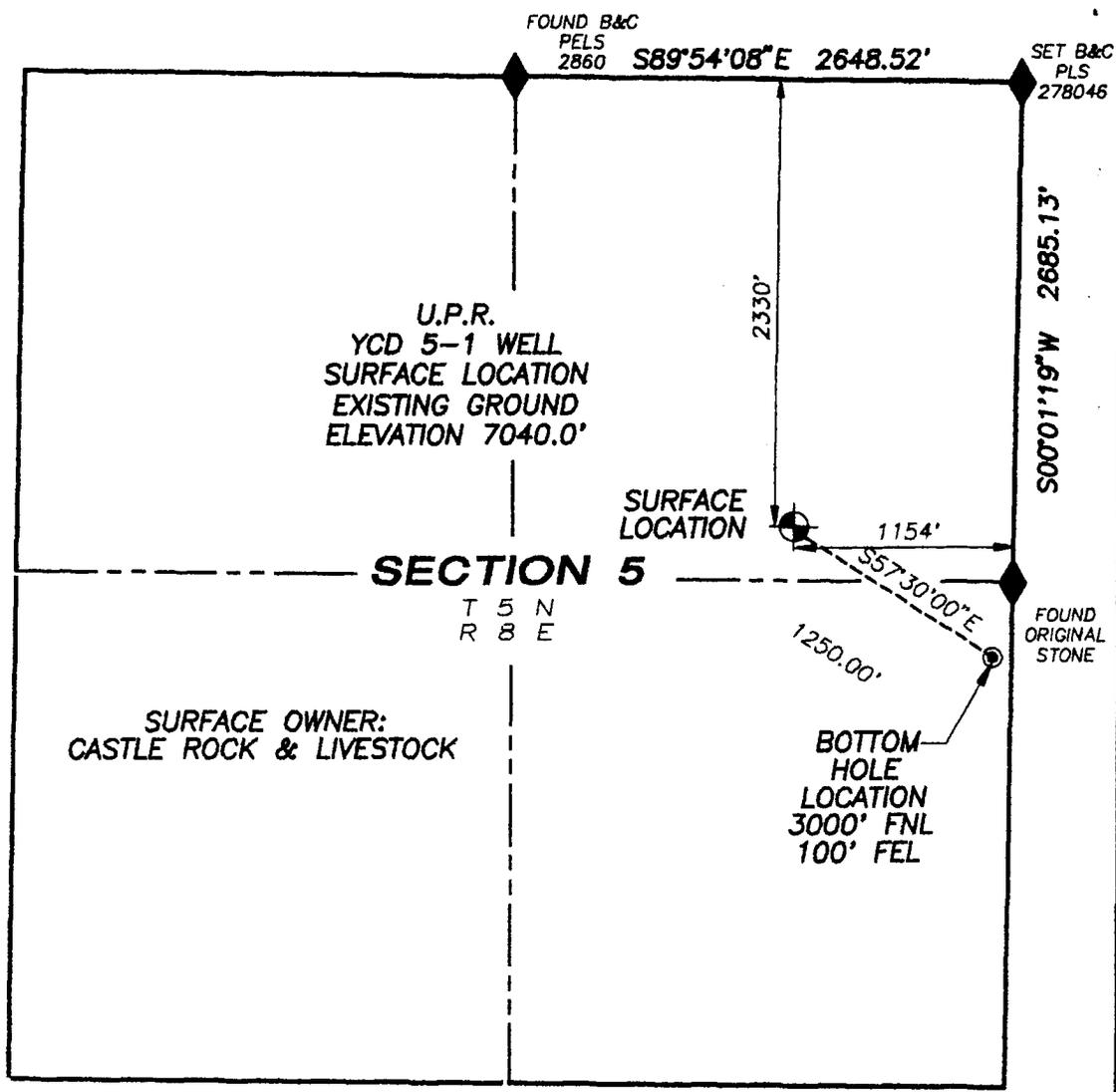
UINTA ENGINEERING & SURVEYING, INC.
808 MAIN STREET
EVANSTON, WYOMING 82930
(307) 789-3602

DATE: 08/29/98 JOB #: 98-26-03
DISK #: WELL10 FILE: 98-26-03

REVISED: 07/02/98

DRAWN BY: Travis Martinez

SHEET 1 OF 4



LOCATION MAP

SURVEYED UNDER MY SUPERVISION
ON JUNE 26, 1998



MAP to ACCOMPANY
APPLICATION for PERMIT to DRILL
U.P.R. YCD 5-1 WELL
2330' FNL 1154' FEL
SECTION 5, T5N, R8E, SLB&M
SUMMIT COUNTY, UTAH

UINTA ENGINEERING & SURVEYING, INC.
 808 MAIN STREET
 EVANSTON, WYOMING 82930
 (307) 789-3602

DATE: 08/29/98 JOB #: 98-26-03
 DISK #: WELL10 FILE: 98-26-03

REVISED: 07/02/98

DRAWN BY: Travis Martinez

SHEET 1 OF 4

WORKSHEET
APPLICATION FOR PERMIT TO DRILL

APD RECEIVED: 06/05/98

API NO. ASSIGNED: 43-043-30319

WELL NAME: YELLOW CREEK DEEP 5-1
 OPERATOR: UNION PACIFIC RESOURCES (N9465)
 CONTACT: Dorothy Morevek (817) 877-6739

PROPOSED LOCATION:
 SENE 05 - T05N - R08E
 SURFACE: 2330-FNL-1154-FEL
 BOTTOM: 3000-FNL-0100-FEL
 SUMMIT COUNTY
 WILDCAT FIELD (001)

INSPECT LOCATION BY: 07/30/98		
TECH REVIEW	Initials	Date
Engineering	RJK	8-31-98**
Geology		
Surface		

LEASE TYPE: FEE
 LEASE NUMBER:
 SURFACE OWNER: Fee

PROPOSED FORMATION: WEBR

RECEIVED AND/OR REVIEWED:

Plat
 Bond: Federal[] State[] Fee M
 (No. #2447222)
 Potash (Y/N)
 Oil Shale (Y/N) *190-5(B)
 Water Permit
 (No. W-48212 / Delbo)
 RDCC Review (Y/N)
 (Date: Dec 14 - 1-22-98 / Comments due 7-14-98)
 St/Fee Surf Agreement (Y/N)

LOCATION AND SITING:

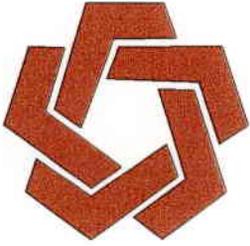
R649-2-3. Unit _____
 R649-3-2. General
 R649-3-3. Exception
 Drilling Unit
 Board Cause No: 189-1 189-1C
 Date: 11-19-80

COMMENTS: * Board Hearing scheduled for 7/98 "Except. Loc. to 189-1"
* Need Presite. (Conducted 8-4-98)
** Revised Drilling Program dated 8-20-98, Recd. 8-26-98. (RJK)

STIPULATIONS: ** Engineering - None

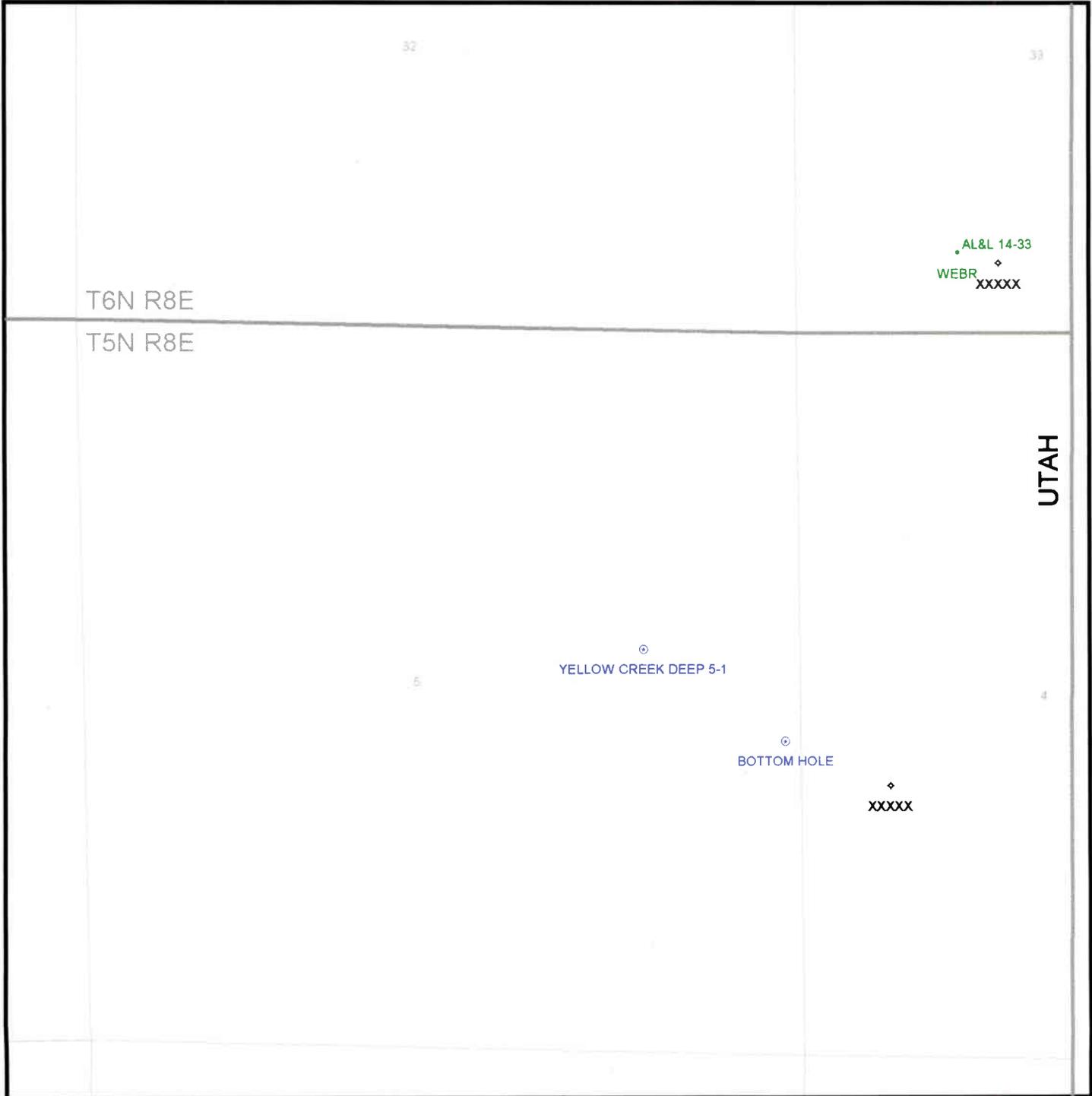
① STATEMENT OF BASIS

② DIRECTIONAL DRILLING



DIVISION OF OIL, GAS & MINING

OPERATOR: UNION PACIFIC RESOURCES (N9465)
FIELD: WILDCAT (001)
SEC. 5, TWP 5N, RNG 8E
COUNTY: SUMMIT UAC: R649-3-3



DATE PREPARED:
17-JULY-1998

DIVISION OF OIL, GAS AND MINING
APPLICATION FOR PERMIT TO DRILL
STATEMENT OF BASIS

Operator Name: Union Pacific Company

Name & Number: Yellow Creek Deep #1-5

API Number: 43-043-30319

Location: 1/4, 1/4 SE NE Sec. 5 T. 5 N R. 8 E

Geology/Ground Water:

The surface casing proposed for this well will be sufficient to provide protection to the near surface waters found in this area. It is an area of recharge to local aquifers and is a watershed area. Two active springs within 150 & 500' of location will need special consideration at the time of construction. Should spring water be encountered while building location or digging the pit a system will need to be provided to keep the location dry and water from entering the pit. There will be a 15-20 foot buffer between the location and a minor drainage that will act as a sedimentation barrier to the drainage.

Reviewer: K. Michael Hebertson

Date: 12-Aug-1998

Surface:

The pre-site was attended by a UPRC representative and a Dogm representative, however the surface representative was contacted a week prior and the night prior, but elected not to attend. He knew the time and place. It was discovered that after the location was moved that the new plats, location layout, and cut and fill diagrams were not sent. A new set was provided at the time of the inspection. Two active springs were discussed at the time of the inspection and UPRC said that they would probably dig a trench prior to building location in order to see if any water ran into it. Reseeding of the top soil and spoil piles was discussed. UPRC is finalizing the escape road to the location with the surface owner and will send confirmation of the final agreement when it is completed. It is possible that Anschutz will actually drill the well and Lyle was not sure that the details of the agreement with Anschutz had been worked out yet. He said that UPRC did not have the well budgeted for this year or next.

Reviewer: K. Michael Hebertson

Date: 12-Aug-1998

Conditions of Approval/Application for Permit to Drill:

1. The pit will be lined with a minimum 12 MIL liner
2. If water is encountered during construction DOGM will be contacted.
3. The location will be bermed on the fill slopes to prevent sediment and runoff from reaching the drainages.

Well name:	Yellow Creek Deep 5-1		
Operator:	UPRC	Project ID:	43-043-30319
String type:	Surface		
Location:	Summit County, Utah		

Design parameters:

Collapse
Mud weight: 8.800 ppg
Design is based on evacuated pipe.

Minimum design factors:

Collapse:
Design factor 1.125

Burst:
Design factor 1.00

Environment:

H2S considered? No
Surface temperature: 75 °F
Bottom hole temperature: 96 °F
Temperature gradient: 1.40 °F/100ft
Minimum section length: 1,500 ft

Cement top: 0 ft

Burst

Max anticipated surface pressure: 0 psi
Internal gradient: 0.468 psi/ft
Calculated BHP 701 psi

No backup mud specified.

Tension:
8 Round STC: 1.80 (J)
8 Round LTC: 1.80 (J)
Buttress: 1.60 (J)
Premium: 1.50 (J)
Body yield: 1.50 (B)

Tension is based on buoyed weight.
Neutral point: 1,303 ft

Non-directional string.

Re subsequent strings:

Next setting depth: 7,500 ft
Next mud weight: 9.000 ppg
Next setting BHP: 3,506 psi
Fracture mud wt: 19.250 ppg
Fracture depth: 7,500 ft
Injection pressure 7,500 psi

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Internal Capacity (ft³)
1	1500	20	106.50	K-55	Buttress	1500	1500	18.875	319

Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (Kips)	Tension Strength (Kips)	Tension Design Factor
1	686	770	1.12	701	2410	3.44	139	1683	12.13 J

Prepared by: RJK
Department of Natural Resources

Phone: (801) 538-5274
FAX: (801) 359-3940

Date: August 31, 1998
State of Utah

STIPULATIONS: None
Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

Engineering responsibility for use of this design will be that of the purchaser.

Well name:	Yellow Creek Deep 5-1	
Operator:	UPRC	Project ID:
String type:	Intermediate	43-043-30319
Location:	Summit County, Utah	

Design parameters:

Collapse

Mud weight: 8.800 ppg
 Design is based on evacuated pipe.

Minimum design factors:

Collapse:

Design factor 1.125

Burst:

Design factor 1.00

Environment:

H2S considered? No
 Surface temperature: 75 °F
 Bottom hole temperature: 161 °F
 Temperature gradient: 1.40 °F/100ft
 Minimum section length: 1,500 ft

Cement top: Surface

Burst

Max anticipated surface pressure: 0 psi
 Internal gradient: 0.468 psi/ft
 Calculated BHP 2,875 psi

No backup mud specified.

Tension:

8 Round STC: 1.80 (J)
 8 Round LTC: 1.80 (J)
 Buttress: 1.60 (J)
 Premium: 1.50 (J)
 Body yield: 1.50 (B)

Tension is based on buoyed weight.
 Neutral point: 5,339 ft

Non-directional string.

Re subsequent strings:

Next setting depth: 7,500 ft
 Next mud weight: 9.000 ppg
 Next setting BHP: 3,506 psi
 Fracture mud wt: 19.250 ppg
 Fracture depth: 7,500 ft
 Injection pressure 7,500 psi

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Internal Capacity (ft³)
1	6150	13.375	72.00	L-80	Buttress	6150	6150	12.25	887
Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (Kips)	Tension Strength (Kips)	Tension Design Factor
1	2811	2670	0.95	2875	5380	1.87	384	1650	4.29 J

for 6150'
 OK to design depth to 5350'

Prepared by: RJK
 Department of Natural Resources

Phone: (801) 538-5274
 FAX: (801) 359-3940

Date: August 31, 1998
 State of Utah

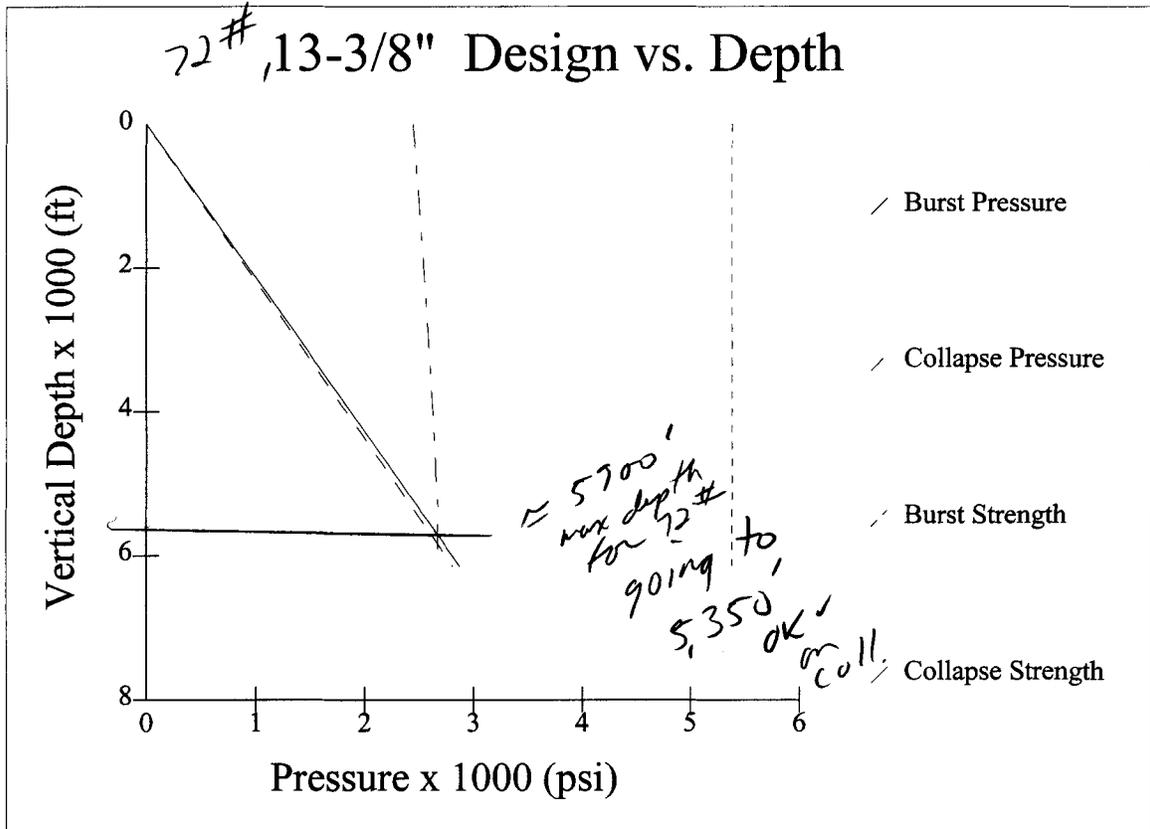
STIPULATIONS: None

Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

Engineering responsibility for use of this design will be that of the purchaser.

Yellow Creek Deep 5-1 - Intermediate



Well name:	Yellow Creek Deep 5-1		
Operator:	UPRC	Project ID:	43-043-30319
String type:	Intermediate		
Location:	Summit County, Utah		

Design parameters:

Collapse
Mud weight: 8.800 ppg
Design is based on evacuated pipe.

Minimum design factors:

Collapse:
Design factor 1.125

Burst:
Design factor 1.00

Environment:

H2S considered? No
Surface temperature: 75 °F
Bottom hole temperature: 161 °F
Temperature gradient: 1.40 °F/100ft
Minimum section length: 1,500 ft

Cement top: Surface

Burst

Max anticipated surface pressure: 0 psi
Internal gradient: 0.468 psi/ft
Calculated BHP 2,875 psi

No backup mud specified.

Tension:
8 Round STC: 1.80 (J)
8 Round LTC: 1.80 (J)
Buttress: 1.60 (J)
Premium: 1.50 (J)
Body yield: 1.50 (B)

Tension is based on buoyed weight.
Neutral point: 5,336 ft

Non-directional string.

Re subsequent strings:

Next setting depth: 7,500 ft
Next mud weight: 9.000 ppg
Next setting BHP: 3,506 psi
Fracture mud wt: 19.250 ppg
Fracture depth: 7,500 ft
Injection pressure 7,500 psi

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Internal Capacity (ft³)
1	6150	13.625	88.20	HCL-80	Buttress	6150	6150	12.25	1090.1

Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (Kips)	Tension Strength (Kips)	Tension Design Factor
1	2811	5930	2.11	2875	6420	2.23	471	1801	3.83 J

Prepared by: RJK
Department of Natural Resources

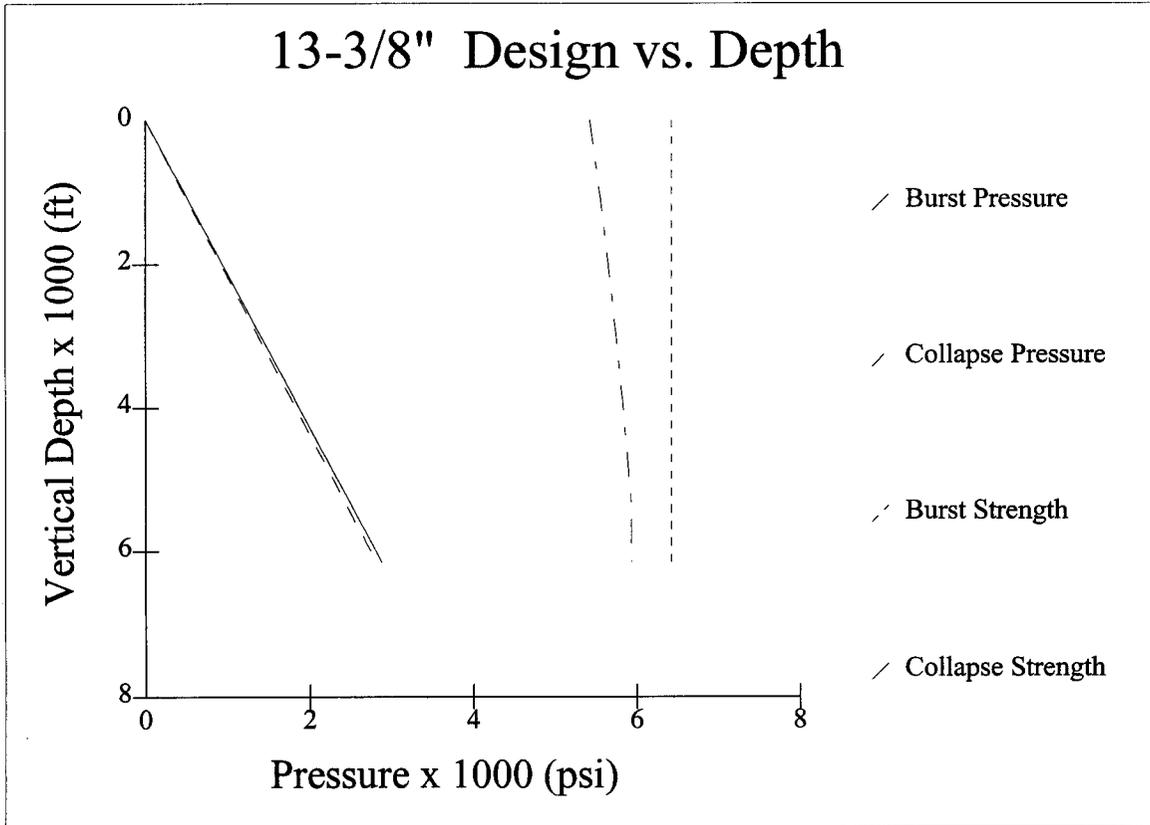
Phone: (801) 538-5274
FAX: (801) 359-3940

Date: August 31, 1998
State of Utah

STIPULATIONS: None
Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.
Burst strength is not adjusted for tension.

