

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

OPERATOR: Anadarko Petroleum Corp.
WELL NAME & NUMBER: BlackHawk A-1
API NUMBER: 43-007-30885
LOCATION: 1/4,1/4 SESE Sec: 20 TWP: 13S RNG: 10E 853 FEL 1143 FSL

Geology/Ground Water:

Significant volumes of high quality ground water are unlikely to be encountered at this location. A moderately permeable soil is developed on the Quaternary / Tertiary Pediment Mantle covering the Blue Gate Member of the Mancos Shale. The proposed casing and cementing program should adequately isolate any zones of fresh water that may be penetrated. No water rights have been filed within a mile of this location and there are no water wells in the Division of Water Rights database within that radius.

Reviewer: Christopher J. Kierst

Date: 1/2/2003

Surface:

The proposed location lies ~2.1 miles East of Spring Glen, Utah and ~1.0 miles West of Kenilworth, Utah. The closest live, year-round water source is the Price River, located ~2.22 miles to the west. The direct area drains to the east into the Price River. Other water sources such as dry washes, the Spring Glen irrigation system, and municipal drinking water systems are located within a 1 miles radius of the proposed gas well. Price River Water Imp. Dist., operates a municipal water distribution line that runs in a West to East direction ~50 feet North of the proposed well site. The soil consists primarily of gravely sandy clay. Johnny Pappas (surface) was in attendance for the on-site.

Reviewer: Mark L. Jones

Date: January 2, 2003

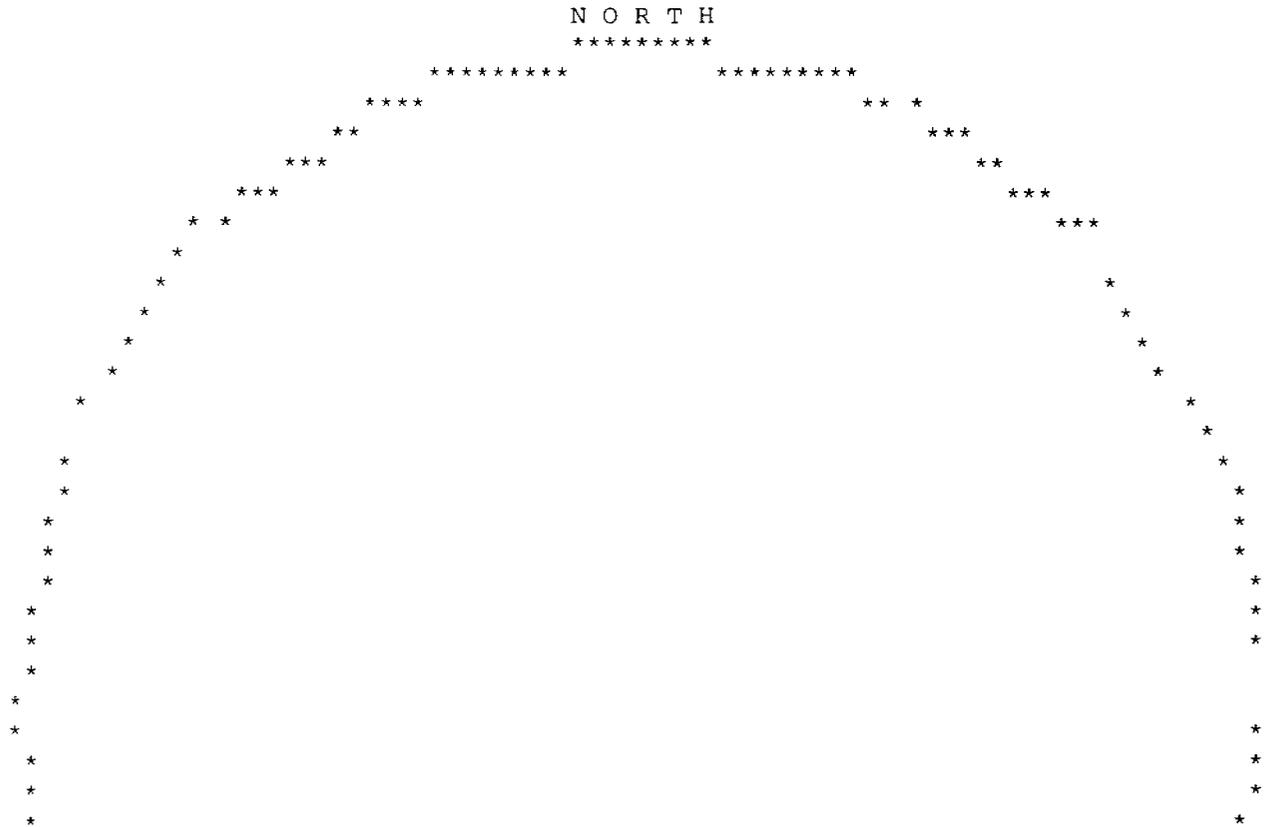
Conditions of Approval/Application for Permit to Drill:

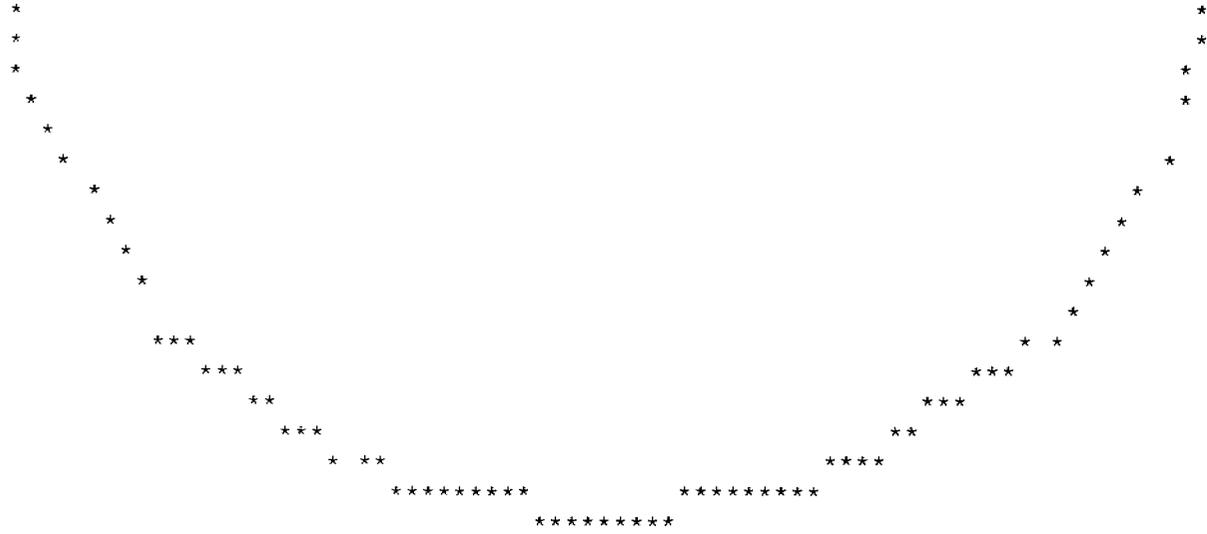
1. Drainage crossing protected with culverts and natural runoff diverted away from the location.
2. A synthetic liner with a minimum thickness of 12 mils shall be properly installed and maintained in the reserve pit.
3. Careful review and consideration of culinary waterline location prior to and during construction, as well during drilling and all other activities at this well site.

UTAH DIVISION OF WATER RIGHTS
WATER RIGHT POINT OF DIVERSION PLOT CREATED FRI, JAN 3, 2003, 5:09 PM
PLOT SHOWS LOCATION OF 0 POINTS OF DIVERSION

PLOT OF AN AREA WITH A RADIUS OF 5280 FEET FROM A POINT
N 1173 FEET, W 867 FEET OF THE SE CORNER,
SECTION 20 TOWNSHIP 13S RANGE 10E SL BASE AND MERIDIAN

PLOT SCALE IS APPROXIMATELY 1 INCH = 2000 FEET





001

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

RIG SKID

FORM 3

AMENDED REPORT
(highlight changes)