Engineering responsibility for use of this design will be that of the purchaser.

Yellow Creek Deep 5-1 - Intermediate



Well name:	Yellow Creek Deep 5-1	
Operator:	UPRC	Project ID:
String type:	Production	43-043-30319
Location:	Summit County, Utah	

Design parameters:
Collapse
Mud weight: 8.800 ppg
Design is based on evacuated pipe.

Minimum design factors:
Collapse:
Design factor 1.125

Environment:
H2S considered? No
Surface temperature: 75 °F
Bottom hole temperature: 257 °F
Temperature gradient: 1.40 °F/100ft
Minimum section length: 1,500 ft

Burst
Max anticipated surface pressure: -135 psi
Internal gradient: 0.468 psi/ft
Calculated BHP: 5,943 psi
No backup mud specified.

Burst:
Design factor 1.00
Tension:
8 Round STC: 1.80 (J)
8 Round LTC: 1.80 (J)
Buttress: 1.60 (J)
Premium: 1.50 (J)
Body yield: 1.50 (B)

Cement top: 8,522 ft
Non-directional string.

Tension is based on buoyed weight.
Neutral point: 11,270 ft

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Internal Capacity (ft³)
1	13000	7	32.00	L-80	Buttress	13000	13000	6	841.1

Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (Kips)	Tension Strength (Kips)	Tension Design Factor
1	5943	8610	1.45	5943	8460	1.42	361	745	2.07 B

Prepared by: RJK
Department of Natural Resources

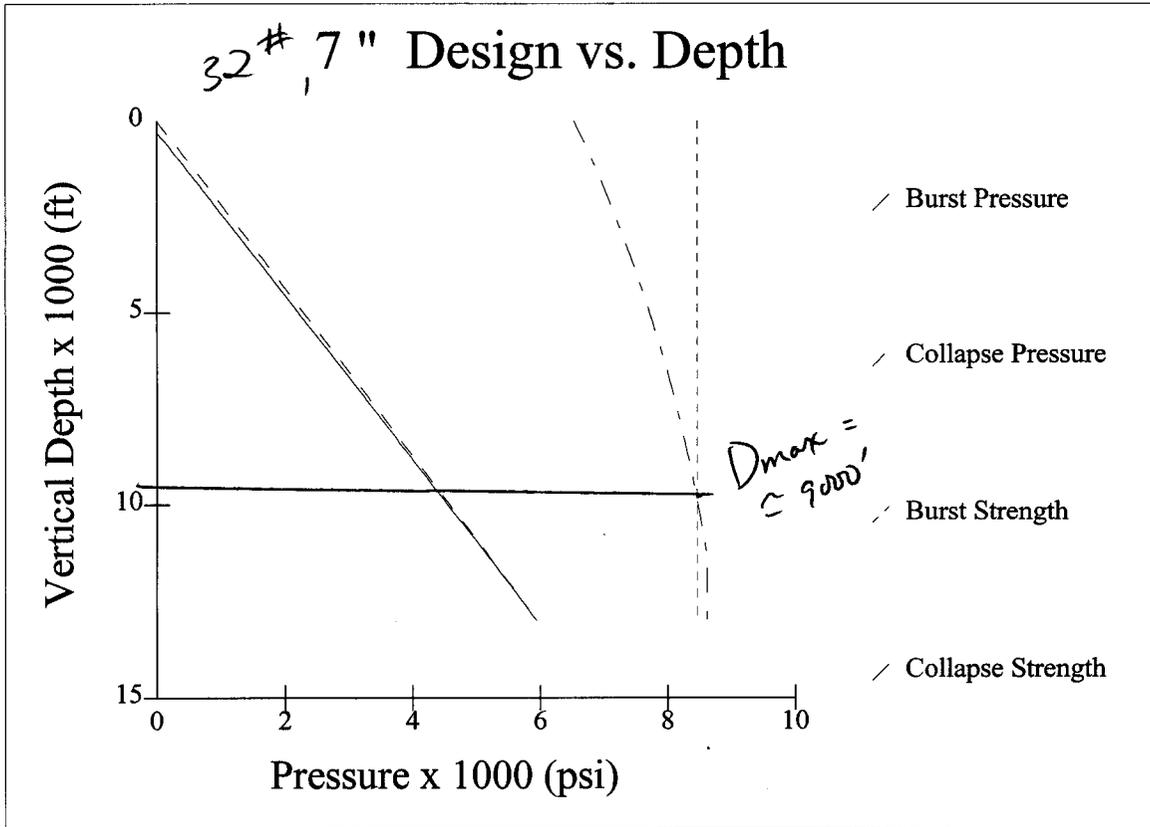
Phone: (801) 538-5274
FAX: (801) 359-3940

Date: August 31, 1998
State of Utah

STIPULATIONS: None
Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.
Burst strength is not adjusted for tension.

Engineering responsibility for use of this design will be that of the purchaser.

Yellow Creek Deep 5-1 - Production



Well name:	Yellow Creek Deep 5-1		
Operator:	UPRC	Project ID:	43-043-30319
String type:	Production		
Location:	Summit County, Utah		

Design parameters:

Collapse

Mud weight: 8.800 ppg
 Design is based on evacuated pipe.

Burst

Max anticipated surface pressure: -135 psi
 Internal gradient: 0.468 psi/ft
 Calculated BHP: 5,943 psi

No backup mud specified.

Minimum design factors:

Collapse:

Design factor: 1.125

Burst:

Design factor: 1.00

Tension:

8 Round STC: 1.80 (J)
 8 Round LTC: 1.80 (J)
 Buttress: 1.60 (J)
 Premium: 1.50 (J)
 Body yield: 1.50 (B)

Tension is based on buoyed weight.
 Neutral point: 11,295 ft

Environment:

H2S considered? No
 Surface temperature: 75 °F
 Bottom hole temperature: 257 °F
 Temperature gradient: 1.40 °F/100ft
 Minimum section length: 1,500 ft

Cement top: 8,522 ft

Non-directional string.

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Internal Capacity (ft³)
1	13000	7.625	39.00	L-80	SuPreme LX	13000	13000	6.5	1010.4

Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (Kips)	Tension Strength (Kips)	Tension Design Factor
1	5943	8820	1.48	5943	9180	1.54	440	794	1.80 J

Prepared by: RJK
 Department of Natural Resources

Phone: (801) 538-5274
 FAX: (801) 359-3940

Date: August 31, 1998
 State of Utah

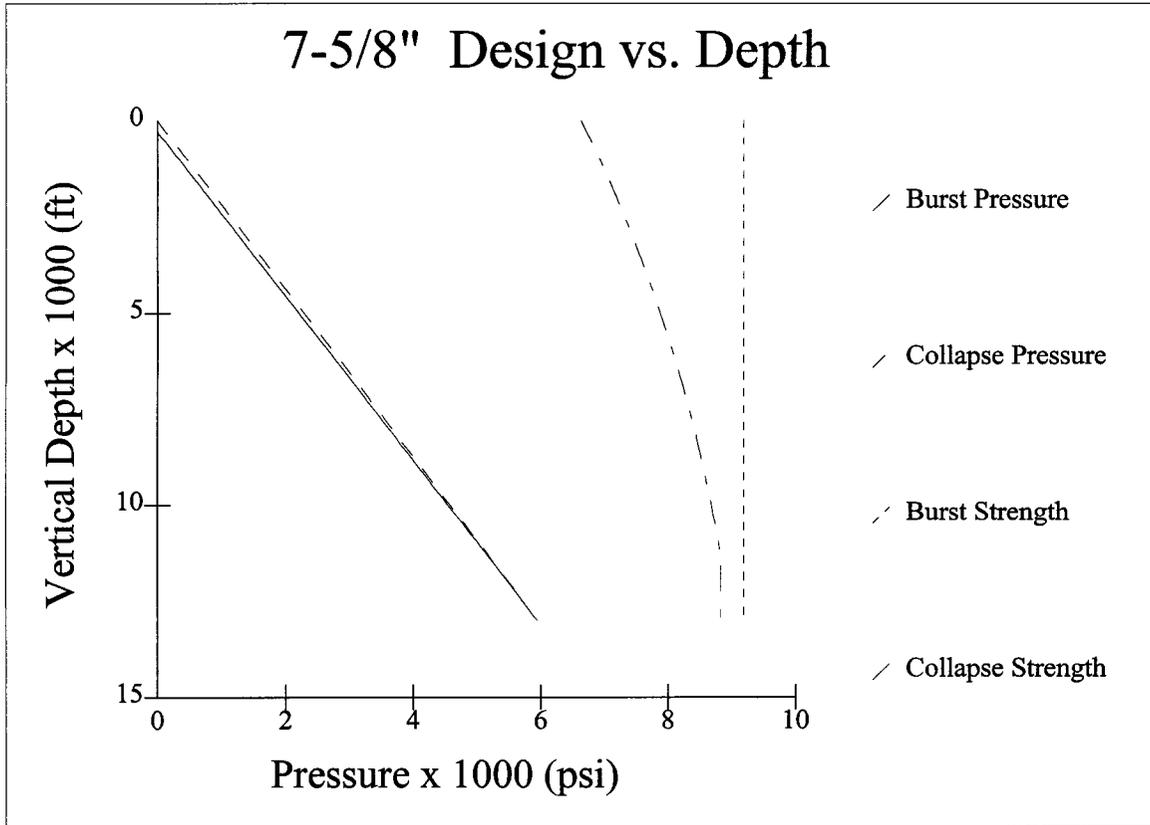
STIPULATIONS: None

Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

Engineering responsibility for use of this design will be that of the purchaser.

Yellow Creek Deep 5-1 - Production



Well name:	Yellow Creek Deep 5-1		
Operator:	UPRC	Project ID:	43-043-30319
String type:	Liner: Production		
Location:	Summit County, Utah		

Design parameters:

Collapse

Mud weight: 8.800 ppg
 Design is based on evacuated pipe.

Minimum design factors:

Collapse:

Design factor 1.125

Burst:

Design factor 1.00

Environment:

H2S considered? No
 Surface temperature: 75 °F
 Bottom hole temperature: 198 °F
 Temperature gradient: 1.40 °F/100ft
 Minimum section length: 1,500 ft

Cement top: 5,023 ft

Liner top: 6,000 ft
 Non-directional string.

Burst

Max anticipated surface pressure: -91 psi
 Internal gradient: 0.468 psi/ft
 Calculated BHP 4,023 psi

No backup mud specified.

Tension:

8 Round STC: 1.80 (J)
 8 Round LTC: 1.80 (J)
 Buttress: 1.60 (J)
 Premium: 1.50 (J)
 Body yield: 1.50 (B)

Tension is based on buoyed weight.
 Neutral point: 8,430 ft

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Internal Capacity (ft³)
1	2800	9.625	47.00	L-80	Buttress	8800	8800	8.625	263.9

Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (Kips)	Tension Strength (Kips)	Tension Design Factor
1	4023	4760	1.18	4023	6870	1.71	114	1086	9.51 B

Prepared by: RJK
 Department of Natural Resources

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 FAX: (801) 359-3940

Date: August 31, 1998
 State of Utah

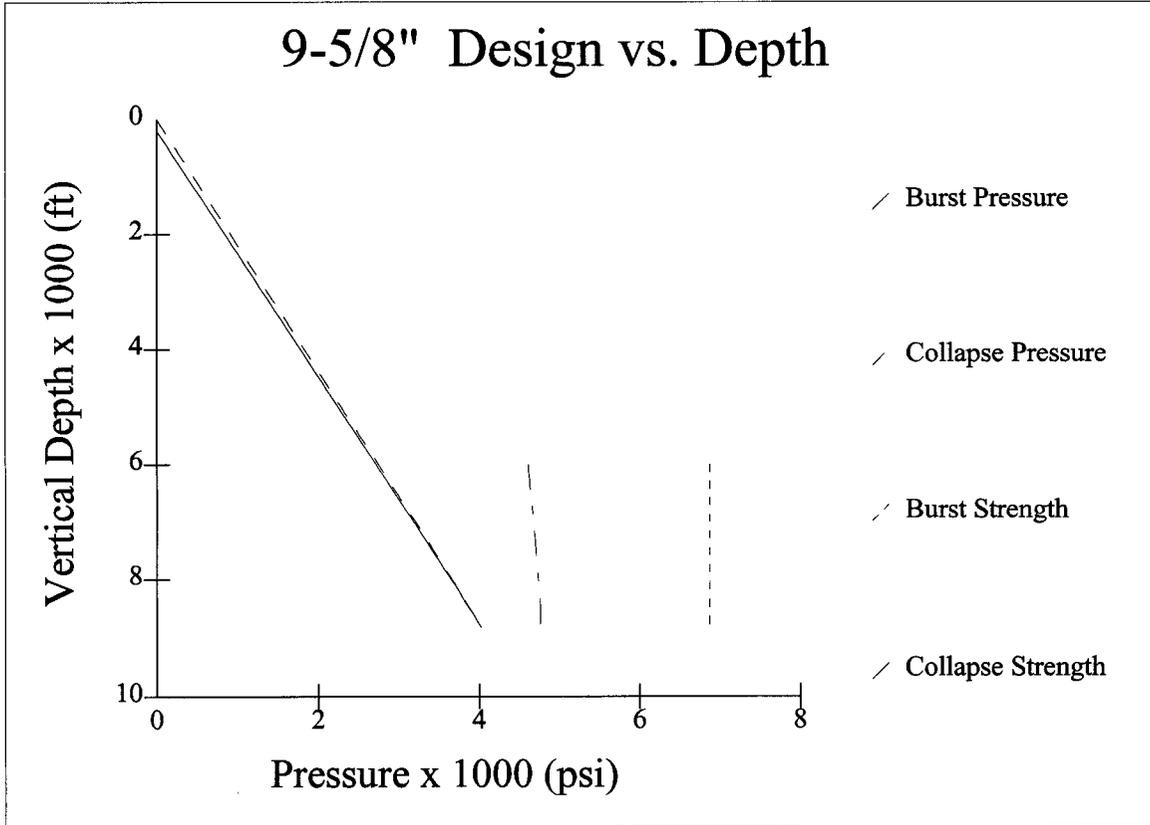
STIPULATIONS: None

Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

Engineering responsibility for use of this design will be that of the purchaser.

Yellow Creek Deep 5-1 - Liner: Production



Well name:	Yellow Creek Deep 5-1	
Operator:	UPRC	Project ID:
String type:	Liner: Production	43-043-30319
Location:	Summit County, Utah	

Design parameters:

Collapse
Mud weight: 8.800 ppg
Design is based on evacuated pipe.

Burst
Max anticipated surface pressure: -91 psi
Internal gradient: 0.468 psi/ft
Calculated BHP: 4,023 psi

No backup mud specified.

Minimum design factors:

Collapse:
Design factor: 1.125

Burst:
Design factor: 1.00

Tension:
8 Round STC: 1.80 (J)
8 Round LTC: 1.80 (J)
Buttress: 1.60 (J)
Premium: 1.50 (J)
Body yield: 1.50 (B)

Tension is based on buoyed weight.
Neutral point: 8,430 ft

Environment:

H2S considered? No
Surface temperature: 75 °F
Bottom hole temperature: 198 °F
Temperature gradient: 1.40 °F/100ft
Minimum section length: 1,500 ft

Cement top: 5,735 ft

Liner top: 6,000 ft
Non-directional string.

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Internal Capacity (ft³)
1	2800	9.625	47.00	L-80	Buttress	8800	8800	8.625	263.9

Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (Kips)	Tension Strength (Kips)	Tension Design Factor
1	4023	4760	1.18	4023	6870	1.71	114	1086	9.51 B

Prepared by: RJK
Department of Natural Resources

Phone: (801) 538-5274
FAX: (801) 359-3940

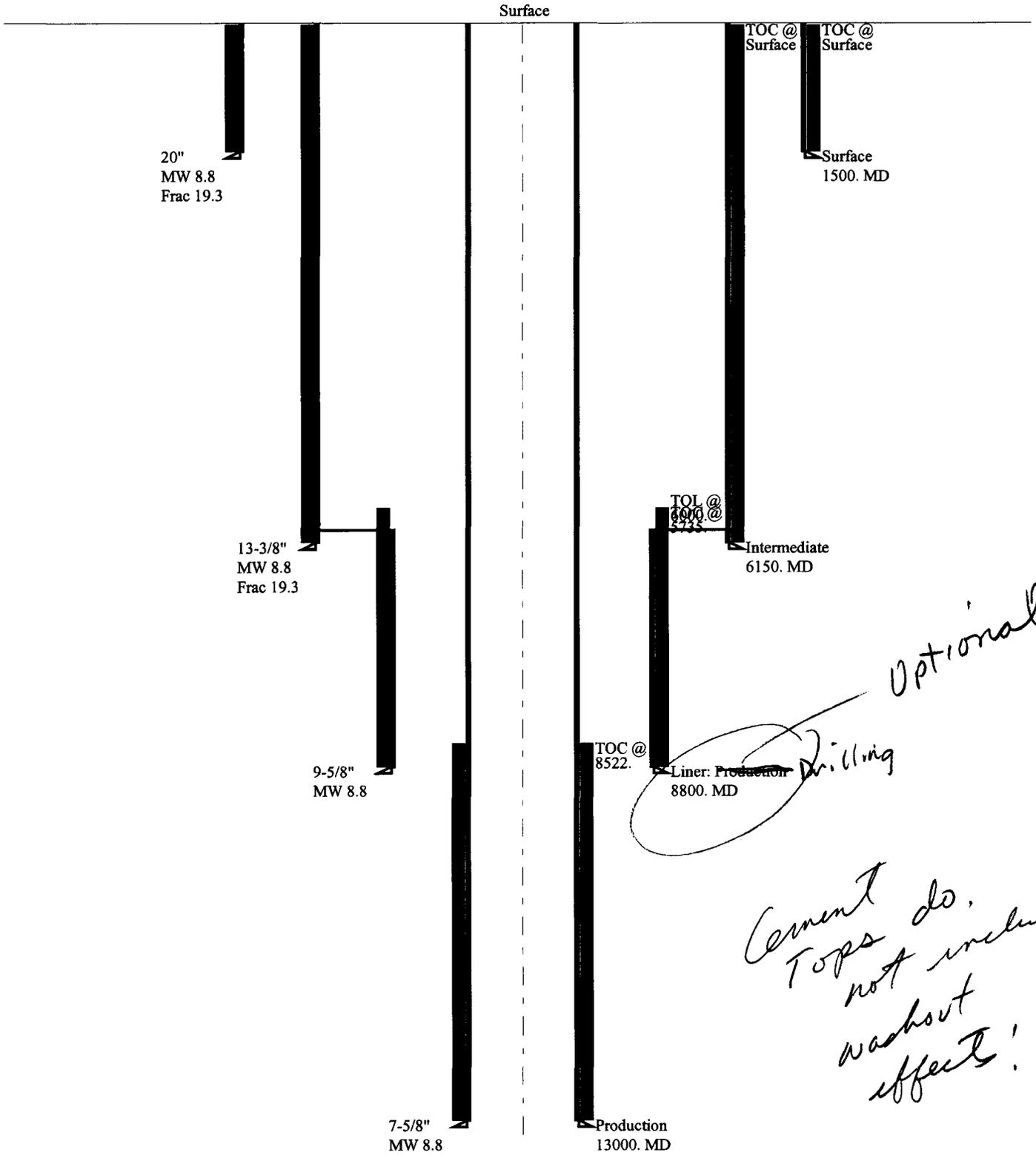
Date: August 31, 1998
State of Utah

STIPULATIONS: None
Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.
Burst strength is not adjusted for tension.

Engineering responsibility for use of this design will be that of the purchaser.

Yellow Creek Deep 5-1

Casing Schematic



State of Utah
On-Site Evaluation
Division of Oil, Gas and Mining

OPERATOR: Union Pacific Company
WELL NAME & NUMBER: Yellow Creek Deep #1-5
API NUMBER: 43-043-30319
LEASE: Fee FIELD/UNIT: Wildcat (001)
LOCATION: 1/4,1/4 SE NE Sec: 5 TWP: 5N RNG: 8E 2330 FNL 1154 FEL
LEGAL WELL SITING: See cause No. 183-1C
GPS COORD (UTM): 495173 E 4560352 N
SURFACE OWNER: Castle Rock Land and Livestock Co.

PARTICIPANTS:

K. Michael Hebertson DOGM, Lyle Woelick UPRC,

REGIONAL/LOCAL SETTING & TOPOGRAPHY:

Overthrust Belt, on the North flank of the Uintah Mountains and the East flank of the Wasatch Mountains, dominated by moderately steep hills and moderate to deeply incised secondary drainages that are well established. The drainage pattern is generally to the North and East toward Echo Canyon and I80 located about 2 miles North of this site.

SURFACE USE PLAN:

CURRENT SURFACE USE: This well pad will be located within the confines of an active cattle ranch. Wildlife is prevalent in the area.

PROPOSED SURFACE DISTURBANCE: This well will disturb an area of about 6 acres including an access road of about .5 miles and the topsoil and spoil piles. The location will also include some drainage diversions to channel precipitation.

LOCATION OF EXISTING WELLS WITHIN A 1 MILE RADIUS: One well in Section 33 6N 8E that has been completed to the Weber Formation. Several wells are across the State line in Wyoming where a bulk of the field is located

LOCATION OF PRODUCTION FACILITIES AND PIPELINES: Pipelines and other facilities are already run to within a mile of this well. The pipeline will follow the uphill contour of the hillside to the tie in point 5. miles North of the location, and facilities will be kept on location.

SOURCE OF CONSTRUCTION MATERIAL: Spoil from the construction of the pad will be used in construction. A gravel cap will be placed on the pad with material obtained from a commercial gravel pit.

ANCILLARY FACILITIES: None will be needed that do not already exist.

WASTE MANAGEMENT PLAN:

All trash garbage and refuse will be placed in wire mesh containers and transported to an approved land fill. All human waste will be contained in portable septic tank or chemical toilet type facilities. Drill cuttings will be contained in the reserve pit and all drainage from the location will be toward the reserve pit.

ENVIRONMENTAL PARAMETERS:

AFFECTED FLOOD PLAINS AND/OR WETLANDS: This pad is in an area of active springs, one located about 500' East and one about 150' South of the edge of the pad after cuts and fills are accounted for. Both of these are lower than the lowest cut of the pad, however the operator has agreed to dig a test trench to 15' deep before construction begins, and assure that the location will not encounter water sources for these springs.

FLORA/FAUNA: Deer, Elk, Moose, Cougar, Eagles, Hawks, Other indigenous bird species, Varieties of grasses, Sage Brush, Rabbit Brush other intermountain flora and fauna.

SOIL TYPE AND CHARACTERISTICS: Mostly clay with very little sand, Gravels and other larger rocks expected at this site were not present.

SURFACE FORMATION & CHARACTERISTICS: Wasatch Formation Clay normally with numerous rocks light gray to medium brown in color. Minor sand and topsoil. Moderate to Poor Permeability.

EROSION/SEDIMENTATION/STABILITY: The location will be stable provided that near surface water is not encountered during construction. Sedimentation will be minor and erosion will not be a major factor.

PALEONTOLOGICAL POTENTIAL: None observed

RESERVE PIT:

CHARACTERISTICS: 200 X 106 X 12 Feet deep located on the Southwest side of the location in cut material. The drilling fluids will be salt saturated at sometime during the drilling process and drill cuttings will be of such a nature that they will need to be contained in the pit and kept out of the environment. The pit will be lined with a synthetic liner.

LINER REQUIREMENTS (Site Ranking Form attached): See attached

SURFACE RESTORATION/RECLAMATION PLAN:

The restoration for this site will be as agreed to in the executed Agreement with Castle Rock Land & Livestock.

SURFACE AGREEMENT: Will be executed and will cover the restoration prior to commencement of drilling activities.

CULTURAL RESOURCES/ARCHAEOLOGY: None observed

OTHER OBSERVATIONS/COMMENTS:

This location is in a known area of H2S production and will require an H2S plan to be in effect. Several active springs are in the immediate proximity of this pad, they will need some consideration when the pad is built.

ATTACHMENTS:

Photos were taken of this site and will be placed on file.

K. Michael Hebertson
DOGM REPRESENTATIVE

4-Aug-1998 11:00 AM
DATE/TIME

**Evaluatic Ranking Criteria and Rank' Score
For Reserve and Onsite Pit Liner Requirements**

<u>Site-Specific Factors</u>	<u>Ranking</u>	<u>Site Ranking</u>
Distance to Groundwater (feet)		
>200	0	
100 to 200	5	
75 to 100	10	
25 to 75	15	
<25 or recharge area	20	<u>15</u>
Distance to Surf. Water (feet)		
>1000	0	
300 to 1000	2	
200 to 300	10	
100 to 200	15	
< 100	20	<u>15</u>
Distance to Nearest Municipal Well (feet)		
>5280	0	
1320 to 5280	5	
500 to 1320	10	
<500	15	<u> </u>
Distance to Other Wells (feet)		
>1320	0	
300 to 1320	10	
<300	20	<u> </u>
Native Soil Type		
Low permeability	0	
Mod. permeability	10	
High permeability	20	<u>10</u>
Fluid Type		
Air/mist	0	
Fresh Water	5	
TDS >5000 and <10000	15	
TDS >10000 or Oil Base	20	
Mud Fluid containing high levels of hazardous constituents		<u>20</u>
Drill Cuttings		
Normal Rock	0	
Salt or detrimental	10	<u>10</u>
Annual Precipitation (inches)		
<10	0	
10 to 20	5	
>20	10	<u>10</u>
Affected Populations		
<10	0	
10 to 30	6	
30 to 50	8	
>50	10	<u> </u>
Presence of Nearby Utility Conduits		
Not Present	0	
Unknown	10	
Present	15	<u> </u>
Final Score (Level II Sensitivity)		<u>80</u>

VII. Private Entities

19. UT980617-030

Michael Baker Corporation: SR 248 Improvements in Park City - road improvements. Comments due 7/14/98.

VIII. 404 Permits

20. UT980623-030

U.S. Army Corps of Engineers/Cache County: Public Notice no. 199850306 - permit to place fill in wetlands. Comments due 7/20/98.

IX. Short Turnaround

Please note! Due to the short turnaro please comment directly to the Agenc with a copy to GOPB.

21. UT980623-020

Division of Oil, Gas and Mining/Summit County: Application for Permit to Drill - proposal to drill a wildcat well the Yellow Creek Deep 5-1 well on a private lease (Sec. 5, T5N, R8E). Comments due 7/14/98.

22. UT980701-040

DOG M/Garfield County: Application for Permit to Drill - proposal to drill a wildcat well, Circle Cliffs State 16 #1 well on state lease ML-45391 (Sec. 16, T33S, R7E). Comments due 7/17/98.

23. UT980701-050

DOG M/Garfield County: Application for Permit to Drill - proposal ro drill a wildcat well, Circle Cliffs State 36 #1 well on state lease ML-45307 (Sec. 36, T32S, R6E). Comments due 7/17/98.

24. UT9890701-060

DOG M/Garfield County: Application for Permit to Drill - proposal to drill a wildcat well, Smoky Mountain State 36 #1 well on state lease ML-45707 (Sec. 36, T40S, R3E). Comments due 7/17/98.

143 SOUTH MAIN ST.
 P.O. BOX 45838
 SALT LAKE CITY, UTAH 84145
 FED. TAX I.D. # 87-0217663

Newspaper Agency Corporation

The Salt Lake Tribune  DESERET NEWS

CUSTOMER'S COPY

PROOF OF PUBLICATION

CUSTOMER NAME AND ADDRESS	ACCOUNT NUMBER	DATE
DIV OF OIL GAS & MAINING 1594 WEST NORTH TEMPLE, SUITE 1210, BX 145801 SALT LAKE CITY, UT 84114	D5385340L-07	06/07/98

ACCOUNT NAME	
DIV OF OIL GAS & MAINING	
TELEPHONE	INVOICE NUMBER
801-538-5340	TL628200581

SCHEDULE
 START 06/07/98 END 06/07/98

NOTICE OF HEARING
 DOCKET NO. 98-011 CAUSE NO. 189-1C
 BEFORE THE BOARD OF OIL, GAS AND MINING
 DEPARTMENT OF NATURAL RESOURCES, STATE OF UTAH

IN THE MATTER OF THE REQUEST FOR AGENCY ACTION OF UNION PACIFIC RESOURCES, FOR AN ORDER AMENDING CAUSE NO. 189-1C AND RE-ESTABLISHING DRILLING UNIT #3 - TOWNSHIP 5 NORTH, RANGE 8 EAST, S.1/4, & M., SUMMIT COUNTY, UTAH.

Notice is hereby given that the Board of Oil, Gas and Mining ("Board") State of Utah, will conduct a hearing on Wednesday, June 24, 1998, at 10:00 a.m., or as soon thereafter as possible, in the Commission Chambers of the Beaver County Courthouse, 405 East Center Street, Beaver, Utah.

The hearing will be conducted as a formal administrative adjudication in accordance with the Utah Code Ann., ss 40-6-1 et seq. Utah Code Ann., ss 63-46b-1 et seq. (1993, as amended), and the Procedural Rules of the Board.

The purpose of the proceeding will be for the Board to receive testimony and evidence regarding the description of the third drilling unit as established by the Board's "Amended Order" entered on November 19, 1990 in Cause No. 189-1, and entering an Order re-establishing Drilling Unit #3 in Summit County, Utah, as follows:

Township 5 North, Range 8 East
 Section 4: Lots 3, 4, 5, 6, and 7 and SW1/4NW1/4, W1/2SW1/4
 Section 6: Lots 1, 2, and 3, and S1/2NE1/4, SE1/4NW1/4, E1/2SW1/4 and SE1/4
 (approximately 729.70 acres)

and granting such other and further relief as may be just and equitable under the circumstances.

Objections to this matter should be filed with the Secretary of the Board at the above address no later than the 10th day of the month, or two weeks before the scheduled hearing, whichever is earlier. Objections filed later than the 10th day may be considered by the Board at or before the regularly scheduled meeting for good cause shown.

Persons interested in this matter may participate pursuant to the procedural rules of the Board. The Request for Agency Action, and any subsequent pleadings, may be inspected in the office of the undersigned.

Pursuant to the Americans with Disabilities Act, persons requiring auxiliary communicative aids and services to enable them to participate in this hearing should call Christine Allred at 538-5327, at least three working days prior to the hearing date.

DATED this 1st day of June, 1998.

STATE OF UTAH
 BOARD OF OIL, GAS AND MINING
 Dave D. Lauriski, Chairman

/s/ Christine Allred
 Secretary of the Board
 1594 West North Temple #1210
 P.O. Box 145801
 Salt Lake City, Utah 84114-6801
 (801) 538-5327

CUST. REF. NO.

189-1C
 CAPTION

OF HEARING DOCKET NO. 98
 SIZE

LINES	2.00 COLUMN	RATE
		1.64
		AD CHARGES
		262.40
		TOTAL COST
		262.40

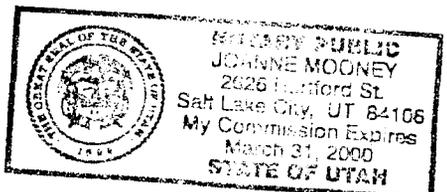
*980729
 189-1C Docket 98-011
 Appr. Board
 Final Order in progress!
 (Re-Establishes Dr. Unit #3)

FIDAVIT OF PUBLICATION

IN CONNECTION WITH THE PUBLICATION OF HEARING DOCKET NO. 98 FOR DIVISION OF OIL, GAS AND MINING WAS PUBLISHED BY THE NEWSPAPER AGENCY OF THE SALT LAKE TRIBUNE AND DESERET NEWS, DAILY NEWSPAPERS IN ENGLISH LANGUAGE WITH GENERAL CIRCULATION IN UTAH, AND PUBLISHED IN BEAVER COUNTY IN THE STATE OF UTAH.

PERIOD FROM 06/07/98 TO 06/07/98

Case Money



STATEMENT BUT A "PROOF OF PUBLICATION"
 PAY FROM BILLING STATEMENT.

143 SOUTH MAIN ST.
 P.O. BOX 45838
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Newspaper Agency Corporation

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ACCOUNT NAME	
DIV OF OIL GAS & MINING	
TELEPHONE	INVOICE NUMBER
801-538-5340	TL628200581
SCHEDULE	
START 06/07/98 END 06/07/98	

NOTICE OF HEARING
 DOCKET NO. 98-011 CAUSE NO. 189-1C
 BEFORE THE BOARD OF OIL, GAS AND MINING
 DEPARTMENT OF NATURAL RESOURCES, STATE OF UTAH

IN THE MATTER OF THE REQUEST FOR AGENCY ACTION OF UNION PACIFIC RESOURCES, FOR AN ORDER AMENDING CAUSE NO. 189-1 AND RE-ESTABLISHING DRILLING UNIT #3 - TOWNSHIP 5 NORTH, RANGE 8 EAST, S.L.B. & M., SUMMIT COUNTY, UTAH.

THE STATE OF UTAH TO ALL PERSONS INTERESTED IN THE ABOVE ENTITLED MATTER.

Notice is hereby given that the Board of Oil, Gas and Mining ("Board"), State of Utah, will conduct a hearing on Wednesday, June 24, 1998, at 10:00 a.m., or as soon thereafter as possible, in the Commission Chambers of the Beaver County Courthouse, 105 East Center Street, Beaver, Utah.

The hearing will be conducted as a formal administrative adjudication in accordance with the Utah Code Ann. ss 40-6-1 et seq, Utah Code Ann. ss 63-46b-1 et seq. (1993, as amended), and the Procedural Rules of the Board.

The purpose of the proceeding will be for the Board to receive testimony and evidence regarding the description of the third drilling unit as established by the Board's "Amended Order" entered on November 19, 1980 in Cause No. 189-1, and entering an Order re-establishing Drilling Unit #3 in Summit County, Utah, as follows:

Township 5 North, Range 8 East
 Section 4: Lots 3, 4, 5, 6, and 7 and SW1/4NW1/4, W1/2SW1/4
 Section 6: Lots 1, 2 and 3, and S1/2NE1/4, SE1/4NW1/4, E1/2SW1/4 and SE1/4
 (approximately 729.70 acres)

and granting such other and further relief as may be just and equitable under the circumstances.

Natural persons may appear and represent themselves before the Board. All other representation by parties before the Board will be by attorneys licensed to practice law in the State of Utah, or attorney licensed to practice law in another jurisdiction which meet the rules of the Utah State Bar for practicing law before the Utah Courts. Attorney representation may be waived by the Board upon petition and good cause shown.

Objections to this matter should be filed with the Secretary of the Board at the above address no later than the 10th day of the month, or two weeks before the scheduled hearing, whichever is earlier. Objections filed later than the 10th day may be considered by the Board at or before the regularly scheduled meeting for good cause shown.

Persons interested in this matter may participate pursuant to the procedural rules of the Board. The Request for Agency Action, and any subsequent pleadings, may be inspected in the office of the undersigned.

Pursuant to the Americans with Disabilities Act, persons requiring auxiliary communicative aids and services to enable them to participate in this hearing should call Christine Allred at 538-5327, at least three working days prior to the hearing date.

DATED this 1st day of June, 1998.

STATE OF UTAH
 BOARD OF OIL, GAS AND MINING
 Dave D. Lauriski, Chairman

/s/ Christine Allred
 Secretary of the Board
 1594 West North Temple # 1210
 P.O. Box 145801
 Salt Lake City, Utah 84114-5801
 (801) 538-5327

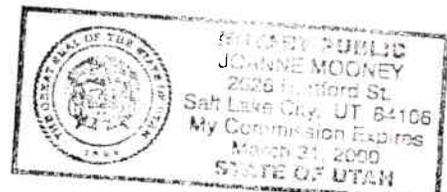
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AD CHARGES	
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TOTAL COST	
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FIDAVIT OF PUBLICATION

I, _____, CLERK OF HEARING DOCKET NO. 98 FOR _____ JUDGE _____ WAS PUBLISHED BY THE NEWSPAPER AGENCY OF THE SALT LAKE TRIBUNE AND DESERET NEWS, DAILY NEWSPAPERS IN ENGLISH LANGUAGE WITH GENERAL CIRCULATION IN UTAH, AND PUBLISHED IN BEAVER COUNTY IN THE STATE OF UTAH.

PERIOD: START 06/07/98 END 06/07/98

Christine Allred



STATEMENT BUT A "PROOF OF PUBLICATION"
 PAY FROM BILLING STATEMENT.

62820050

2
 2071 REP. 10/31 NEADMINI

PROOF OF PUBLICATION

STATE OF UTAH
County of Summit

I, Rachelle Eickhoff, Rachelle Eickhoff being first duly sworn, depose and say that I am the office secretary of The Park Record, a bi-weekly newspaper of general circulation, in Park City, Utah. The notice attached hereto and which is a (an):

Notice of Hearing

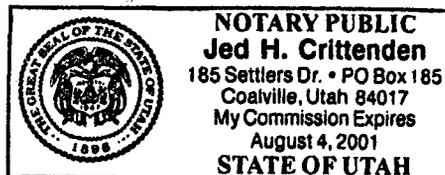
was published in said newspaper for 1 consecutive issue(s), the first publication having been made on the 6 day of June, 1998, and the last on the 6 day of June, 1998, that said notice was published in the regular and entire issue of every number of the paper during the period and times of publication and the same was published in the newspaper proper and not in any supplement.

Subscribed and sworn to before me this 11 day of June, 1998.

Jed H. Crittenden

Jed H. Crittenden
Notary Public

My commission expires: August 4, 2001



**BEFORE THE BOARD
OF OIL, GAS AND
MINING DEPARTMENT
OF NATURAL
RESOURCES STATE
OF UTAH**

In the matter of the request for agency action of Union Pacific Resources, for an order amending cause no. 189-1 and re-establishing drilling unit #3 Townships 5 North, Range 8 East, S.L.B.&M., Summit County, Utah. Notice of hearing Docket No. 98-011 Cause no. 189-1C THE STATE OF UTAH TO ALL PERSONS INTERESTED IN THE ABOVE ENTITLED MATTER. Notice is hereby given that the Board of Oil, Gas and Mining (Board), State of Utah, will conduct a hearing on Wednesday, June 24, 1998, at 10:00am., or as soon thereafter as possible, in the Commission Chambers of the Beaver County Courthouse, 105 East Center Street, Beaver, Utah. The hearing will be conducted as a formal administrative adjudication in accordance with the Utah Code Ann. 40-6-1 et seq., Utah Code Ann. 63-46b-1 et seq. (1953, as amended), and the Procedural Rules of the Board. The purpose of the proceeding will be for the Board to receive testimony and evidence regarding the description of the third drilling unit as established by the Board's Amended Order entered on November 19, 1980 in Cause No. 189-1, and entering an Order re-establishing Drilling Unit #3 in Summit County, Utah, as follows: Township 5 North, Range 8 East Section 4: Lots 3,4,5,6, and 7 and S W 1 / 4 N W 1 / 4 , W1/2SW1/4 Section 5: Lots 1,2 and 3, and S 1 2 N E 1 / 2 , S E 1 / 4 N W 1 / 4 , E1/2SW1/4 and SE1/4 (approximately 729.70 acres), and granting such other and further relief as may be just and equitable under the circumstances. natural persons may appear and represent themselves

before the Board. All other representation by parties before the Board will be by attorneys licensed to practice law in the State of Utah, or attorneys licensed to practice law in another jurisdiction which meet the rules of the Utah State Bar for practicing law before the Utah Courts. Attorney representation may be waived by the Board upon petition and good cause shown. Objections to this matter should be filed with the Secretary of the Board at the Board at the above address no later than the 10th of the month, or two weeks before the scheduled hearing, whichever is earlier. Objections filed later than the 10th day may be considered by the Board at or before the regularly scheduled meeting for good cause shown. Persons interested in this matter may participate pursuant to the procedural rules of the Board. The Request for Agency Action, and any subsequent pleadings, may be inspected in the office of the undersigned. Pursuant to the Americans with Disabilities Act, persons requiring auxiliary communicative aids and services to enable them to participate in this hearing should call Christine Allred at 538-5327, at least three working days prior to the hearing date. Published in The Park Record on June 6, 1 9 9 8

PROOF OF PUBLICATION



STATE OF UTAH,)
County of Summit,) ss.

I, Nancy Davis

being first duly sworn, depose and say that I am the _____

Bookkeeper of The Summit County Bee, a week-

ly newspaper of general circulation, published once each week at

Coalville, Utah, that the notice attached hereto and which is a

Docket No. 98-011 Cause No. 189-1C

was published in said newspaper for One con-

secutive issues, the first publication having been made on the

5 day of June, 1998, and the last

on the 5 day of June, 1998, that said

notice was published in the regular and entire issue of every number

of the paper during the period and times of publication, and the same

was published in the newspaper proper and not in any supplement.

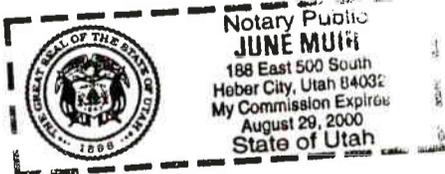
Nancy Davis

Subscribed and sworn to before me this 5th day of

June, 1998

June Muir
Notary Public

My commission expires Aug, 29, 2000



AND MINING
DEPARTMENT OF
NATURAL
RESOURCES

STATE OF UTAH
IN THE MATTER OF
THE REQUEST FOR
AGENCY ACTION OF
UNION PACIFIC
RESOURCES, FOR AN
ORDER AMENDING
CAUSE NO. 1891 AND
REESTABLISHING
DRILLING UNIT #3
TOWNSHIP 5 NORTH,
RANGE 8 EAST,
S.L.B.&M., SUMMIT
COUNTY, UTAH.

NOTICE OF HEAR-
ING
DOCKET NO. 98-011
CAUSE NO. 189-1C
THE STATE OF UTAH
TO ALL PERSONS
INTERESTED IN THE
ABOVE ENTITLED
MATTER.

Notice is hereby given
that the Board of Oil, Gas
and Mining ("Board"),
State of Utah, will con-
duct a hearing on
Wednesday, June 24,
1998, at 10:00 a.m., or as
soon thereafter as possi-
ble, in the Commission
Chambers of the Beaver
County Courthouse, 105
East Center Street,
Beaver, Utah.

The hearing will be con-
ducted as a formal admin-
istrative adjudication in
accordance with the Utah
Code Ann. § 40-6-1 et
seq., Utah Code Ann. §
63-6b1 et seq. (1953, as
amended), and the
Procedural Rules of the
Board.

The purpose of the pro-
ceeding will be for the
Board to receive tes-
timony and evidence
regarding the description
of the third drilling unit as
established by the
Board's "Amended
Order" entered on
November 19, 1980 in
Cause No. 189-1, and
entering an Order re-es-
tablishing Drilling Unit
#3 in Summit County,
Utah, as follows:

Township 5 North,
Range 8 East

Section 4: Lots 3, 4, 5,
6, and 7 and
SW1/4NW1/4, W1/2
SW1/4

Section 5: Lots 1, 2 and
3, and S1/2NE1/4,
SE1/4NW1/4,
E1/2SW1/4 and SE1/4
(approximately 729.70
acres)

and granting such other
and further relief as may
be just and equitable
under the circumstances.

Natural persons may
appear and represent
themselves before the
Board. All other represen-
tation by parties before
the Board will be by
attorneys licensed to
practice law in the State
of Utah, or attorneys li-
censed to practice law in
another jurisdiction
which meet the rules of
the Utah State Bar for
practicing law before the
Utah Courts. Attorney
representation may be
waived by the Board
upon petition and good
cause shown.

Objections to this matter
should be filed with the
Secretary of the Board at
the above address no later
than the 10th day of the
month, or two weeks
before the scheduled
hearing, whichever is ear-
lier. Objections filed later
than the 10th day may be
considered by the Board

month, or two weeks before the scheduled hearing, whichever is earlier. Objections filed later than the 10th day may be considered by the Board at or before the regularly scheduled meeting for good cause shown.

Persons interested in this matter may participate pursuant to the procedural rules of the Board. The Request for Agency Action, and any subsequent pleadings, may be inspected in the office of the undersigned.