APPLICATION FOR PERMIT TO DRILL			5. MINERAL LEASE NO: NA FEE	6. SURFACE: Fee
1A. TYPE OF WORK: DRILL <input checked="" type="checkbox"/> REENTER <input type="checkbox"/> DEEPEN <input type="checkbox"/>			7. IF INDIAN, ALLOTTEE OR TRIBE NAME: NA	
B. TYPE OF WELL: OIL <input type="checkbox"/> GAS <input checked="" type="checkbox"/> OTHER _____ SINGLE ZONE <input checked="" type="checkbox"/> MULTIPLE ZONE <input type="checkbox"/>			8. UNIT or CA AGREEMENT NAME: NA	
2. NAME OF OPERATOR: Anadarko Petroleum Corporation			9. WELL NAME and NUMBER: Blackhawk A-1	
3. ADDRESS OF OPERATOR: P. O. Box 1330 CITY Houston STATE TX ZIP 77251-1330			PHONE NUMBER: (832) 636-3315	10. FIELD AND POOL, OR WILDCAT: Helper/Ferron
4. LOCATION OF WELL (FOOTAGES) AT SURFACE: 1157' FSL & 886' FEL AT PROPOSED PRODUCING ZONE: Same			11. QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: sese 20 13S 10E	
14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE: ~1 mile to Springlen			12. COUNTY: Carbon	13. STATE: UTAH
15. DISTANCE TO NEAREST PROPERTY OR LEASE LINE (FEET)		16. NUMBER OF ACRES IN LEASE: 841		17. NUMBER OF ACRES ASSIGNED TO THIS WELL: 160
18. DISTANCE TO NEAREST WELL (DRILLING, COMPLETED, OR APPLIED FOR) ON THIS LEASE (FEET) 3832'		19. PROPOSED DEPTH: 3,950		20. BOND DESCRIPTION: 224351
21. ELEVATIONS (SHOW WHETHER DF, RT, GR, ETC.): GR 6212'		22. APPROXIMATE DATE WORK WILL START: 5/24/2003		23. ESTIMATED DURATION: 15 days

24. **PROPOSED CASING AND CEMENTING PROGRAM**

SIZE OF HOLE	CASING SIZE, GRADE, AND WEIGHT PER FOOT			SETTING DEPTH	CEMENT TYPE, QUANTITY, YIELD, AND SLURRY WEIGHT
12 1/4	8 5/8	24	J55, LTC	300	170 cu ft, API CI G
7 7/8	5 1/2	17	N80, LTC	3,950	200-250 cu ft, API CI G

25. **ATTACHMENTS**

VERIFY THE FOLLOWING ARE ATTACHED IN ACCORDANCE WITH THE UTAH OIL AND GAS CONSERVATION GENERAL RULES:

<input checked="" type="checkbox"/> WELL PLAT OR MAP PREPARED BY LICENSED SURVEYOR OR ENGINEER	<input checked="" type="checkbox"/> COMPLETE DRILLING PLAN
<input type="checkbox"/> EVIDENCE OF DIVISION OF WATER RIGHTS APPROVAL FOR USE OF WATER	<input type="checkbox"/> FORM 5, IF OPERATOR IS PERSON OR COMPANY OTHER THAN THE LEASE OWNER

NAME (PLEASE PRINT) Carla Ghazizadeh TITLE Env. & Reg. Analyst

SIGNATURE *Carla Ghazizadeh* DATE 5/22/2003

(This space for State use only)