Pursuant to the Americans with Disabilities Act, persons requiring auxiliary communicative aids and services to enable them to participate in this hearing should call Christine Allred at 5385327, at least three working days prior to the hearing date.

DATED this 1st day of June, 1998.

STATE OF UTAH
BOARD OF OIL, GAS
AND MINING
Dave D. Lauriski,
Chairman
/s/ Christine Allred
Secretary of the Board
1594 West North
Temple, Suite 1210
P.O. Box 145801
Salt Lake City, Utah
841145801
(801) 538-5327

Published in The
Summit County Bee June
5, 1998.

BEFORE THE BOARD OF OIL, GAS, AND MINING
DEPARTMENT OF NATURAL RESOURCES
in and for the STATE OF UTAH

IN THE MATTER OF THE APPLICATION OF) AMENDED
AMOCO PRODUCTION COMPANY FOR AN) ORDER
ORDER ESTABLISHING APPROXIMATELY)
727 ACRE GAS DRILLING UNITS FOR) Cause No. 189-1
CERTAIN LANDS IN SUMMIT COUNTY, UTAH)

Pursuant to the application of Amoco Production Company, this cause came on for hearing before the Board of Oil, Gas, and Mining, State of Utah, at 9:00 a.m., on Wednesday, November 19, 1980, in the Wildlife Resources Auditorium, 1596 West North Temple, Salt Lake City, Utah.

The following Board Members were present:

Maxilian A. Farbman

Edward T. Beck

E. Steele McIntyre

John L. Bell

C. Ray Juvelin

Appearances were made as follows:

For the Applicant: Gordon D. Ryan, Esq.
Denver, Colorado

Vinton Pierce
Denver, Colorado

For the Anschutz Corp., Inc.: Ted Stockma~~ff~~, Esq.
Denver, Colorado

Paul Denny
John Haley
Denver, Colorado

Applicant introduced testimony and exhibits in support of its application and questions were addressed to applicant's witnesses and statements were submitted by others present.

NOW, THEREFORE, the Board having considered questions and answers, statements presented and the testimony adduced and exhibits recieved at said hearing and being fully advised in the premises, now makes and enters the following:

FINDINGS AND CONCLUSIONS

1. That due and, regular notice of the time, place and purpose of the hearing was given to all interested parties as required by law and the Rules and Regulations of the Board.

2. That the Board has jurisdiction over the matter covered by said application and over all parties interested therein and has jurisdiction to make and promulgate the Order hereinafter set forth.

3. That the application of Amoco Production Company complies in all respects with the Rules and Regulations of the Board.

4. That said application is for an Order establishing approximately 727 acre gas drilling units for the Phosphoria formation in the following described area:

Township 6 North, Range 8 East

Lots 1 through 4 and W/2 comprising all of Section 28, and E/2, E/2 W/2 of Section 29 (approximately 728.20 acres);

E/2 W/2, E/2 of Section 32, and Lots 1 through 4 and W/2 comprising all of Section 33 (approximately 726.91 acres);

Township 5 North, Range 8 East

Lots 1 through 4 and W/2 comprising all of Section 4, and E/2, E/2 W/2 of Section 5 (approximately 726.66 acres).

with future wells to be located at least 1,320' from the boundary of the drilling unit.

5. That Applicant is the owner of working interests, and in some instances of operating rights, in a significant portion of the above described area sought to be spaced. Applicant has heretofore obtained the approval of the Wyoming Oil and Gas Supervisor to drill a test well for gas, its Urroz WTU No. 1, at a location in the NW/4 of Section 2, T14N, R12W, in Uinta County, Wyoming and has tested said well in the Phosphoria formation at a commercial rate of 10 MMCFD. The gas contains 16% H₂S. [After perforating the production casing and short-term production testing the perforated Phosphoria intervals, the well will be shut-in pending arrangements for a market]. Based upon the seismic information available, modified by the discovery well, the indicated structural configuration of this Phosphoria pool extends slightly into Utah.

6. That from geological evidence presented, it appears that all of the acreage hereinabove described is underlain by and would be productive from the Phosphoria formation.

7. That establishment of drilling units is necessary to avoid the drilling of unnecessary wells to protect correlative rights and to assist in the prevention of waste.

8. That a gas drilling unit of approximately 640 acres will accomplish this and is not smaller nor greater than the maximum area that can be efficiently and economically drained by one well producing gas from the above formation.

9. That the above described lands include the area in which additional wells will be drilled in an attempt to define the limits of this gas pool.

10. That if these additional wells encounter gas in the Phosphoria formation, it will be gas contained in the same pool.

11. That the Phosphoria formation is defined as a gas pool.

12. That each future well should be located in such a manner that, at the Phosphoria producing intervals, the well will be no closer than 1000 feet from the boundary of the NW/4 and no closer than 1000 feet from the boundary of the SE/4 of a governmental section.

13. That said units should be established as follows:

a. Lots 1, 2, 3 & 4, and the W/2 W/2 of Section 28, the E/2, and E/2 E/2 W/2 of Section 29, Township 6 North, Range 8 East S1/4, consisting of 648.20 acres shall constitute drilling unit #1.

b. Lots 1, 2, 3 & 4, and the W/2 W/2 of Section 33, the E/2 and E/2 E/2 W/2 of Section 32, Township 6 North, Range 8 East, S1/4, consisting of 646.91 acres shall constitute drilling unit #2.

c. Lots 1, 2, 3 & 4, and the W/2 W/2 of Section 4, the E/2 and E/2 E/2 W/2 of Section 5, Township 5 North, Range 8 East, S1/4, consisting of 646.66 acres shall constitute drilling unit #3.

ORDER

IT IS THEREFORE ORDERED:

To prevent waste of gas and associated hydrocarbons, to avoid the drilling of unnecessary wells, to protect correlative rights and to establish drilling units of relatively uniform size and shape, the Board orders and decrees as follows:

1. That approximately 640 acre gas drilling units for the Phosphoria formation be and the same are hereby established for the following lands:

Township 6 North, Range 8 East

Lots 1 through 4 and W/2 comprising all of Section 28, and E/2, E/2 W/2 of Section 29 (approximately 728.20 acres);

E/2 W/2, E/2 of Section 32, and Lots 1 through 4 and W/2 comprising all of Section 33 (approximately 726.91 acres);

Township 5 North, Range 8 East

Lots 1 through 4 and W/2 comprising all of Section 4, and E/2, E/2 W/2 of Section 5 (approximately 726.66 acres).

2. That each future well shall be located in such a manner that, at the Phosphoria producing intervals, the well will be no closer than 1000 feet from the boundary of what could be considered the NW/4 and no closer than 1000 feet from the boundary of what could be considered the SE/4 of the drilling unit. Each drilling unit shall be a half section of lot or lots, or portion thereof, equivalent thereto as established by governmental survey.

3. That said units shall be established as follows:

a. Lots 1 through 4 and the W/2 W/2 of Section 28, the E/2, and E/2 E/2 W/2 of Section 29, Township 6 North, Range 8 East, SLBM, consisting of 648.20 acres shall constitute drilling unit #1.

b. Lots 1 through 4 and the W/2 W/2 of Section 33, the E/2, and E/2 E/2 W/2 of Section 32, Township 6 North, Range 8 East, SLBM, consisting of 646.91 acres shall constitute drilling unit #2.

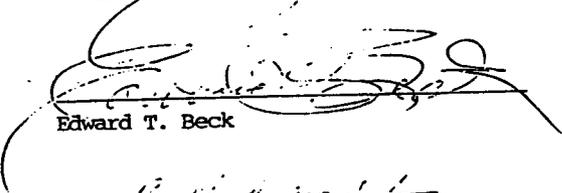
c. Lots 1 through 4 and the W/2 W/2 of Section 4, the E/2, and E/2 E/2 W/2 of Section 5, Township 5 North, Range 8 East, SLBM, consisting of 646.66 acres shall constitute drilling unit #3.

4. That the Board retains continuing jurisdiction over all matters covered by this Order and particularly to make further orders as may be necessary under conditions and circumstances developed in the future.

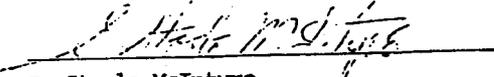
Entered this 19th day of November, 1980.

STATE OF UTAH
BOARD OF OIL, GAS AND MINING

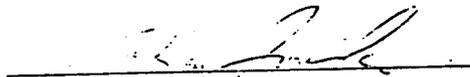
Maxilian A. Farbrman



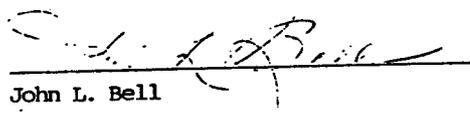
Edward T. Beck



E. Steele McIntyre



C. Ray Juvelin



John L. Bell

**BEFORE THE BOARD OF OIL, GAS AND MINING
DEPARTMENT OF NATURAL RESOURCES
STATE OF UTAH**

IN THE MATTER OF THE REQUEST FOR
AGENCY ACTION OF THE ANSCHUTZ
CORPORATION FOR AN EXCEPTION TO THE
DRILLING LOCATION ESTABLISHED BY
BOARD ORDER IN CAUSE NO. 189-1 AND
AFFECTING OIL AND GAS DRILLING UNIT 2
CONSISTING OF SECTION 33 AND PART OF
SECTION 32, TOWNSHIP 6 NORTH, RANGE 8
EAST, SLB&M, SUMMIT COUNTY, UTAH

)
)
) **FINDINGS OF FACT,**
) **CONCLUSIONS OF LAW AND**
) **ORDER OF APPROVAL**
)
) **Docket No. 96-008**
) **Cause No. 189-1B**
)
)

This cause came on for hearing before the Utah Board of Oil, Gas and Mining (the "Board") on Wednesday, August 28, 1996, at the hour of 10:30 a.m. The following Board members were present and participated at the hearing:

Dave D. Lauriski, Chairman
Thomas B. Faddies
Jay L. Christensen
Kent G. Stringham
Judy F. Lever
Elise Erler
Raymond Murray

Attending and participating on behalf of the Division of Oil, Gas and Mining (the "Division") were James W. Carter, Director; Lowell P. Braxton, Deputy Director; Ronald J. Firth, Associate Director, Oil and Gas; Brad G. Hill, Petroleum Geologist; and Gilbert L. Hunt, Environmental Manager. The Board and the Division were represented by Patrick J. O'Hara, Esq. and Thomas A. Mitchell, Esq., respectively, Assistant Attorneys General.

Testifying on behalf of Petitioner The Anschutz Corporation ("Anschutz") were Paul R. Lamerson, Consulting Geologist, and Hal Koerner, Jr., Petroleum Engineer and Anschutz's General Manager for Drilling and Production. A. John Davis, Pruitt, Gushee & Bachtell, appeared as attorney on behalf of Anschutz.

The Board received into the record, together with other exhibits, letters from the owners in the adjacent drilling & spacing units and from the Wyoming Oil and Gas Conservation Commission stating they did not object to and/or would not protest Anschutz's Request for Agency Action (the "Request"). No objections or protests were made in opposition to the Request and no other parties appeared or participated at the hearing.

The Board, having considered the testimony presented and the exhibits received at the hearing, being fully advised, and for good cause appearing, hereby makes the following findings of fact, conclusions of law, and order.

FINDINGS OF FACT

1. On July 10, 1996, Anschutz submitted its Request for Agency Action in this matter, in accordance with Utah statute and the applicable rules and regulations of the Board and Division, for an exception to the drilling location established by Board Order in Cause 189-1 dated November 19, 1980 ("the 1980 Order"), and affecting oil and gas Drilling & Spacing Unit No. 2 consisting of the following real property located in Summit County, Utah:

Township 6 North, Range 8 East, SLB&M
Section 33: Lots 1 through 4; W $\frac{1}{2}$ W $\frac{1}{2}$
Section 32: E $\frac{1}{2}$, E $\frac{1}{2}$ E $\frac{1}{2}$ W $\frac{1}{2}$,
consisting of 646.91 acres

2. In the 1980 Order, the Board established Drilling Unit No. 2, together with two other gas drilling and spacing units of approximately 646 acres for future wells drilled into the Phosphoria Formation, Yellow Creek Deep Field.

3. The permitted location for each well in the drilling and spacing units was required to be no closer than "1,000 feet from the boundary of what could be considered the NW¼ and no closer than 1,000 feet from the boundary of what could be considered the SE¼ of the drilling unit."

4. Anschutz requested the exception in order to drill the AL&L 14-33 gas well for the production of sour gas and condensate in Drilling Unit No. 2 from the Phosphoria Formation at a surface location in what could be considered the SE¼ of Drilling Unit No. 2. The surface location requested was 532 feet from the south line (FSL) and 786 feet from the east line (FEL). The bottom hole location requested was 100 FSL and 460 FEL as shown on the plat which was received into evidence as Exhibit "A".

5. Anschutz and the Division, through Mr. Davis and Mr. Mitchell, entered a stipulation on the record stipulating and representing that (a) all owners of record in the unit, together with the State of Wyoming had no objection to and/or do not protest the Request; (b) the Division had reviewed the Request and the Affidavits and exhibits in support thereof, supported and would administratively approve Anschutz's Request; and (c) based upon the expert opinions of Mssrs. Lamerson and Koerner, geologic, structure and reservoir conditions present in the Phosphoria Formation justified the drilling of the subject well at the

requested location and would maximize the economic recovery of natural gas, production, prevent waste and loss of gas, and protect correlative rights.

6. Based upon the statements of Mr. Carter and Mr. Mitchell, the testimony of Anschutz's expert witnesses, and the exhibits in support thereof, the Board finds as follows:

- (a) The legal well location established in the 1980 Order was based upon limited geologic, structural, and reservoir information available at that time pertaining to the Yellow Creek Field and Phosphoria Formation;
- (b) The requested exception location is based upon a wealth of geologic, structural, and reservoir data obtained from a large number of wells drilled in the field since the 1980 Order, including two deep wells into the Phosphoria Formation;
- (c) From analysis of that data, it is generally agreed that the Yellow Creek anticline is asymmetrical and plunges deeply to the southwest at the Nugget Sandstone Structural position. At the Phosphoria Formation level, the anticline has a steep to overturned southeast flank and a gentle northwest flank. To obtain maximum drainage of reserves from the Phosphoria Formation, the bottom hole must be located as high as structurally possible on the northwest flank and the southwest plunge of the anticline. By locating the bottom hole of the proposed well at the location requested, Anschutz expects to intercept the Phosphoria Formation close to the crest of the structure. By doing so, in addition to maximizing the available amount of reserves, Anschutz also expects

to take advantage of natural fracturing and minimize water production. In contrast, a well drilled at the legal location would bottom hole much lower in the Phosphoria Structure in Drilling Unit No. 2 close to the gas/water contact and well away from the area of maximum fracture density; and

- (d) The proposed exception location is in the public interest, will promote conservation, is designed to increase the ultimate recovery of oil and gas and prevent waste, and will protect the correlative rights of each affected owner.

7. Pursuant to the requirements of statute and Utah Admin. Code Rules R649-3-3.5 and R649-106-300, Anschutz mailed, postage prepaid, a copy of the Request for Agency Action, and supporting affidavits, to the owners of all directly or diagonally offsetting drilling units.

8. Notice was duly published as required by Utah Admin. Code R641-106-100.

9. The vote of the Board members present at the hearing and in this cause was unanimous in favor of approving the Request for Agency Action.

CONCLUSIONS OF LAW

10. Due and regular notice of the time, place and purpose of the hearing was properly given to all interested parties in the form and manner as required by law and the rules and regulations of the Board and Division.

11. The Board has jurisdiction over all matters covered by the Request for Agency Action pursuant to Utah Code Ann. § 40-6-5 and has the power and authority under Utah Code Ann. § 40-6-6(6) to render the order herein set forth.

12. The proposed exception location is reasonably necessary to fulfill the purposes of the Utah Oil and Gas Conservation Act (Utah Code Ann. §§ 40-6-1, *et seq.*).

ORDER

Based upon the Request for Agency Action, the stipulation, testimony and evidence submitted, and the findings of fact and conclusions of law stated above, the Board orders as follows:

1. The Board hereby grants Anschutz's Request for an exception well location for the purpose of drilling a Phosphoria Formation gas well in Drilling Unit No. 2 established by Order in Cause No. 189-1 dated November 19, 1980, at a surface location 532 feet from the south line and 786 feet from the east line and a bottom hole location 100 feet from the south line and 460 feet from the east line in what would be considered the SE¼ of said Drilling Unit No. 2.

2. The Board retains continuing jurisdiction over all matters covered by this Order and over all parties affected thereby.

DATED this 18th day of September, 1996.

STATE OF UTAH
BOARD OF OIL, GAS AND MINING



Dave D. Lauriski, Chairman

STATE ACTIONS

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

-
1. ADMINISTERING STATE AGENCY
OIL, GAS AND MINING
1594 West North Temple, Suite 1210
P.O. Box 145801
Salt Lake City, Utah 84114-5801
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)
Mountainland 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:
Union Pacific Resources Company, proposes to drill the Yellow Creek Deep 5-1 well (wildcat) on a private lease in Summit 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)
S 1/4 NE 1/4, Section 5, Township 5 North, Range 8 East, Summit County, Utah
NESE (BHL)
-
9. HAS THE LOCAL GOVERNMENT(S) BEEN CONTACTED?
No
-
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:
- John R. Baza
PHONE: 538-5334
- 
DATE: 6-22-98 *for John R. Baza* Associate Director
-

STATE ACTIONS

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

1. ADMINISTERING STATE AGENCY OIL, GAS AND MINING 1594 West North Temple, Suite 1210 P.O. Box 145801 Salt Lake City, Utah 84114-5801	2. STATE APPLICATION IDENTIFIER NUMBER: (assigned by State Clearinghouse)
--	--

4. AREAWIDE CLEARING HOUSE(S) RECEIVING STATE ACTIONS: (to be sent out by agency in block 1) Mountainland Association of Governments	3. APPROXIMATE DATE PROJECT WILL START: Upon Approval
--	--

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

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

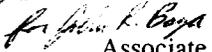
7. DESCRIPTION:
Union Pacific Resources Company, proposes to drill the Yellow Creek Deep 5-1 well (wildcat) on a private lease in Summit County, Utah. This action is being presented to RDCC for consideration of resource issues affecting state interests. The Division of Oil, Gas and Mining is the primary administrative agency in this action and must issue approval before operations commence.

8. LAND AFFECTED (site location map required) (indicate county)
NE NE, Section 5, Township 5 North, Range 8 East, Summit County, Utah

9. HAS THE LOCAL GOVERNMENT(S) BEEN CONTACTED?
No

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: John R. Baza PHONE: 538-5334	13. SIGNATURE AND TITLE OF AUTHORIZED OFFICIAL:  DATE: 6-22-98  Associate Director
--	---

STATE OF UTAH
DIVISION OF OIL, GAS AND MINING

5. Lease Designation and Serial No.
FEE

6. If Indian, Allottee or Tribe Name
NA

7. Unit Agreement Name
NA

8. Farm or Lease Name
Yellow Creek Deep

9. Well Name
5-1

10. Field and Pool, or Wildcat
Yellow Creek Deep

11. QQ, Sec., T., R., M., or Block and Survey or Area
(SENE) Sec. 5, T5N-R8E

12. County or Parish
Summit

13. State
Utah

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1 a. Type of Work
(X) DRILL () DEEPEN () PLUG BACK

b. Type of Well
() Oil Well (X) Gas Well () Other () Single Zone () Multiple Zone

2. Name of Operator
UNION PACIFIC RESOURCES COMPANY

3. Address of Operator
P. O. Box 7 MS 3006 Fort Worth, Texas 76101-0007

4. Location of Well (Report location clearly and in accordance with any State requirements)
At Surface (SENE) '2330' FNL, 1154' FEL Sec. 5, T5N-R8E, SLBM
At Proposed Producing Zone (NESE) 3000' FNL, 100' FEL Sec. 5, T5N-R8E, SLBM

CONFIDENTIAL

14. Distance in miles and direction from nearest town or post office
25 miles southwest of Evanston, Wyoming

15. Distance from proposed location to nearest property or lease line, Ft. 1154'
(Also to nearest drilling line, if any)

16. No. of acres in lease 642.84

17. No. of acres assigned to this well
Hearing pending

18. Distance from proposed location to nearest well, drilling, completed, or applied for, on this lease, Ft. NA

19. Proposed Depth 12,925' TVD

20. Rotary or cable tools
Rotary

21. Elevations (Show whether DP, RT., GR., etc.)
7094.55' MSL (GR)

22. Approx. date work will start
Upon Approval

Directional? HORIZONTAL? CALL

23 PROPOSED CASING AND CEMENTING PROGRAM

Size of Hole	Size of Casing	Weight per Foot	Setting Depth	Quantity of Cement
26"	20	106.5	K-55 1500'	NA
17-1/2"	13-3/8"	72#	L-80 6150'	NA
12-1/4"	7-5/8"	39#	L-80 13000'	NA

Union Pacific Resources Company (UPRC) proposes drilling this well in accordance with the attached Drilling Procedures. Operations with regard to drilling and operating of this well will be conducted under State-wide Bond No. 2447222. There is a Surface Owners Agreement in place between UPRC and Castle Rock Land and Livestock Company dated 12/10/96. Water will be hauled to the location by Dalbo (License No. W-48212) and Denny's Rental Service (License No. 127623)

Please consider all submittals pertaining to this well as "COMPANY CONFIDENTIAL".
If additional information is needed, please contact the undersigned at (817) 877-6739, FAX (817) 877-7942.

*495172.4 5014
45603737 100
4954914
45601678*

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: if proposal is to deepen or plug back, 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. I hereby certify that this report is true and complete to the best of my knowledge

Signed: Dorothy Moravek *Dmoravek* Title: Regulatory Analyst Date: 7/13/98

API No. 43-043-30319 Approval Date 9/1/98

Approved by *[Signature]*
Conditions of approval, if any:
(3/89)

Title: **BRADLEY REICH**
RECLAMATION SPECIALIST III
RECEIVED
JUL 15 1998
DIV. OF OIL, GAS & MINING

GENERAL DRILLING PROCEDURE

1. Build a 400' x 300' site location with 200' x 130' reserve pit (12' deep) and construct access road as per proposed survey plat information. Fence reserve pit on the 3 outside walls. Determine escape route and stake out. Construct berms at the base of all fill slopes to prevent the silting of springs in the immediate area. Place a 12 mil liner in reserve pit. Road and location to be graveled.
2. Drilling foreman to complete "Storm Water Pollution Prevention Plan" and submit a copy to the Fort Worth Office. Retain original on rig.
 - * Have dirt contractor sign "Table E-1" following the completion of location.
 - * Modify Exhibit "C3" to reflect diversion ditches.
 - * Maintain "Maintenance Inspection Report".
3. Set and cement 30" conductor (+/- 8 yards) at about 70' below ground level. **NOTIFY UTAH DIVISION OF OIL, GAS AND MINING 24 HOURS PRIOR TO SPUD.** Note on report person(s) contacted. Post copy of regulatory permit in the doghouse. Erect a state approved well location sign and move in company approved gate guard.
4. Move in and rig up rotary tools. Report GL to KB measurement and conductor casing depth on PERC and IADC tour sheets. Have rig source water checked by cementing company for cement compatibility.
5. Mud up 36 vis and spud well with a 26" mill tooth bit and shock sub on a 60'/90' stabilized BHA utilizing 3 Pt chert type roller reamer for stabilization. Drill a 26" hole to surface casing depth at 1,500' using fresh water and gel/polymer sweeps. Run Totco surveys every 270' or less. Do not exceed 3° inclination. Circulate hole clean. Strap out of hole.
 - * Drill with a fresh water spud mud (36 vis) with high vis gel/lime sweeps as required to insure adequate hole cleaning. Maintain pump rates at +1,000 GPM if possible.
 - * Some offset wells experienced lost circulation in this interval. If needed sweep hole with high vis pill containing 30-40 ppb LCM. Fibrous material, mica, and sized Calcium Carbonate should be made available on location.
 - * Keep mud weight as low as possible by running all solids removal equipment, centrifuge and size screens on dual flowline cleaner's as tight as possible.
 - * Mud Weight: 8.6 - 8.8 ppg.
 - * Viscosity: 35 - 50 sec/qt. (higher if necessary)
 - * Fluid Loss: No Control
6. Rig up casing crew and run 20" 106.50# K-55, BTC surface casing. Casing is to have been previously cleaned, drifted, and strapped. Run casing as follows:
 - * 20" guide shoe
 - * 1 Joint 20" 106.50# K-55 BTC casing
 - * 20" float collar
 - * 20" 106.50# K-55 BTC casing to surface.
 - * Consider 5" DP inner string if tools available.

UPRC Y.C.D. 5-1
Yellow Creek Deep Field
Page 2

Thread-lok guide shoe and float collar. Strap weld float joint and tac weld guide shoe. Install one centralizer on the shoe joint and every 4th joint to surface. **Note: Coordinate casing and wellhead delivery from Fort Worth office.**

7. Circulate and condition mud for a minimum 1-1/2 casing volumes with rig pump. Rig up cementers and cement surface casing as per attached DS procedure using a top plug only. Do not reciprocate pipe during job and displace with mud. Do not over displace cement. Notify Fort Worth office immediately if cement is not circulated to surface. If cement level should fall, top out with 1" work string to 80' KB with 150 sx Class G + 2% CaCl.
8. Wait on cement 8 hours. Rough and final cut 30" and 20" casing to accommodate 20" SOW with 36" OD baseplate x 1-1/2" thick w/4ribs 1-1/2" thick. Baseplate to set 2'-3' below ground level. Install FMC C-29-L 20" SOW x 20-3/4" 3,000 flanged psi wellhead with a bullplug on one outlet and a 2" LP, 3,000# WP, T-21 trim gate valve on the other outlet. Base plate should set squarely on 30" conductor. Pressure test weld to 600 psi (770 psi collapse on 20" surface casing). **Note: Use hot-head preheat to 400° F for 20" weld.**
9. Nipple up 21-1/4" x 2M type MSP Hydril annular with 6" HCR and 6" diverter lines tied to 21-1/4" - 2M x 20-3/4"-3M drilling spool. Test lines, annular, spool, and valve to 250 psi low and 1,700 psi high (70% of burst rating - 20"). Install FMC wear bushing (17-1/2" bits) in starting head. **Note: Notify Utah Division of Oil, Gas and Mining Agency 24 hours prior to diverter test.**
10. Run in hole with 17-1/2" retip bit and slick BHA. Tag float collar and pressure test casing to 1,700 psi using rig pump. Drill out float collar, shoe joint and 10' new formation.
11. Trip for 17-1/2" insert bit, shock sub, and 60/90 BHA (Monel bottomhole collar) stabilized with 3-pt chert type roller reamers. Drill ahead taking single shot surveys every 270' and on bit trips. Deviation not to exceed 3°. Should deviation approach 3°, begin taking surveys at shorter intervals and attempt to correct using less WOB or higher RPM, new bits, or alternate stabilization. If unable to control deviation, trip for a steerable mud motor and MWD. Drill out and dump all contaminated fluid. Drill with a low bentonite/polymer mud as per attached mud program. While drilling in the Preuss Salt, the chloride increase should be tolerated and no additional salt should be added to the mud. Top of Preuss is expected at 4,545' with top of salt zone at 5,700'. **Note: Have mud loggers rigged up and operational by 5,000'. In the unlikely event major salt stringers are encountered, break mud over to saturated salt system.**

Interval	MW	Vis	P.V.	Yld.Pt.	W.L.	PH
<u>TVD</u>	<u>(Ppg.)</u>	<u>(sec)</u>	<u>(cps)</u>	<u>(#/100sf)</u>	<u>(cc)</u>	
1,200-6,150	8.6-8.8	35-45	8-10	10-12	10-15	8.5-9.0

UPRC Y.C.D. 5-1
Yellow Creek Deep Field
Page 3

- * Maintain sufficient supplies of LCM material on location. If needed sweep hole with high vis pill containing 20-25 ppb fibrous LCM.
 - * Sized Calcium Carbonate may also be used in sweeps (80 Bbls, 30-50 ppb) to reduce the fluid loss to permeable zones.
 - * Discontinue use of PHPA polymer while drilling in salt section. Use yellow/white starch to control fluid loss.
 - * Keep mud weight as low as possible by running all available solids removal equipment. Size screens as necessary for fine cut.
 - * Ensure rig crews are familiar with well control procedures. Run BOP drills (diverter) daily and note on IADC/Morning Reports.
 - * Only 10-20' of pure salt is expected at this well location. Short trip at 12-18 hour intervals (as necessary) if salt flow or tite hole is experienced drilling this lower section.
 - * Prehydrate fresh gel in mud system if necessary.
12. At casing point, (6,150' TVD, or $\pm 100'$ into top of Twin Creek) pump gel/polymer pill and circulate the hole clean. Make wiper trip to surface casing shoe. Circulate bottoms up. Run Multishot gyro survey (if necessary) from TD to surface. Pull out of hole SLM to run pipe. Retrieve wear bushing.
13. Rig up casing crew. Casing is to have been previously cleaned, drifted, and strapped. Run casing as follows:
- * 13-5/8" differential fill float shoe
 - * 2 joints 13-5/8" 88.2 ppf HCL-80 BTC casing
 - * 13-5/8" differential fill float collar
 - * 13-5/8" 88.2 ppf HCL-80 BTC casing to $\pm 5,350'$ (800' of pipe)
 - * 13-3/8" 72# ppf L-80 BTC casing to surface
 - * Thread-lok shoe and collar. Install centralizers on 2-joint shoe joint. One centralizer should be placed against float shoe with a stop ring and one placed in the middle of the float joint with stop rings on either side. Run one centralizer per joint for the next four joints. Run two centralizers per joint thru the gross salt interval and thereafter every 4 joints into the 20" casing.
14. Circulate and condition mud for a minimum of 1-1/2 casing volumes with rig pump. Cement 13-3/8" x 13-5/8" casing as per attached cement program using a top and bottom plug. With 2-3 bbls cement left in tub, drop top plug. Pump last 2-3 bbls cement and displace with water. Cement volume is designed to bring cement to surface or into 20" casing at a minimum.

15. Pick up and lay out 20-3/4" annular. Remove 6" diverter lines and HCR. Set full buoyed string weight of 13-3/8" casing on FMC C-29 casing hanger. **Record buoyant weight of 13-3/8" casing.** Rig up cementers on casing head valve. Establish injection rate into 20"x13-3/8" annulus. Squeeze annulus with 500sx cement and displace cement 100' below GL. Cut casing and install FMC C-29-ET 20-3/4" 3000 psi x 13-5/8" 5,000 psi wellhead. Pressure test void to 1,000 psi (for 15 minutes using FMC). Nipple up 13-5/8" 5,000 psi BOP's; test rams and manifold to 250 and 5,000 psi; annular to 250 and 3,500 psi. **Notify Utah Division of Oil, Gas and Mining Agency 24 hours prior to BOP test.**
16. Install wear bushing and run in hole with 12-1/4" insert bit, shock sub, monel DC, and 60/90 BHA stabilized with 3-pt near bit roller reamer. Pressure test casing to 3,500 psi for 30 minutes. Drill out float collar, shoe joint and float shoe.
17. Drill ahead taking single shot directional surveys every 180' and on bit trips. Drill ahead with fresh water using gel sweeps for hole cleaning as long as hole conditions allow (top of Ankareh). At +/- 8,800', convert to a low bentonite/polymer mud system as per attached mud program. Inspect all BHA components including HW drill pipe at a maximum every 200 rotating hours.

NOTE: The H₂S safety procedures defined in the attached H₂S Contingency Plan will be adhered to at all times. Rig up H₂S safety equipment and train all personnel in H₂S safety practices prior to reaching 11,000' TVD (1,000' above the Phosphoria Formation).

NOTE: Offset well data and indicated structure assumes a natural walk tendency to the east. The well will be allowed to follow this tendency with a planned bottom hole displacement of +/- 1,000' to the east'. Directional surveys will be monitored closely . Should the walk tendency be in the wrong direction, or off line, the well will be drilled with directional tools easterly to a terminus at 3,000' FNL and 100' FEL of Section 5 at Total Depth (13,000' MD).

NOTE: The Twin Creek and Nugget formations may be pressure depleted (fractured) at this location. Mud weight must be kept to a minimum while drilling this interval to minimize lost circulation. We will attempt to drill to TD without setting an intermediate casing string. However, if losses are severe and the hole cannot be stabilized a 9-5/8" intermediate drilling liner (47#/ft, L-80, BTC) will be set to protect the loss zones. If fluid losses can be controlled the hole size will be downsized to 9-7/8" into the Ankareh section.

UPRC Y.C.D. 5-1
Yellow Creek Deep Field
Page 5

<u>Interval</u> <u>TVD</u>	<u>MW</u> <u>(Ppg)</u>	<u>Vis</u> <u>(sec)</u>	<u>P.V.</u> <u>(cps)</u>	<u>Yld.Pt.</u> <u>(#/100sf)</u>	<u>W.L.</u> <u>(cc)</u>	<u>PH</u>
6,150-8,800	Fresh Water					
8,800-TD	8.6-8.8	27-45	8-10	16-20	10-12	8.5-11.0

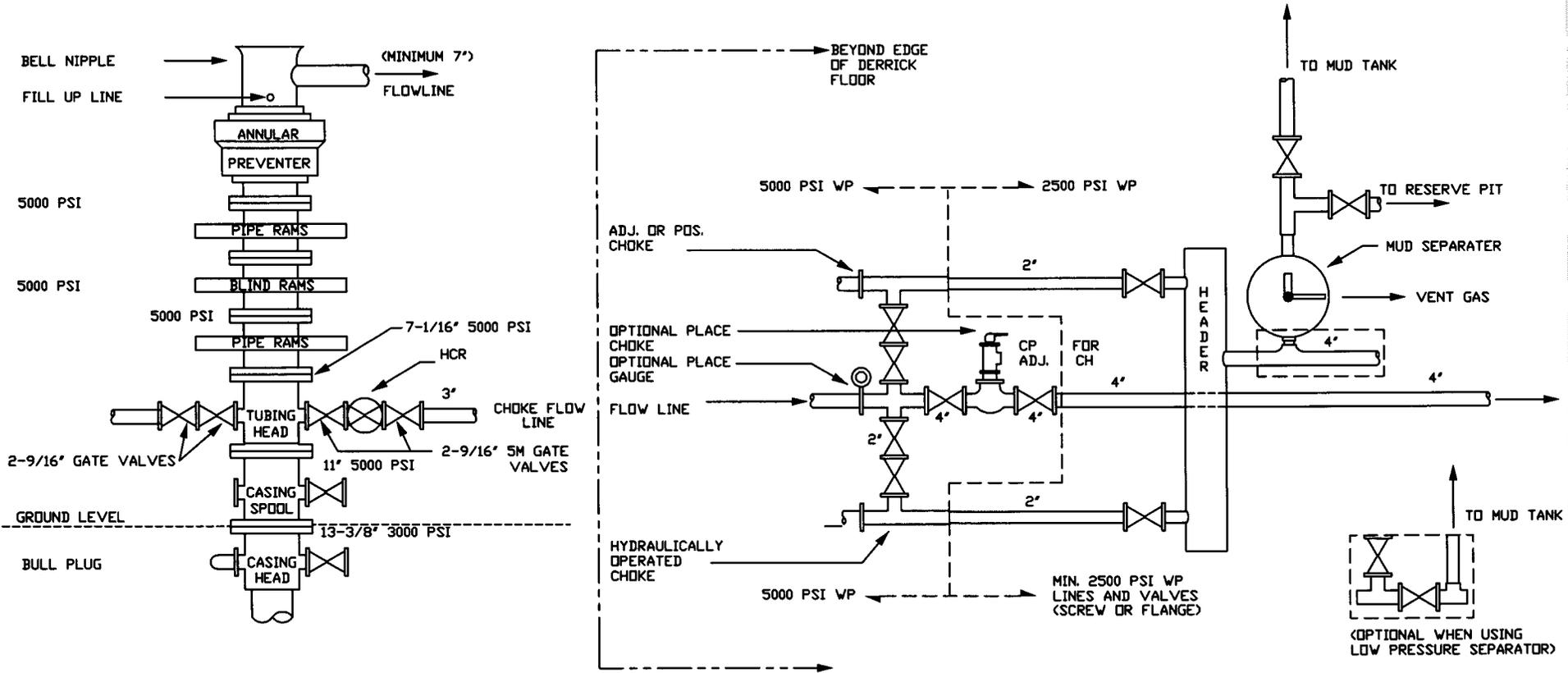
- * Drill as deep as hole conditions will allow with fresh water to maximize penetration rate. Pump Gel/polymer sweeps as necessary for hole cleaning.
 - * The Twin Creek and Nugget intervals may be pressure depleted. Calcium Carbonate sweeps may be used seal off seepage losses and prevent tight hole and stuck pipe.
 - * Maintain sufficient supplies of LCM material on location. If needed sweep hole with high vis pill containing 20-25 ppb of various size LCM. Liquid casing has been used with success in this interval.
 - * At the top of the Ankareh, or sooner if hole conditions dictate, convert to a low bentonite/polymer system as per mud program. Add 6-10 ppb high yield gel, .15 ppb Pac to lower fluid loss and .25-.5 ppb PHPA polymer to help stabilize shale sections in the Ankareh.
 - * Gas may be encountered in the Ankareh and below. Increases in connection and/or trip gas should be tested for the presence of H₂S. If needed treat fluid with 1-2 ppb Zinc Carbonate (1-2 ppb will control 800-1000 ppm H₂S) and raise PH to 11.0.
 - * The Phosphoria is known to contain H₂S and CO₂. Pretreat system with 2 ppb zinc carbonate and increase PH to 11 prior to drilling the Phosphoria. Discontinue additions of PHPA polymer when PH is increased. Test drilling mud for residual zinc at regular intervals to help maintain safe concentration of the material.
 - * A Garret Gas Train will be used for chemical analysis of the fluid to determine H₂S and CO₂ content.
 - * Treat Anhydrite contamination with soda ash and control rheology with polymer thinners and Desco-CF.
 - * Use lime to control fluid alkalinities.
 - * Keep mud weight as low as possible by running all solids removal equipment.
 - * Maintain sufficient barite on location to raise MW to 10.0 ppg if necessary.
 - * Ensure rig crews are familiar with H₂S safety and well control procedures. Run BOP drills weekly and note on IADC/Morning Reports and in PERC system.
18. Continue drilling to Total Depth at 13,000' MD / 12,925' TVD. Pump sweep and circulate bottoms up. Short trip to 13-3/8" intermediate casing. Circulate bottoms up. Drop multishot directional survey if no full record from MWD. Pull out of hole to run logs.
19. Rig up wireline services. Rig up lubricator if hole conditions warrant. Run the following logs:
- * DIL/Sonic/GR : TD to 13-3/8" shoe.
 - * LDT/CNL/GR : TD to 13-3/8" shoe.

UPRC Y.C.D. 5-1
Yellow Creek Deep Field
Page 6

- * FMI-Dipmeter : TD to 13-3/8" shoe.
 - * No tool insurance required.
 - * Fax logs in to Ft. Worth as soon as possible.
 - * Record Loggers' TD on IADC tour sheet.
20. If commercial pay exists, install 7" casing rams in top BOP and retest ram body to 5,000 psi. Make a conditioning trip to TD. Circulate and condition hole for casing. Pull out of hole standing pipe in derrick. Lay down BHA, Retrieve wear bushing.
21. Rig up casing crew. Casing is to have been previously cleaned, drifted, and strapped. Run casing as follows:
- * 7" differential fill float shoe
 - * 2 joints 7" 32.0 ppf L-80 AB Modified casing
 - * 7" differential fill float collar
 - * 7" 32.0 ppf L-80 AB Modified to \pm 3500'
 - * 7" AB Modified Pin X 7-5/8" SLX Box XO'
 - * 7-5/8" 39 ppf L-80 SLX to surface
 - * Thread-lok bottom three joints to include float equipment. Centralization to be determined based upon pay intervals.
22. Circulate and condition mud for a minimum of 1-1/2 casing volumes with rig pump. Cement casing as per attached program using a top and bottom plug (7"). Displace cement with fresh water and bump plug. Do not over displace. Plan to pump a premium quality cement to the top of Ankareh at 8,800' and a light weight slurry (12.7 ppg) into the 13-3/8" shoe.
23. Wait on cement a total of 8 hours prior to nipping down BOP's.
24. Nipple down BOP's and set 7-5/8" FMC casing slips with pipe in full tension. Machine 7-5/8" cutoff for metal-to-metal tubing head installation.
25. Lay down drill pipe and prepare to complete well with drilling rig.
26. Completion procedure to follow.

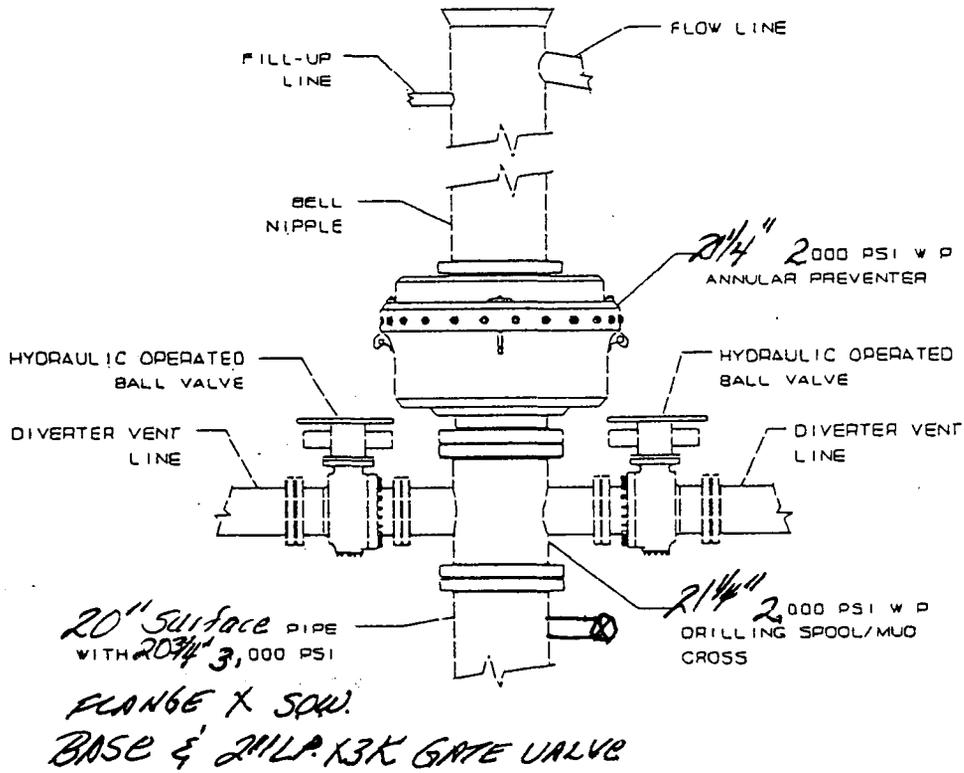
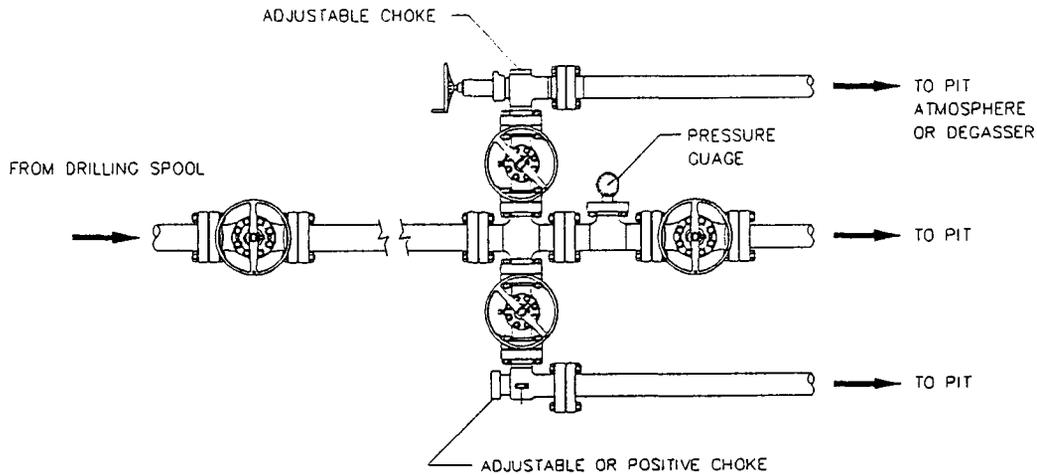
DRAWING NUMBER 7B

5000 # WORKING PRESSURE

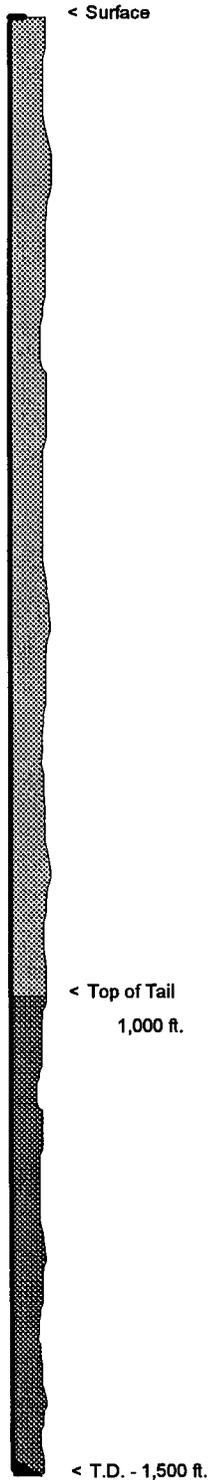


TYPICAL 2000 PSI

MANIFOLD



Well Data: 20 in. Surface Casing



Depth	1,500 ft.
Casing Size	20 in., 106 lbs./ft.
Open Hole Diameter	26 in.
BHST	80 °F
BHCT	80.0 °F
Total Excess	40 %
Lead Excess (calculated O.H.)	60.0 %
Tail Excess	0 %

Calculations:

Volume Factors:

Casing x Open Hole	1.5053 cu.ft./ft
Casing (Internal)	1.9713 cu.ft./ft

Top of Lead	Surface
Top of Tail	1,000 ft.