API NUMBER ASSIGNED: 43-007-30923

APPROVED BY THE STATE OF UTAH DIVISION OF OIL, GAS, AND MINING RECEIVED

DATE: 5/23/2003 **MAY 23 2003**

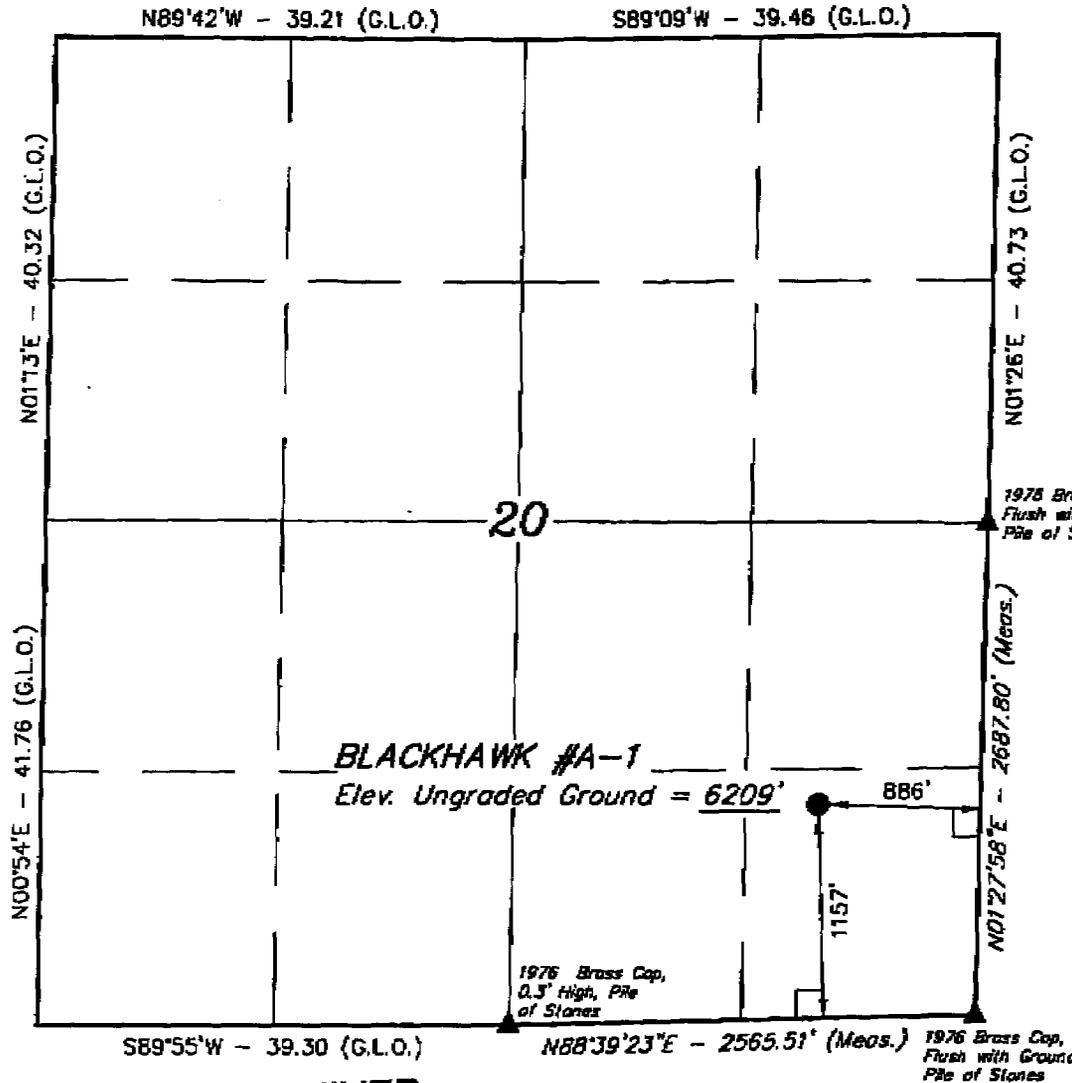
BY: *[Signature]*

DIV. OF OIL, GAS & MINING

T13S, R10E, S.L.B.&M.

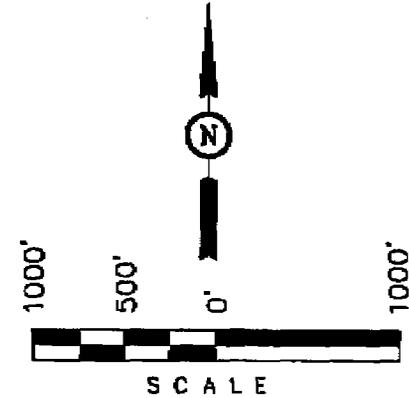
ANADARKO PETROLEUM CORP.

Well location, BLACKHAWK #A-1, located shown in the SE 1/4 SE 1/4 of Section 20, T13S, R10E, S.L.B.&M. Carbon County, Utah.