Lead System:

Total Lead Fill $(1,000 \times 1.5053 \times 1.6) / 1.79 = 1,346$ sks.

Tail System:

Open Hole Fill $(500 \times 1.5053 \times 1.) / 1.16 = 648$ sks.
 Casing Shoe Cement $(40 \times 1.9713) / 1.16 = 68$ sks.
 Total Tail Cement = 716 sks.

Cementing Systems

Lead System: 1,345 sks.

35:65 Poz:Class G + 6% D20 + 2% S1 + 0.25 pps D29

Mix Weight	:	12.7 PPG
Yield	:	1.79 cu.ft./sk.
Mix Water	:	9.42 gal./sk.

Tail System: 715 sks.

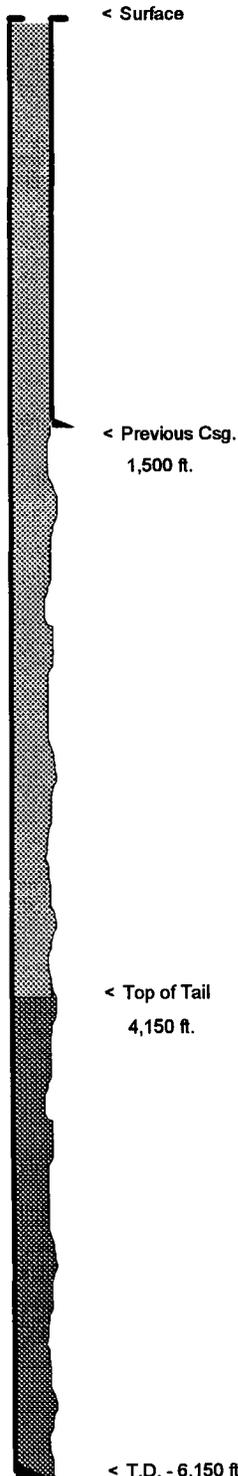
Class G + 2% S1 + 0.25 pps D29

Mix Weight	:	15.8 PPG
Yield	:	1.16 cu.ft./sk.
Mix Water	:	4.95 gal./sk.

Notice:

Performance parameters for cement systems recommended are typically taken from existing laboratory data. In some cases, data exist which duplicate the recommended systems and job environment, but when those data do not exist, extrapolations are made from data which most closely match the anticipated conditions. Sufficient lead-time should always be allowed, so that pilot samples/field blends can be run to verify system performance parameters, before actually pumping the job.

Well Data: 13 3/8 in. Intermediate Casing



Depth	6,150 ft.
Casing Size	13 3/8 in., 68 lbs./ft.
Open Hole Diameter	17 1/2 in.
Previous Csg. Depth	1,500 ft.
Previous Csg. Size	20 in., 106 lbs./ft.
BHST	146 °F
BHCT	114.8 °F
Total Excess	29 %
Lead Excess (calculated O.H.)	50.0 %
Tail Excess	0 %

Calculations:

Volume Factors:

Casing x Open Hole	0.6946 cu.ft./ft
Casing x Previous Casing	0.9956 cu.ft./ft
Casing (Internal)	0.8407 cu.ft./ft

Top of Lead	Surface
Top of Tail	4,150 ft.

Lead System:

Open Hole Fill	$(2,650 \times 0.6946 \times 1.5) / 1.77 = 1,561$ sks.
Previous Casing Fill	$(1,500 \times 0.9956) / 1.77 = 845$ sks.
Total Lead Cement	= 2,405 sks.

Tail System:

Open Hole Fill	$(2,000 \times 0.6946 \times 1.) / 1.15 = 1,209$ sks.
Casing Shoe Cement	$(40 \times 0.8407) / 1.15 = 29$ sks.
Total Tail Cement	= 1,239 sks.

Cementing Systems

Lead System: 2,405 sks.

35:65 Poz:Class G + 6% D20 + 0.25% B71 + 0.25 pps D29

Mix Weight	:	12.7 PPG
Yield	:	1.77 cu.ft./sk.
Mix Water	:	9.37 gal./sk.

Tail System: 1,240 sks.

Class G + 0.25% B71 + 0.25 pps D29

Mix Weight	:	15.8 PPG
Yield	:	1.15 cu.ft./sk.
Mix Water	:	4.96 gal./sk.

Notice:

Performance parameters for cement systems recommended are typically taken from existing laboratory data. In some cases, data exist which duplicate the recommended systems and job environment, but when those data do not exist, extrapolations are made from data which most closely match the anticipated conditions. Sufficient lead-time should always be allowed, so that pilot samples/field blends can be run to verify system performance parameters, before actually pumping the job.

PRIMARY CEMENTING PROPOSAL

7 IN. PRODUCTION CASING

Union Pacific Resources

Yellow Creek Deep 5-1

Well Location

Field : Yellow Creek Deep
County : Summit
State : Utah
Country : USA

Prepared for : Mr. Rene St. Pierre

Service Point : ROCK SPRINGS, WY

Business Phone : 307-362-3621

Date Prepared : 8/20/98

FAX No. : 307-382-8156

Prepared by : J.A. Fouras

Phone : (817) 321-6366

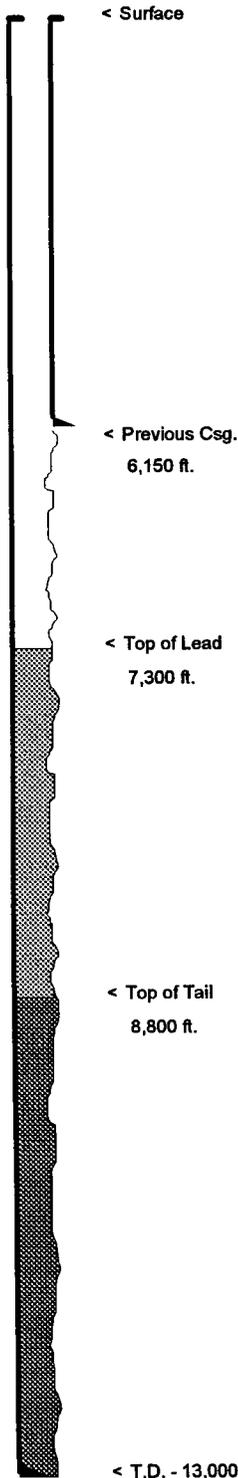
FAX : (817) 321-6731

E-Mail address : fouras@rock-springs.dowell.slb.com

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Well Data: 7 in. Production Casing



Depth	13,000 ft.
Casing Size	7 in., 32 lbs./ft.
Open Hole Diameter (Lead)	12 1/4 in.
Open Hole Diameter (Tail)	9 7/8 in.
Previous Csg. Depth	6,150 ft.
Previous Csg. Size	13 3/8 in., 68 lbs./ft.
BHST	220 °F
BHCT	174.4 °F
Lead Excess (calculated O.H.)	10 % - in 12 1/4" OH
Tail Excess	40 % - in 9 7/8" OH

Calculations:

Volume Factors:

Casing x 9-7/8" Open Hole	0.2646 cu.ft./ft
Casing x 12-1/4" Open Hole	0.5512 cu.ft./ft
Casing x Previous Casing	0.5735 cu.ft./ft
Casing (Internal)	0.2037 cu.ft./ft

Top of Lead	7,300 ft.
Top of Tail	8,800 ft.

Lead System:

Total Lead Fill $(1,500 \times 0.5512 \times 1.1) / 1.75 = 519.7$ sks.

Tail System:

Open Hole Fill $(4,200 \times 0.2646 \times 1.4) / 1.15 = 1,350$ sks.
 Casing Shoe Cement $(40 \times 0.2037) / 1.15 = 7$ sks.
 Total Tail Cement = 1,357 sks.

Cementing Systems

Lead System: 520 sks.

50:50 Poz:Class G + 8% D20 + 0.5% D112 + 0.2% D46 + 0.5% B71

Mix Weight	:	12.5 PPG
Yield	:	1.75 cu.ft./sk.
Mix Water	:	9.15 gal./sk.

Tail System: 1,355 sks.

Class G + 0.8% B14 + 0.2% D800 + 0.1% D65

Mix Weight	:	15.8 PPG
Yield	:	1.15 cu.ft./sk.
Mix Water	:	4.95 gal./sk.

Notice:

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PRIMARY CEMENTING PROPOSAL

9 5/8 IN. DRILLING LINER

*Contingency
LINER
ONLY FOR
Hole for
Turn creek on
Nuggett*

Union Pacific Resources

Yellow Creek Deep 5-1

Well Location

Field : Yellow Creek Deep
County : Summit
State : Utah
Country : USA

Prepared for : Mr. Rene St. Pierre

Service Point : ROCK SPRINGS, WY

Business Phone : 307-362-3621

Date Prepared : 8/20/98

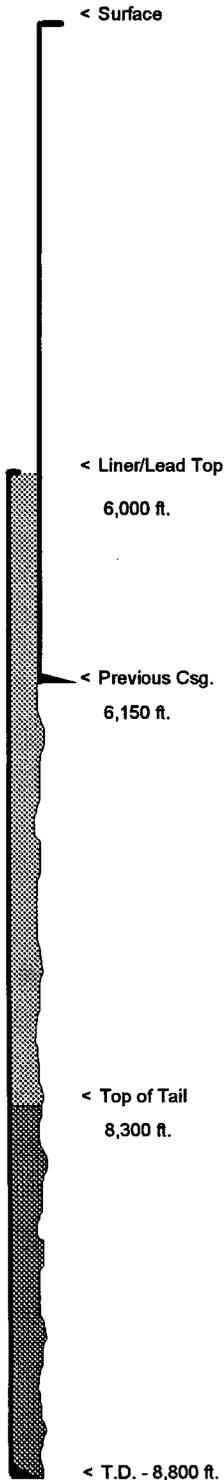
FAX No. : 307-382-8156

Prepared by : J.A. Fouras
Phone : (817) 321-6366
FAX : (817) 321-6731
E-Mail address :

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Well Data: 9 5/8 in. Drilling Liner



Depth	8,800 ft.
Liner Size	9 5/8 in., 53.5 lbs./ft.
Liner Top	6,000 ft.
Open Hole Diameter	12 1/4 in.
Previous Csg. Depth	6,150 ft.
Previous Csg. Size	13 3/8 in., 68 lbs./ft.
BHST	166 °F
BHCT	133.5 °F
Total Excess	8 %
Lead Excess (calculated O.H.)	10.0 %
Tail Excess	0 %

Calculations:

Volume Factors:

Liner x Open Hole	0.3132 cu.ft./ft
Liner x Previous Casing	0.3355 cu.ft./ft
Liner (Internal)	0.3991 cu.ft./ft
Previous Casing (Internal)	0.8407 cu.ft./ft.

Top of Lead	6,000 ft.
Top of Tail	8,300 ft.

Lead System:

Liner Lap Fill	$(2,150 \times 0.3132 \times 1.1) / 1.75 = 423 \text{ sks.}$
Liner Lap Fill	$(150 \times 0.3355) / 1.75 = 29 \text{ sks.}$
Liner Cap	

Tail System:

Open Hole Fill	$(500 \times 0.3132 \times 1.) / 1.15 = 136 \text{ sks.}$
Casing Shoe Cement	$(40 \times 0.3991) / 1.15 = 14 \text{ sks.}$
Total Tail Cement	= 150 sks.

Cementing Systems

Lead System: 450 sks.

50:50 Poz:Class G + 8% D20 + 0.5% D112 + 0.2% D46 + 0.3% B71

Mix Weight	:	12.5 PPG
Yield	:	1.75 cu.ft./sk.
Mix Water	:	9.15 gal./sk.

Tail System: 150 sks.

Class G + 0.7% B14 + 0.1% D65

Mix Weight	:	15.8 PPG
Yield	:	1.15 cu.ft./sk.
Mix Water	:	4.95 gal./sk.

Notice:

Performance parameters for cement systems recommended are typically taken from existing laboratory data. In some cases, data exist which duplicate the recommended systems and job environment, but when those data do not exist, extrapolations are made from data which most closely match the anticipated conditions. Sufficient lead-time should always be allowed, so that pilot samples/field blends can be run to verify system performance parameters, before actually pumping the job.

PRIMARY CEMENTING PROPOSAL**7 IN. PRODUCTION CASING****With 9-5/8" Drilling Liner**

Union Pacific Resources***Yellow Creek Deep 5-1***

Well Location

Field : Yellow Creek Deep 5-1
County : Summit
State : Utah
Country : USA

Prepared for : Mr. Rene St. Pierre

Service Point : ROCK SPRINGS, WY

Business Phone : 307-362-3621

Date Prepared : 8/20/98

FAX No. : 307-382-8156

Prepared by : J.A. Fouras

Phone : (817) 321 - 6366

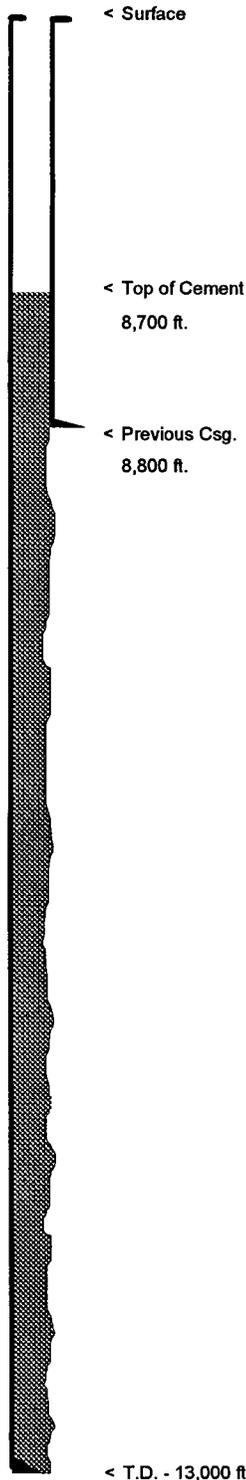
FAX : (817) 321 - 6731

E-Mail address : fouras@rock-springs.dowell.slb.com

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Well Data: 7 in. Production Casing



Depth	13,000 ft.
Casing Size	7 in., 32 lbs./ft.
Open Hole Diameter	8 1/2 in.
Previous Csg. Depth	8,800 ft.
Previous Csg. Size	9 5/8 in., 53.5 lbs./ft.
BHST	220 °F
BHCT	174.4 °F
Total Excess	40 %
Tail Excess	40 %

Calculations:

Volume Factors:

Casing x Open Hole	0.1268 cu.ft./ft
Casing x Previous Casing	0.1318 cu.ft./ft
Casing (Internal)	0.2037 cu.ft./ft

Top of Cement 8,700 ft.

Cement System:

Open Hole Fill	$(4,200 \times 0.1268 \times 1.4) / 1.15 = 647$ sks.
Previous Casing Fill	$(100 \times 0.1318) / 1.15 = 11$ sks.
Casing Shoe Cement	$(40 \times 0.2037) / 1.15 = 7$ sks.
Total Tail Cement	= 665 sks.

Cementing Systems

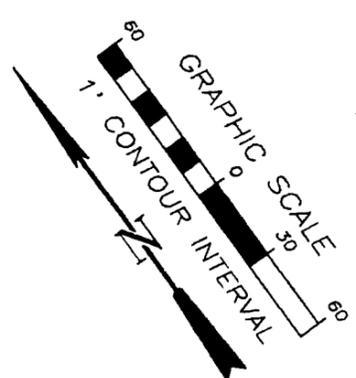
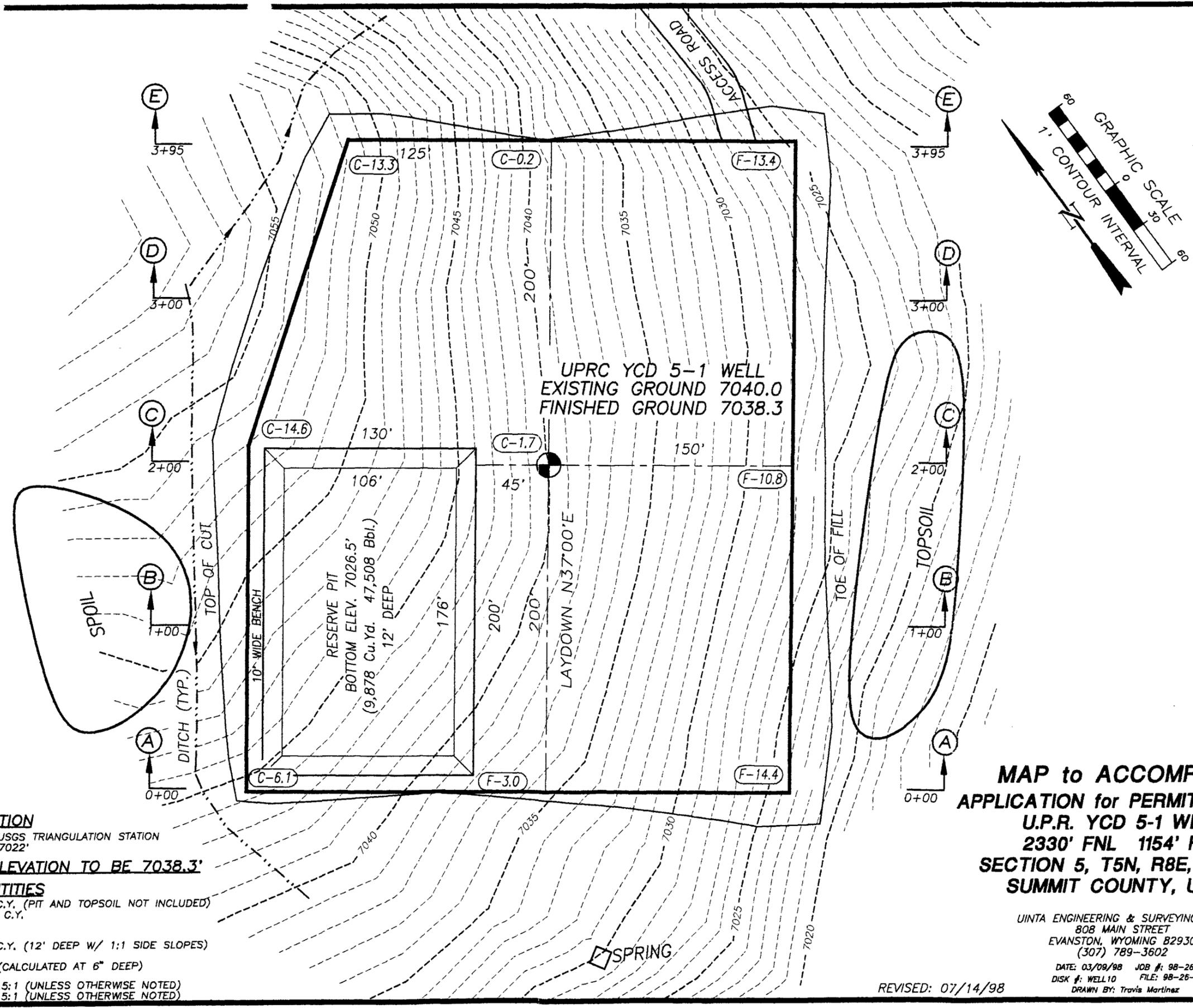
Cement System: 665 sks.

Class G + 0.8% B14 + 0.2% D800 + 0.1% D65

Mix Weight	:	15.8 PPG
Yield	:	1.15 cu.ft./sk.
Mix Water	:	4.95 gal./sk.

Notice:

Performance parameters for cement systems recommended are typically taken from existing laboratory data. In some cases, data exist which duplicate the recommended systems and job environment, but when those data do not exist, extrapolations are made from data which most closely match the anticipated conditions. Sufficient lead-time should always be allowed, so that pilot samples/field blends can be run to verify system performance parameters, before actually pumping the job.



UPRC YCD 5-1 WELL
 EXISTING GROUND 7040.0
 FINISHED GROUND 7038.3

RESERVE PIT
 BOTTOM ELEV. 7026.5'
 (9,878 Cu.Yd. 47,508 Bbl.)
 12' DEEP

LAYDOWN N37°00'E

BASIS OF ELEVATION

ELEVATIONS BASED ON USGS TRIANGULATION STATION
 "EVANSTON" ELEVATION 7022'

FINISHED PAD ELEVATION TO BE 7038.3'

WELL PAD QUANTITIES

EXCAVATION = 18,733 C.Y. (PIT AND TOPSOIL NOT INCLUDED)

EMBANKMENT = 16,321 C.Y.

SPOIL = 2,412 C.Y.