BASIS OF ELEVATION

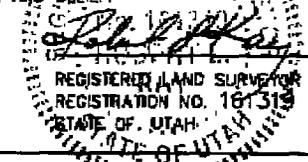
SPOT ELEVATION AT A ROAD INTERSECTION IN THE NE 1/4 OF SECTION 21, T13S, R10E, S.L.B.&M. TAKEN FROM THE HELPER QUADRANGLE, UTAH, CARBON COUNTY, 7.5 MINUTE QUAD. (TOPOGRAPHIC MAP) PUBLISHED BY THE UNITED STATES DEPARTMENT OF THE INTERIOR, GEOLOGICAL SURVEY. SAID ELEVATION IS MARKED AS BEING 6487 FEET.



SCALE

CERTIFICATE

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



REVISED: 5-20-03 C.G.
REVISED: 10-31-02 C.G.

UINTAH ENGINEERING & LAND SURVEYING
85 SOUTH 200 EAST - VERNAL, UTAH 84078
(801) 788-1017

SCALE 1" = 1000'	DATE SURVEYED: 9-24-01	DATE DRAWN: 9-17-02
PARTY J.F. T.A. C.G.	REFERENCES G.L.O. PLAT	
WEATHER WARM	FILE ANADARKO PETROLEUM CORP.	

RECEIVED

MAY 23 2003

BASIS OF BEARINGS

BASIS OF BEARINGS IS A G.P.S. OBSERVATION.

(AUTONOMOUS NAD 83)

LATITUDE = 39°40'37.14" (39.676983)

LONGITUDE = 110°49'11.12" (110.819756)

LEGEND:

└ = 90° SYMBOL

● = PROPOSED WELL HEAD

▲ = SECTION CORNERS LOCATED.

DIV. OF OIL, GAS & MINING

002 ANADARKO PETROLEUM CORPORATION

P.O. BOX 1330 • HOUSTON, TEXAS 77251-1330 • TEL. 281/975-1101



May 22, 2003

State of Utah
Division of Oil, Gas & Mining
1594 West North Temple, Suite 1210
Salt Lake City, Utah 84114-6801
Attn: Diana Mason

**RE: EXCEPTION TO CAUSE 241-01
BLACKHAWK A-1
SEC. 20, T13S, R10E
CARBON COUNTY, UTAH**

Dear Ms. Mason:

Anadarko Petroleum Corporation hereby requests an exception to cause on the Blackhawk A-1 in Carbon County, Utah. This exception is requested due to topography in this area which mandates that this well be positioned 1157' from the South line and 886' from the East line in Section 20, T13S, R10E. Anadarko Petroleum is its own offset operator and waives its objection to this exception. There are no other owners within 460' of this proposed wellsite.

If additional information is required, please do not hesitate to contact me at 832-636-3315 or carla_ghazizadeh@anadarko.com.

Sincerely,


Carla Ghazizadeh
Env. & Reg. Analyst

Attach.

RECEIVED

MAY 22 2003

DIV. OF OIL, GAS & MINING

**DRILLING PLAN
TO ACCOMPANY APPLICATION FOR PERMIT TO DRILL**

Company: Anadarko Petroleum Corporation
Location: ~~1143 FSL & 853 EEL~~
1157 FSL 8800
T13S R10E Sec. 20
Carbon County, Utah

Well: BlackHawk A-1 (Rigged)
Lease: ~~87-0140, U-71391~~ FEE
Surface Elevation: 6212

Surface/Mineral Ownership: Plateau Mining Corp/BlackHawk Coal Co.

A. Estimated Tops of Important Geologic Markers:

<u>GEOLOGIC MARKER</u>	<u>DEPTH</u>
Emery	Surface
Bluegate Shale	2362
Ferron SS Member	3462
Ferron Coal Top	3477
Base of Ferron Coal	3607
Tununk Shale	3667

B. Estimated Depth at which Water, Oil, Gas or other Mineral-Bearing zones are expected to be encountered:

Gas-bearing Ferron Sandstone Member is expected to be encountered from: 3462 - 3607.

All fresh water zones and prospectively valuable mineral zones encountered during drilling will be recorded by depth and adequately protected. All oil and gas shows will be tested to determine commercial potential.

C. Pressure Control Equipment:

A 9" 2000 psi WP double gate hydraulic BOP with pipe rams and blind rams will be installed on the 8-5/8" casinghead. In addition to the BOP stack, a rotating head will be installed on top of the BOP to assist in safe air drilling operations. The BOP stack will be tested prior to drilling below surface casing. The ram preventers will be tested to 70% of the working pressure of the casinghead. The annular will be tested to 50% of its working pressure. Operational checks will be made daily or on trips. A BOP schematic is shown on attached Exhibit "A".