RESERVE PIT = 9,878 C.Y. (12' DEEP W/ 1:1 SIDE SLOPES)

TOPSOIL = 2,801 C.Y. (CALCULATED AT 6" DEEP)

ALL CUT SLOPES ARE 1.5:1 (UNLESS OTHERWISE NOTED)
 ALL FILL SLOPES ARE 1.5:1 (UNLESS OTHERWISE NOTED)

MAP to ACCOMPANY
APPLICATION for PERMIT to DRILL
U.P.R. YCD 5-1 WELL
2330' FNL 1154' FEL
SECTION 5, T5N, R8E, SLB&M
SUMMIT COUNTY, UTAH

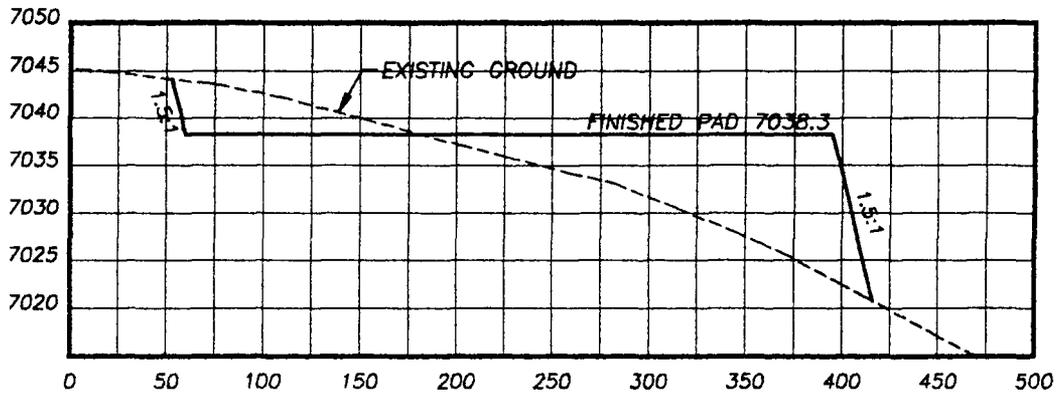
UINTA ENGINEERING & SURVEYING, INC.
 808 MAIN STREET
 EVANSTON, WYOMING 82930
 (307) 789-3602

DATE: 03/09/98 JOB #: 98-26-03
 DISK #: WELL10 FILE: 98-26-03
 DRAWN BY: Travis Martinez

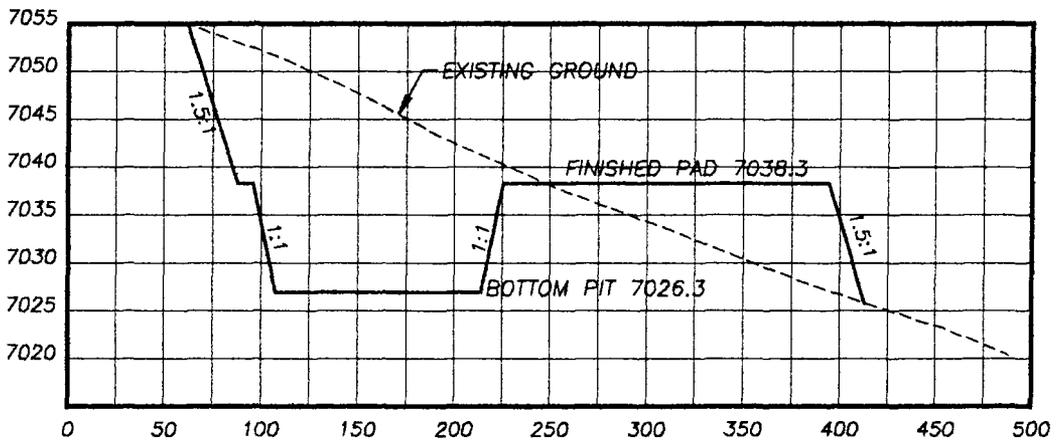
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SHEET 2 OF 4

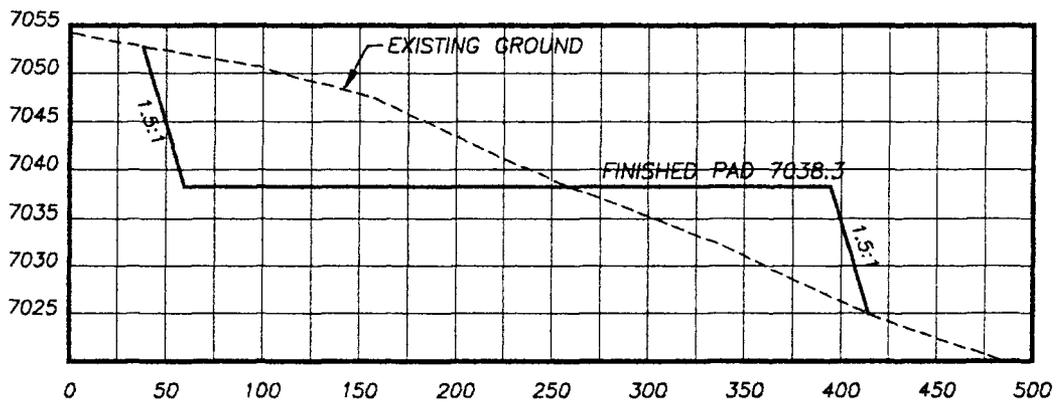
SECTION A



SECTION B



SECTION C



HORIZ. SCALE: 1" = 100'
 VERT. SCALE: 1" = 20'

**MAP to ACCOMPANY
 APPLICATION for PERMIT to DRILL
 U.P.R. YCD 5-1 WELL
 2330' FNL 1154' FEL
 SECTION 5, T5N, R8E, SLB&M
 SUMMIT COUNTY, UTAH**

UINTA ENGINEERING & SURVEYING, INC.
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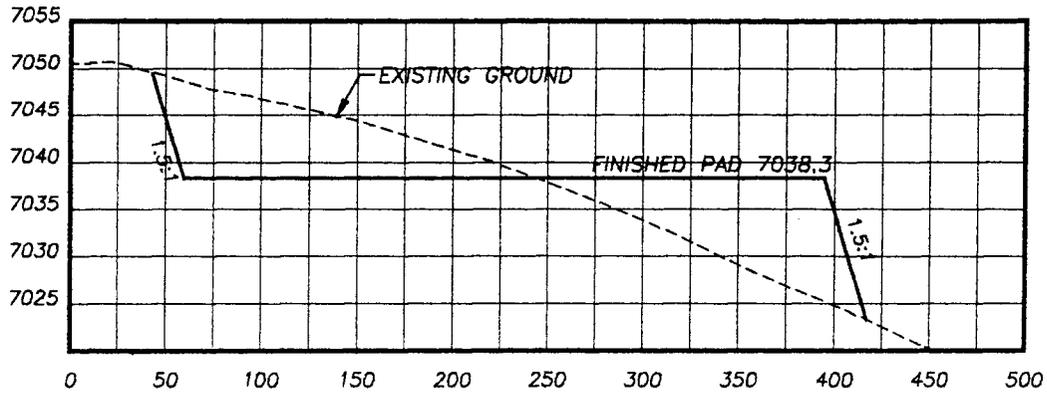
DATE: 03/09/98 JOB #: 98-26-03
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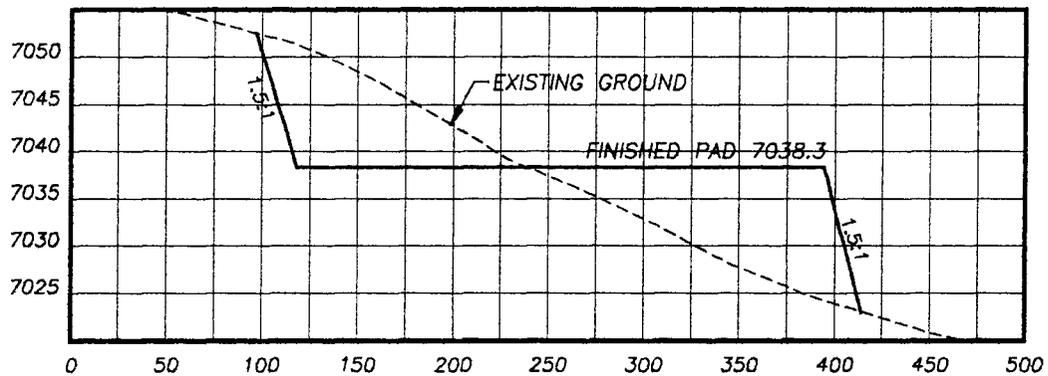
SHEET 3 OF 4

ALL CUT SLOPES ARE 1.5 : 1 (UNLESS OTHERWISE NOTED)
 ALL FILL SLOPES ARE 1.5 : 1 (UNLESS OTHERWISE NOTED)

SECTION D



SECTION E



HORIZ. SCALE: 1" = 100'
 VERT. SCALE: 1" = 20'

**MAP to ACCOMPANY
 APPLICATION for PERMIT to DRILL
 U.P.R. YCD 5-1 WELL
 2330' FNL 1154' FEL
 SECTION 5, T5N, R8E, SLB&M
 SUMMIT COUNTY, UTAH**

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 DRAWN BY: Travis Martinez

ALL CUT SLOPES ARE 1.5 : 1 (UNLESS OTHERWISE NOTED)
 ALL FILL SLOPES ARE 1.5 : 1 (UNLESS OTHERWISE NOTED)

H2S Contingency Plan

for

UPRC YCD 5-1

Township 5N, Range 8E

NE/4 Section 5

Summit County, Utah

Union Pacific Resources Co
Wahsatch Gathering System
86 Allegiance Circle
Evanston, WY. 82930

Table of Contents

Introduction and directions

I. Responsibilities and Duties

- A. All personnel
- B. Drilling Foreman
- C. Rig Supervisor- Toolpusher
- D. Safety Consultant
- E. Operations Center Foreman

II. Drilling Rig Layout

- A. Location

III. Safety Procedures

- A. Training
- B. Operating Conditions
- C. Public Protection Plan
- D. Emergency Rescue Procedures

IV. H₂S Safety Equipment on Location

V. Well Ignition Procedures

- A. Ignition Equipment
- B. Ignition Procedures

VI. Residents- Public in Roe

- A. Map of area around location

VII. Emergency Phone Directory

- A. Union Pacific Resources
- B. Emergency Service Phone List

VIII. Reference for Hydrogen Sulfide and Sulfur Dioxide

Introduction

It is the policy of Union Pacific Resources Corporation to provide a safe and healthful work environment for all of its employees as well as contractors that may work on UPRC leases. Union Pacific Resources makes a continued effort to comply with laws and regulations relative to worker safety and health, and to manage all operations in a manner to reduce risk.

The following is a H₂S contingency plan for the UPR YCD 5-1 well. It is designed for personnel working on this project to follow in case of an accidental release of hydrogen sulfide during drilling and or drilling operations. For the plan to be effective, all personnel must review and be familiar with onsite duties as well as the safety equipment involved.

The purpose of this plan is to act as a guideline for personnel working on the wellsite in the event of a sudden release of hydrogen sulfide. All personnel working on the wellsite as well as service personnel that may travel to location on an unscheduled basis must be familiar with this program. The cooperation and participation of all personnel involved with the drilling and completion operations is necessary for this plan to be effective.

Directions to location: These directions start from the eastbound I-80 exit # 3 on highway 151 (yellow creek road) near the Kentucky Fried Chicken store. Follow country road 151 (yellow creek road) south for 4.2 miles on pavement to a gate on the right hand side of the road. There is a large yellow and black sign warning of "Caution Hydrogen Sulfide" with the UPR logo. Turn right and follow this dirt road for 1.9 miles to a hairpin bend. At this bend in the road, bear left and follow the road 1 mile to the location.

I. Duties & Responsibilities

In order to assure proper execution of the contingency plan, it is essential that one person be responsible for and in complete charge of implementing the procedures outlined in this plan. The order of responsibility will be as follows:

1. Union Pacific Resources drilling or completion representative on location - if unable to perform his/ her duties
2. Alternate UPRC representative - if unable to perform his/ her duties
3. Rig Toolpusher/ Supervisor - if unable to perform his/ her duties
4. Safety consultant representative- if available

A. All Personnel

1. Always be alert for possible H2S alarms- both audible and visual.
2. Be familiar with location of Safe Briefing Areas (SBA) and protective breathing equipment.
3. Develop a "wind awareness". Be aware of prevailing wind direction as well as nearby uphill areas, should there be no wind.
4. Familiarize yourself with nearest escape routes for safe evacuation
5. Should H2S alarm sound, DON'T PANIC - Remain calm and follow instructions of person in charge.
6. If the H2S alarms sound:
 - a. Essential personnel shall don the appropriate respiratory protective equipment and follow company procedures. Essential personnel will continue to wear respiratory protective equipment until the area is deemed safe (H2S concentration less than 10 PPM)
 - b. Non-essential personnel shall evacuate to the appropriate safe briefing area using escape breathing systems. Wait there for further instructions from UPRC drilling representative.

- C. Initiate rescue protocol if necessary- following training procedures.

B. UPRC Foreman

1. The UPRC on site foreman will confirm that all personnel on location at any time are trained in H2S safety and aware of above list of duties.

2. The UPRC foreman will ensure that all safety and emergency procedures are observed by all personnel.

3. The UPRC foreman will make an effort to keep the number of personnel on location to a minimum and to ensure that only essential personnel are on location during critical operations.

4. Should an extreme danger condition exist, the UPRC foreman will:

a. Assess the situation and advise all personnel by appropriate means of communication.

b. Be responsible for determining that the extreme danger condition is warranted and the red flag shall be posted at location entrance.

c. Go to safe briefing area and give clear instructions relative to hazard on location, and actions for personnel to follow.

d. Notify company and regulatory groups of current situation as outlined in company protocol. Follow appropriate emergency procedures for emergency services notification.

e. Proceed to rig floor and supervise operations with rig supervisor. Take action to control and reduce the H2S hazard.

f. Ensure that essential personnel are properly protected with supplied air breathing equipment and that non-essential personnel are in a "poison gas free" area.

g. Be responsible for authorizing evacuation of persons/ residents in area surrounding the drilling location.

h. Commence any ignition procedures if ignition criteria are met.

C. Rig Supervisor- Toolpusher

1. If the UPRC on site foreman is unable to perform his/ her duties, and the alternate foreman is also unable or unavailable to perform his duties, the rig toolpusher will assume command of wellsite operations and all responsibilities listed above for drilling foreman.

2. Ensure that all rig personnel are properly trained to work in H2S environment and fully understand purpose of H2S alarms, and actions to take when alarms activate. Ensure that all crew personnel understand the buddy system, safe briefing areas, and individual duties as well as emergency evacuation procedures.

3. Should an extreme danger operational condition arise, the rig toolpusher shall assist the UPRC foreman by:

- a. Proceeding to the rig floor and assist in supervising rig operations.
- b. Ensure that only essential working personnel remain in hazardous areas.
- c. Ensure that all crew members that remain in hazardous area, wear respiratory protective equipment until notified that area is "clear" of any toxic gases.
- d. Assign rig crew member or other service representative to block entrance to location. No unauthorized personnel will be allowed entry to location.
- e. Help to determine hazardous "danger zones" on location using portable detection equipment and position electric fans to move gas in any high concentration areas.

D. Safety Consultant

1. During normal operations (no H2S present), the safety consultant will be responsible for the following:

- a. Ensure that all wellsite safety equipment is in place and operational.
- b. Ensure that all wellsite personnel are familiar with location safety layout and operation of all safety equipment.
- c. Assist the UPRC foreman in performing weekly H2S drills for location personnel.

2. When an operational condition is classified as extreme danger, the safety consultant will be responsible for the following:

- a. Account for all wellsite personnel
- b. Assess any injuries and direct first aid measure.
- c. Ensure that all safety and monitoring equipment is functioning properly and available.
- d. Monitor the safety of wellsite personnel
- e. Maintain a close communication with UPRC foreman.
- f. Be prepared to assist UPRC foreman with support for rig crew or other personnel using breathing equipment.
- g. Be prepared to assist UPRC foreman with emergency procedures including possible well ignition.
- h. Be prepared to assist with evacuation of any area residents or other personnel working in the immediate area.

E. Senior Operations Superintendent

1. The UPRC operations superintendent will be responsible for notifying and maintaining contact with company production manager as well as other company supervisory personnel.

2. Maintain communication with the UPRC on site foreman to proceed with any other assistance that might be required.

3. Travel to wellsite if appropriate

4. Assist UPRC on site foreman with all other notifications - both company and regulatory.

II. Location Layout

A. Location

1. All respiratory protective equipment and H₂S detection equipment will be rigged up when the drilling rig is 3 days or approximately 500 feet above the first zone suspected to contain hydrogen sulfide. This advance rig up will ensure that all personnel are trained and safety equipment in place prior to entering any zone potentially containing hydrogen sulfide. The rig crews and other service personnel will be trained at this time.

2. The drilling rig will be situated on location to allow for the prevailing winds to blow across the rig toward the circulation tanks or at right angles to the lines from the B.O.P.s to the circulation tanks.

3. The entrance to the location is designed so that it can be barricaded if a hydrogen sulfide emergency condition arises. An auxiliary exit route will be available so that in case of an emergency, a shift in wind direction would not prevent escape from the location.

4. A minimum of 2 safe briefing areas (SBA) shall be designated for assembly of personnel during emergency conditions. These will be located at least 150 ft. or as practical, from the wellbore and in such a location that at least one area will be upwind of the well at all times. Upon recognition of an emergency situation, all personnel will be trained to assemble at the designated briefing area for instructions.

5. Smoking areas will be established and "No Smoking" signs will be posted around the location.

6. Reliable 24 hour radio and telephone communications will be available at the drilling foremen's office.

7. A mud-gas separator will be rigged up and manifolded to the choke system.

8. All equipment that might come in to contact with hydrogen sulfide - drill pipe, drill stem test tools, drilling tubulars blowout preventers, casing, choke system - will meet UPRC's metallurgy requirements for H₂S service.

9. The drilling rig will have a continuous electronic H₂S detection system that automatically will activate visible and audible alarms if hydrogen sulfide is detected. The visible light will activate if 10 PPM H₂S is present. The audible siren will activate if 15 PPM or higher concentration is present. There will be at least 4 H₂S sensors in place on the drilling rig. They will be located to detect the presence of hydrogen

sulfide in areas where it is most likely to come to surface. The sensor head locations will be: 1) rig floor by driller's console, 2) substructure area near the bell nipple, 3) the shale shaker, 4) the mud mixing area. Additional sensors will be positioned at the discretion of the drilling foreman. At least 1 light and 1 siren will be placed on the rig to indicate the presence of hydrogen sulfide. The light and siren will be strategically placed to be visible to all personnel on the drill site. Additional alarm lights & sirens may be added to ensure that all personnel on the drill site are able to notice the alarms at any time.

10. The H₂S detection equipment will be calibrated as recommended by the manufacturer. Calibration records will be maintained on location.

11. At least 4 windsocks will be placed around the drill site to ensure that wind direction can be readily determined by everyone on the drilling location. One windsock will be mounted on or near the rig floor to be readily visible to rig crews when tripping pipe.

12. All respiratory protective equipment will be NIOSH/MSHA approved positive pressure type and maintained according to manufacturer's guidelines. All breathing air used for this equipment will be CGA type Grade D breathing air. Battery powered voice mikes will be available for communication when wearing masks.

13. Both 30 minute self-contained breathing apparatuses (SCBA) and workline units with escape cylinders will be available on location. There will be sufficient numbers of this supplied air breathing equipment on location to ensure that all personnel on location have 1 piece of equipment available to them. All respiratory protective equipment will use nose cups to prevent fogging in temperatures below 32 F. Spectacle kits will be available for personnel that require corrective lenses when working under mask.

14. Electric explosion-proof ventilating fans (bug blowers) will be available to provide air movement in enclosed areas where gas might accumulate.

15. H₂S drills will be conducted at least weekly to ensure that all well site personnel are competent in emergency donning procedures. These drills will be recorded in the driller's log.

III. Safety Procedures

A. Training

All personnel who come onto the drilling location must be properly trained in hydrogen sulfide safety. The personnel shall carry documentation with them indicating that the training has occurred within the previous 12 months.

Training topics shall include at a minimum:

1. Hazards and characteristics of hydrogen sulfide and symptoms of exposure to this gas.
2. Proper use, care and limitations of respiratory protective equipment with hands on practice.
3. Use of both fixed and portable detection toxic gas equipment.
4. Work practices to reduce opportunities for toxic gas exposure as well as confined space procedures.
5. First aid for toxic gas exposure and resuscitation equipment.
6. The buddy system
7. Emergency evacuation procedures
8. A review of the contingency plan for the well.

B. Operating Conditions

A three color- flag warning system will be used to notify personnel approaching the drill site as to operating conditions on the wellsite. This system is in compliance with BLM OO # 6 and follows industry standards.

Green Flag - Potential Danger

Yellow Flag - Moderate Danger

Red Flag- Extreme Danger - Do Not approach if red flag is flying.

C. Public Protection Plan

The well location is less than 1 mile from the city limits of Evanston, WY. Union Pacific Resources has conducted thorough area review as well as computer modeling to review areas of concern should H₂S be released to the atmosphere. A copy of the UPRC Wahsatch Gathering System "Emergency Response Program" is included to provide greater detail as to any residents in the area or the public that might be in the gas dispersion area as well as local services and personnel involved with any emergency response.

Please refer to the Public Protection Section (Section 5) in the UPR WGS Emergency Response Plan for a complete description of public protection actions, including incident level identification, shelter-in-place, and evacuation plan instructions. Potential and actual releases, incidents, and public protection responses will be coordinated immediately with the WGS Control Room Operator. Protocols established in the UPR WGS Emergency Response Plan on alerting and notification procedures, establishing command authorities, communications, and coordination will be strictly followed.

It is the intent of this plan to establish primary responsibility for well control and release mitigation to the UPR drilling well site supervisor. Public protection actions will be the responsibility of the WGS Operations Superintendent and the WGS Operations team, in cooperation with the Uinta County Fire Protection team. This protocol is established in the UPR WGS Emergency Response Plan.

D. Emergency Rescue Procedures

Well site personnel should not attempt emergency rescues unless they have been properly trained. A trained person who discovers another person overcome by hydrogen sulfide should **not attempt to rescue without donning the proper breathing equipment**. When making an emergency rescue always use the following procedures:

1. Don rescue breathing equipment before attempting to rescue someone.
2. Remove the victim from the contaminated area to an area free of toxic gas by traveling upwind or cross wind. Be certain that you are in a safe area before removing your breathing equipment.
3. If the victim is not breathing, initiate mouth- to mouth resuscitation immediately. Follow CPR guidelines and replace mouth to mouth with a bag mask resuscitator if available.

4. Treat the victim for shock, keeping the victim warm and calm. Never leave the victim alone.

5. Any personnel who experience hydrogen sulfide exposure must be taken to a hospital for examination and their supervisor notified of the incident.

6. Their supervisor shall follow the company Emergency Preparedness plan .

IV. H2S Safety Equipment on Location

Item	Amount	Description
1.	1	safety trailer with a cascade system of 10-300 cu. ft bottles of compressed breathing air complete with high pressure regulators
2.	At least 1000 ft.	low pressure airline equipped with Hanson locking fittings. This airline will be rigged up with manifolds to supply breathing air to the rig floor, substructure, derrick, shale shaker area, and mud mixing areas. Three high pressure refill hoses will be attached to cascade systems for cylinder refill.
3.	Twelve (12)	Scott 30 minute self contained breathing apparatuses (SCBA).
4.	Twelve (12)	Scott airline units with emergency escape cylinders.
5.	One (1)	4- channel continuous electronic H2S monitor with audible and visual alarms. The set points for these alarms are 10 PPM for the low alarm and 15 PPM for the high alarm.
6.	Two (2)	Sensidyne portable hand operated pump type detection units with tubes for hydrogen sulfide and sulfur dioxide.
7.	One (1)	oxygen resuscitator with spare oxygen cylinder.
8.	One (1)	trauma first aid kit
9.	One (1)	stokes stretcher and one (1) KED.
10.	Four	wind socks
11.	At least one (1)	well condition sign with 3 flag system.
12.	Two (2)	Safe Briefing Area (SBA) signs
13.	One (1)	fire blanket

- | | | |
|-----|-----------|---|
| 14. | One (1) | set air splints |
| 15. | Two (2) | electric explosion proof fans |
| 16. | One (1) | bullhorn and chalk board |
| 17. | Three (3) | 300 cu. ft. air bottles for the safe briefing area. |
| 18. | Two (2) | 30 # fire extinguishers |
| 19. | Six (6) | battery powered voice mikes for communication when wearing air masks. |
| 20. | One (1) | battery powered combustible gas meter |

A drawing of the drilling location will be inserted in this page showing the actual placement of the all safety equipment relative to the other equipment on the drill site. This drawing will be made shortly after the rig up on location.