The BOP system will be consistent with API RP 53. Pressure tests will be conducted before drilling out from under all casing strings which are set and cemented in place. Blowout preventer controls will be installed prior to drilling the surface casing plug and will remain in use until the well is completed or abandoned. Preventers will be inspected and operated at least daily to ensure good mechanical working order. This inspection will be recorded on the daily drilling report. Preventers will be pressure tested before drilling casing cement plugs. The accumulator system will meet IADC guidelines concerning pump capacities, storage capacity, and reservoir volume. Closing unit fluid volume will be sufficient to pre-charge the system to operating pressure plus 50% excess. One set of controls will be in the doghouse on the rig floor and one set will be remote on the drilling pad.

D. Casing Program

Surface Casing: 8-5/8", 24#, J55, LTC new casing will be set at approximately 300'.
Production Casing: 5-1/2" 17#, N80, LTC, new casing will be set at TD if productive.

D. Casing Program (continued)

Casing Design Factors

The safety factors on casing strings will equal or exceed the following values:

Collapse	1.0
Joint Strength	1.6
Burst	1.33

E. Cement Program

Surface - Cement will be circulated to the surface. Casing will be cemented with approximately 170 cu. ft. of API Class 'G' cement.

Production - Casing will be cemented with approximately 200-250 cu. ft. of API Class 'G' thixotropic cement. The actual cement volume will be based upon hole depth and gauge, and will be determined from logs.

Additional additives will be used to retard the cement, accelerate the cement, control lost circulation, or control fluid loss. All cementing will be done in accordance with API cementing practices.

F. Mud Program and Circulating Medium:

A truck-mounted air drilling rig will be used to drill the surface hole to 300' and to pre-set the surface casing before moving a drilling rig on location to drill the rest of the hole to TD. An air or air/mist system will be used for drilling from below surface pipe at 300' to TD. The mud/fluid system will be monitored visually and with a gas chromatograph detector.

G. Coring, Logging, and Testing Program:

- a. Rotary sidewall coring in the Ferron Sandstone interval may be performed, depending upon shows and hole conditions.
- b. DST's may be run depending upon shows.
- c. The following logging program is planned:
 1. SDL-GR-CAL over prospective intervals..
 2. DIL- SP-GR-CAL over prospective intervals
- d. A mud logging unit with chromatograph will be used from approximately 1000' to TD.
- e. After production casing is installed, a cement bond log will be run to determine the top of cement. Productive zones will then be perforated and swab tested. Water produced during testing will be contained in the temporary reserve pit. All produced oil will be stored and sold. Gas will be flared during testing.