V. Well Ignition Procedures

If it should become apparent that a uncontrolled release of hydrogen sulfide to the atmosphere may endanger the health and safety of the public or well site personnel, the UPRC drilling foreman will make a decision to ignite the well. The following procedure should be followed before attempting to ignite the well.

A. Ignition equipment - The following equipment will be available on-site for use by the ignition team.

1. 2 12 gauge flare guns with flare shells
2. 2 500 ft. Fire resistant retrieval ropes
3. 1 portable combustible gas meter
4. Self contained breathing apparatus (SCBA) for each member of the ignition team.
5. 1 backup vehicle with communication equipment

B. Ignition Procedures

1. The UPRC on site foreman will ensure that well site personnel are evacuated to a safe area upwind of the well bore prior to any ignition action.

2. The UPRC foreman and a designated partner "buddy" backed up by well site safety personnel will comprise the ignition team. All team members will be wearing 30 minute SCBAs.

3. The backup crew will be positioned near a radio equipped vehicle at a safe distance from the sour gas release. They will standby to rescue the actual team igniting the well.

4. The partner of the ignition team will carry a combustible gas/ hydrogen sulfide meter to continuously monitor the area in which they are working and define the perimeter of the gas cloud.

5. The UPRC foreman will carry the flare gun and shells.

6. The ignition team will determine the hazardous area and establish safe working perimeters. Once this is identified the team will proceed upwind of the leak and fire into the area with flare gun. If trouble is encountered in trying to light the leak, retry to ignite by firing the flare shells at 45 and 90 angles to the gas source, but DO NOT approach closer to the leak.

7. After ignition, monitor for sulfur dioxide and work with the support group to restrict access to the contaminated area.

VI. Residents - Public in Radius of Exposure (ROE)

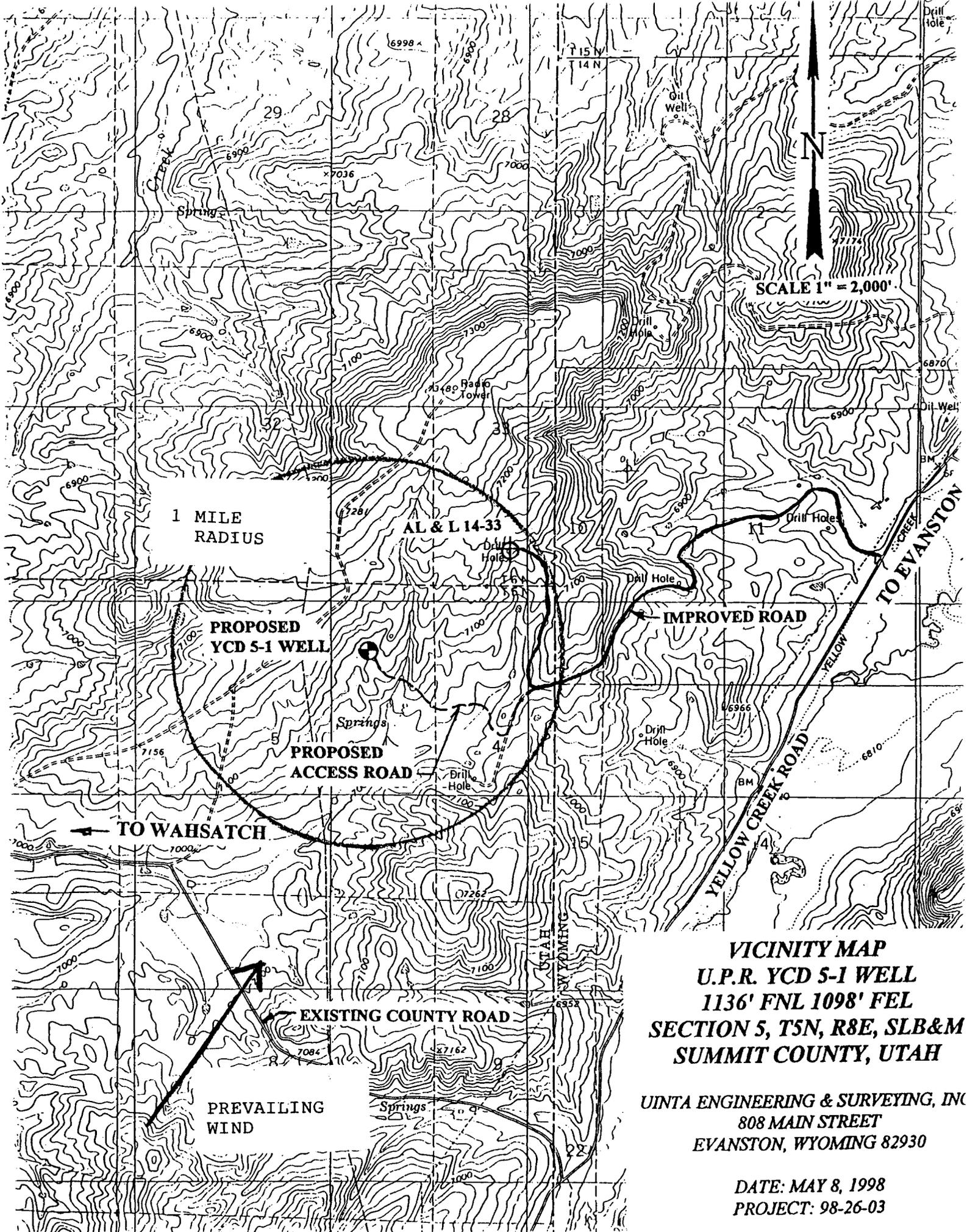
The Wahsatch Gathering System (WGS) Emergency Response Plan provides detail as to the public in ROE, contacts for residents and emergency services support contacts and protocols.

VII. Emergency Phone Directory

A. Union Pacific Resources
 86 Allegiance Circle
 Evanston, WY. 82930

(307) 789-1573

<u>Title</u>	<u>Name</u>		<u>Phone</u>
Drilling Superintendent	Rene St. Pierre	Office	(817) 877-7679
		Home	(817) 441-5068
		Cell	(817) 832-6085
Overthrust Area Senior Operations Superintendent	M.P. (Pete) Straub	Office	(307) 789-1573
		Home	(307) 789-1576
		Cell	(307) 799-8496
Engineering	Julie Martinez	Office	(817) 877-7936
		Home	(817) 788-8740
		Cell	(817) 371-1809
Safety	Kevin McDermott	Office	(307) 352-6033
		Home	(307) 362-0579
		Cell	(307) 350-8877
Field Supervision	Bobby Cooper	Home	(435) 789-9455
		Cell -Vernal	(435) 828-8378
		Cell - Wyo.	(307) 679-2312
Public Relations	Pat Doyle	Home	(307) 587-8365
		Office	(817) 877-6527
		Home	(972) 247-7125
		Cell	(817) 371-3305
		Pager	(888) 457-6475



VICINITY MAP
U.P.R. YCD 5-1 WELL
1136' FNL 1098' FEL
SECTION 5, T5N, R8E, SLB&M
SUMMIT COUNTY, UTAH

UINTA ENGINEERING & SURVEYING, INC
808 MAIN STREET
EVANSTON, WYOMING 82930

DATE: MAY 8, 1998
PROJECT: 98-26-03

B. Emergency Services Phone List

1. IHC Memorial Hospital - Evanston, WY. (307) 789-3636
2. Ambulance Services - Uinta County, WY. (307) 789-2331
3. Sheriff Department- Uinta County, WY. (307) 789-2331
4. Highway Patrol - Wyoming (800) 442-9090
5. Fire Department - Uinta County, WY. 911 or (307) 789-2331
6. Medical Helicopter - Air Med - Salt Lake City, UT (800) 453-0120

PROPERTIES OF GAS

If gas should be produced, it could be a mixture of Carbon Dioxide, Hydrogen Sulfide, and Methane.

TOXICITY OF VARIOUS GASES

<u>Common Name</u>	<u>Chemical Formula</u>	<u>Specific Gravity of Air=1</u>	¹ <u>Threshold Limit</u>	² <u>Hazardous Limit</u>	³ <u>Lethal Concern</u>
Hydrogen Cyanide	HCN	0.94	10 ppm	150 ppm/hr.	300 ppm
Hydrogen Sulfide	H ₂ S	1.18	10 ppm	250 ppm/hr.	600 ppm
Sulfur Dioxide	SO ₂	2.21	5 ppm	--	1000 ppm
Chlorine	CL ₂	2.45	1 ppm	4 ppm/hr.	1000 ppm
Carbon Monoxide	CO	0.97	50 ppm	400 ppm/hr.	1000 ppm
Carbon Dioxide	CO ₂	1.52	5000 ppm	5%	10%
Methane	CH ₄	0.55	90000 ppm	Combustible Above 5% in Air	--

¹ Threshold - Concentration at which it is believed that all workers may repeatedly be exposed, day after day, without adverse side effects.

² Hazardous - Concentration that may cause death.

³ Lethal - Concentration that will cause death with short-term exposure.

HYDROGEN SULFIDE

GENERAL PROPERTIES

Hydrogen Sulfide itself is a colorless and transparent gas and is flammable. It is heavier than air and, hence, may accumulate in low places.

Although the slightest presence of H_2S in the air is normally detectable by its characteristic "rotten egg" odor, it is dangerous to rely on the odor as a means of detecting excessive concentrations because the sense of smell is rapidly lost, allowing lethal concentrations to be accumulated without warning. The following table indicates the poisonous nature of Hydrogen Sulfide, which is more toxic than Carbon Monoxide.

Common names: sour gas, acid gas, rotten egg gas, sulphur gas, sulphurated gas, sweet gas.*

PHYSICAL-CHEMICAL PROPERTIES

Chemical Formula	H_2S
1. Specific Gravity (air = 1.000) . .	1.193 (@ 77°F)
2. Color	None
3. Odor	Compare to rotten eggs
4. Odor Threshold	0.13 part of 1 ppm
5. Corrosivity	Reacts with metals, plastics, tissues and nerves.
6. Solubility in Water	4.0 to 1 in H_2O @ 32°F 2.6 to 1 in H_2O @ 68°F
7. Effects on Humans	Olfactory nerves, respiratory nerves, irritates sensitive membranes in eyes, nose, and throat.
8. Vapor Pressure	19.6 atmospheres at 25°C
9. Explosive Limits	4.3% to 46% by volume in air.

* H_2S is a sweet tasting gas, but often the word "tasting" is left out.

10. Ignition Temperature	18°F (burns with a pale flame).
11. Molecular Weight	34.08
12. Conversion Factors	1 mg/l of air = 717 ppm (at 25°C and 760 mm HG). 1 ppm = 0.00139 mg/l of air.
13. pH	3 in water
14. Conversion Factors	1 mg/l of air = 717 ppm (at 25°C and 760 mm HG). 1 ppm = 0.00139 mg/l of air.

INDUSTRIAL OCCURRENCES

Hydrogen Sulfide exposures occur in certain processes in the petroleum industry, chemical plants, chemical laboratories, sulfur and gypsum mines, viscose rayon and rubber industries, tanneries, and in the manufacture of some chemicals, dyes, and pigments. It may be encountered in excavations in swampy or filled ground. It is produced when sulfur-containing organic matter decomposes, and it can therefore be found in sewage or organic-waste treatment plants. A common sewer gas, it may find its way into utility manholes, particularly dangerous when encountered in tanks, vessels, and other enclosed spaces.

TOXIC PROPERTIES

Hydrogen Sulfide is an extremely toxic and irritating gas. Free Hydrogen Sulfide in the blood reduces its oxygen-carrying capacity, thereby depressing the nervous system. Sufficiently high concentrations cause blocking of the phrenic nerve, resulting in immediate collapse and death due to respiratory failure and asphyxiation.

Because Hydrogen Sulfide is oxidized quite rapidly to sulfates in the body, no permanent after effects occur in cases of recovery from acute exposures unless oxygen deprivation of the nervous system is prolonged. However, in cases of acute exposures, there is always the possibility that pulmonary edema may develop. It is also reported that symptoms such as nervousness, dry nonproductive coughing, nausea, headache, and insomnia, lasting up to about three days, have occurred after acute exposures to Hydrogen Sulfide.

At low concentrations the predominant effect of Hydrogen Sulfide is on the eyes and respiratory tract. Eye irritation, conjunctivitis, pain, lacrimation, keratitis, and photophobia may persist for several days. Respiratory tract symptoms include coughing, painful breathing, and pain in the nose and throat.

There is no evidence that repeated exposures to Hydrogen Sulfide result in accumulative or systemic poisoning. Effects such as eye irritation, respiratory tract irritation, slow pulse rate, lassitude, digestive disturbances, and cold sweats may occur, but these symptoms disappear in a relatively short time after removal from the exposure. Repeated exposures to Hydrogen Sulfide do not appear to cause any increase or decrease in susceptibility to this gas.

The paralytic effect of Hydrogen Sulfide on the olfactory nerve is probably the most significant property of the gas. This paralysis may create a false sense of security. A worker can be overcome after the typical rotten-egg odor has disappeared. Rather than the characteristic Hydrogen Sulfide odor, some victims of sudden acute overexposure have reported a brief, sickeningly sweet odor just prior to unconsciousness.

Subjective olfactory responses to various concentrations of Hydrogen Sulfide have been summarized as follows:

- 0.02 ppm: No odor
- 0.13 ppm: Minimal perceptible odor
- 0.77 ppm: Faint, but readily perceptible odor
- 4.60 ppm: Easily detectable, moderate odor
- 27.0 ppm: Strong, unpleasant odor, but not intolerable.

Physiological responses to various concentrations of Hydrogen Sulfide have been reported as follows:

- 10 ppm: Beginning eye irritation
- 50-100 ppm: Slight conjunctivitis and respiratory tract irritation after 1 hour exposure.
- 100 ppm: Coughing, eye irritation, loss of sense of smell after 2-15 minutes. Altered respiration, pain in the eyes, and drowsiness after 15-30 minutes, followed by throat irritation after 1 hour. Several hours' exposure results in gradual increase in severity of these symptoms and death may occur within the next 48 hours.
- 200-300 ppm: Marked conjunctivitis and respiratory tract irritation after 1 hour of exposure.
- 500-700 ppm: Loss of consciousness and possibly death in 30 minutes to 1 hour.

700-1000 ppm: Rapid unconsciousness, cessation of respiration, and death.

1000-2000 ppm: Unconsciousness at once, with early cessation of respiration and death in a few minutes. Death may occur even if individual is removed to fresh air at once.

ACCEPTABLE CONCENTRATIONS

Acceptable Eight-Hour Time-Weighted Average.

To avoid discomfort, the time-weighted average concentration of Hydrogen Sulfide shall not exceed 10 ppm.

Acceptable Ceiling Concentrations.

The acceptable concentration for protection of health for an eight-hour, five-day week shall be 20 ppm. Fluctuations are to occur below this concentration.

Acceptable Maximum For Peaks Above Acceptable Base Line For Continuous Exposure.

A single-peak concentration not exceeding 50 ppm for a maximum of 10 minutes is allowable provided that the daily time-weighted average is not exceeded.

H₂S EQUIVALENTS

<u>Parts per Million</u>	<u>Percents</u>	<u>Grains per 100 cu. ft.</u>
1	.0001	.055
10	.001	.55
18	.0018	1.0
100	.01	5.5
1000	.1	55.5
10000	1.0	555.5

Grains per 100 cu. ft. = % by volume Mole 636.4
1% by volume = 10,000 ppm

SULFUR DIOXIDE

Sulfur Dioxide (SO₂) is a colorless, transparent gas and is non-flammable.

Sulfur Dioxide is produced during the burning of H₂S. Although SO₂ is heavier than air, it will be picked up by a breeze and carried downwind at elevated temperatures. While Sulfur Dioxide is extremely irritating to the eyes and mucous membranes of the upper respiratory tract, it has exceptionally good warning powers in this respect.

CONCENTRATIONS

EFFECTS

<u>%SO₂</u>	<u>ppm</u>	
.0005	5	Pungent odor-normally a person can detect SO ₂ in this range.
.001	10	Safe for eight (8) hour exposure.
.0012	12	Throat irritation, coughing, constriction of the chest, tearing and smarting of the eyes.
.015	150	So irritating that it can only be endured for a few minutes.
.05	500	Causes a sense of suffocation, even with the first breath.

PHYSICAL PROPERTIES AND CHARACTERISTICS

Chemical Formula	SO ₂
1. Specific Gravity	2.212
2. Color	None
3. Flammable	No
4. Odor	Characteristic, pungent, gives ample warning of its presence.

5. Corrosivity	Dry--not corrosive to ordinary metals. Wet- -corrosive to most common metals.
6. Allowable Concentrations	5 ppm (ACGIH) 5 ppm (OSHA)
7. Effects on Humans	Irritates eyes, throat and upper respiratory system.

TOXIC PROPERTIES

Sulfur Dioxide is an irritating gas in its vapor form and the odor is so intensely irritating that concentrations of 3 to 5 parts per million in the air are readily detectable by the normal person. In higher concentrations, the severely irritating effect of the gas makes it unlikely that any person would be able to remain in a Sulfur Dioxide contaminated atmosphere unless he were unconscious or trapped.

Sulfur Dioxide gas is intensely irritating to the eyes, throat, and upper respiratory system. Inhalation of this gas in concentrations of 8 to 12 parts per million in air causes throat irritation, coughing, constriction of the chest, tearing and smarting of the eyes. 150 parts per million is so extremely irritating that it can be endured only for a few minutes. 500 parts per million is so acutely irritating to the upper respiratory tract that it causes a sense of suffocation, even with the first breath.

Out of numerous reported exposures to Sulfur Dioxide, there are few references that would indicate pneumonia as an after effect.

Division of Oil, Gas and Mining
PHONE CONVERSATION DOCUMENTATION FORM

Route original/copy to:

Well File _____ Suspense _____ Other _____
(Return Date) _____
(Loc.) Sec _____ Twp _____ Rng _____ (To-Initials) _____
(API No.) 43-043-30319 _____

1. Date of Phone Call: 8-18-98 / 8/19/98 Time: _____
12:49 follow up message

2. DOGM Employee (name) RJK (Initiated Call)
Talked to: Rene St. Pierre
Name Dorothy Moravell (Initiated Call) - Phone No. (817) 877-6739
of (Company/Organization) UPRC 7679-Rene.

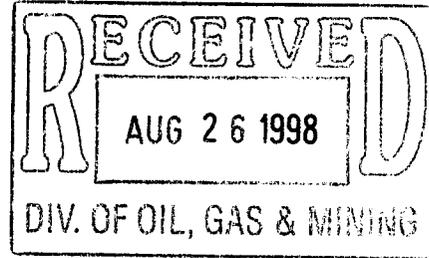
3. Topic of Conversation: Yellow Creek
Deep 5-1 APD.

4. Highlights of Conversation: Faxed her a copy of The BOP
rule R649-3-7 well Control. Told her I need
schematics for 3M + 5M BOPE's; Copies of
Mud + Cement Programs; Specs for 9 5/8"
CSG; Asked if items #7 and #9 meet our
pressure test reqs per faxed rule. She is
to love their Drilling Engr. Rene St. Pierre
call back.

Rcd. Revised Plan 8-26-98.



August 25, 1998



Mr. Robert Krueger
State of Utah Dept. of Natural Resources
Division of Oil, Gas and Mining
1594 West North Temple, Suite 1210
Salt Lake City, Utah 84114-5801

Re: Yellow Creek Deep 5-1 Well
Summit County, Utah

Dear Bob:

I am enclosing a revised copy of our Drilling Program for the above captioned well. Our engineer has tried to incorporate all of your comments. I would appreciate hearing from you at your earliest opportunity if this drilling program does not meet your needs.

Please call me at (817) 877-6739.

Very truly yours,

A handwritten signature in cursive script that reads "Dmoravek".

Dorothy Moravek
Regulatory Analyst

3. Drill a 17-1/2" hole to 6,150' TVD (+/- 100' into Twin Creek). Run and cement 13-3/8" intermediate casing. NU 13-5/8" 5M, 3 ram stack with annular.
4. Drill a 12-1/4" hole to TD @ 13,000 MD (-5,800' SS). Log and evaluate open hole section. If commercial pay exists, run and cement 7" X 7-5/8" production casing.
5. Prepare to complete well. Completion procedure to follow.

cc: M. J. Walker
S. J. Bosworth
C. W. Cook
J. Martinez
C. Cooper-Day
L. E. Woelich
Well File



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

1594 West North Temple, Suite 1210
Box 145801
Salt Lake City, Utah 84114-5801
801-538-5340
801-359-3940 (Fax)
801-538-7223 (TDD)

September 1, 1998

Union Pacific Resources Company
P.O. Box 7 MS3006
Fort Worth, Texas 76101-0007

Re: Yellow Creek Deep 5-1 Well, 2330' FNL, 1154' FEL, SE NE,
Sec. 5, T. 5 N., R. 8 E., Summit 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 43-043-30319.

Sincerely,

A handwritten signature in black ink that reads "John R. Baza".

John R. Baza
Associate Director

lwp

Enclosures

cc: Summit County Assessor
Bureau of Land Management, State Office

Operator: Union Pacific Resources Company
Well Name & Number: Yellow Creek Deep 5-1
API Number: 43-043-30319
Lease: Fee
Location: SE NE Sec. 5 T. 5 N. R. 8 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 prior to spudding the well. Contact Jim Thompson at (801)538-5336.

Notify the Division prior to commencing operations to plug and abandon the well. Contact Dan Jarvis at (801) 538-5338 or Robert Krueger at (801) 538-5274.

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. Compliance with the Conditions of Approval/Application for Permit to Drill outlined in the Statement of Basis (copy attached).

5. In accordance with Utah Admin. R.649-3-11, Directional Drilling, submittal of a complete angular deviation and directional drilling survey report is required.



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

Michael O. Leavitt
Governor

Kathleen Clarke
Executive Director

Lowell P. Braxton
Division Director

1594 West North Temple, Suite 1210

PO Box 145801

Salt Lake City, Utah 84114-5801

801-538-5340

801-359-3940 (Fax)

801-538-7223 (TDD)

August 28, 2000

Ms. Dorothy Moravek
Union Pacific Resources Company
P.O. Box 7, MS3006
Fort Worth, Texas 76101-0007

Re: APD Rescinded -- Yellow Creek Deep 5-1 Well, Sec. 5, T. 5.0N, R. 8.0E, Summit County, Utah, API No. 43-043-30319

Gentlemen:

The Application for Permit to Drill for the subject well was approved by the Division of Oil, Gas and Mining on September 1, 1998. No drilling activity at this location has been reported to the division. Due to the excessive time delay in commencing drilling operations, approval to drill the 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
Information Services Manager
Oil and Gas

cc: L.E. Cordova
Well File

















UPRC Yellow Creek Deep 5-1

Sec. 5, 5N, 8E

43-043-30319

<No. 8A> 001 21+00 NNNNN-07AU 736