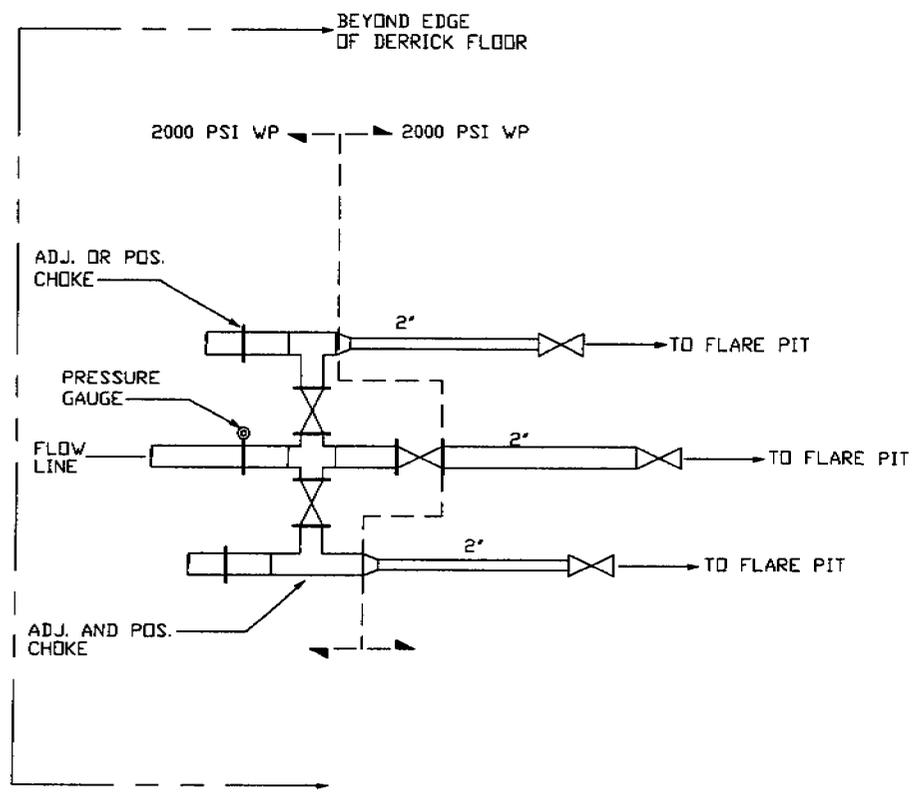
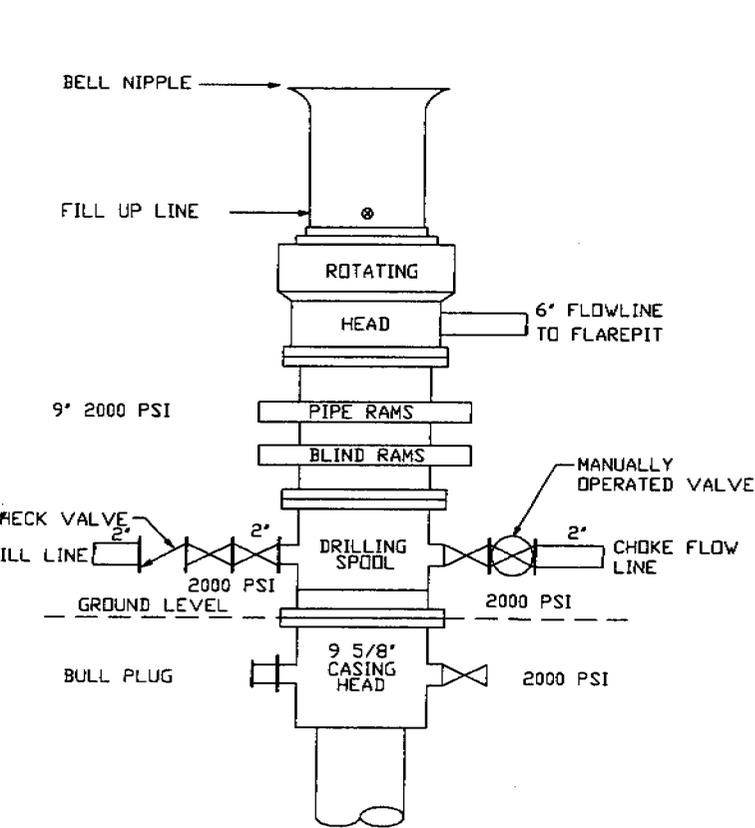
H. Abnormal Conditions and Potential Hazards:

Abnormal conditions such as abnormal temperatures or pressures are not anticipated. Potential hazards such as H₂S are also not anticipated.

I. Location and Type of Water Supply:

Water supply for drilling and completion purposes will be furnished by a water truck and will be obtained from the Price River Municipal Water District hydrant located at 1800 East 800 North, Price, Utah. This water supply is subject to change if a more economic source can be found.

2000 # WORKING PRESSURE
A.R. DRILLING



REMOVED MASTER VALVE	J.D. NEWBORN
ISSUE FOR CONSTRUCTION	J.D. NEWBORN
DESCRIPTION	BY WMS/APP

NOTES

NOTES

DESIGN	JAMES S. BARKLEY	10-28-51
FIELD	A. MULLINS	2-21-52
APPROVED		
DATE		
SCALE	NONE	

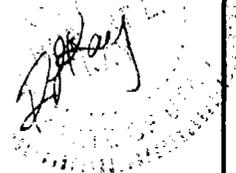
ANADARKO
PETROLEUM CORPORATION
HOUSTON TEXAS

ANADARKO PETROLEUM
DRILLING PERMIT
OPTION #5
SHE. # DP-3 REV 1

ANADARKO PETROLEUM CORP.

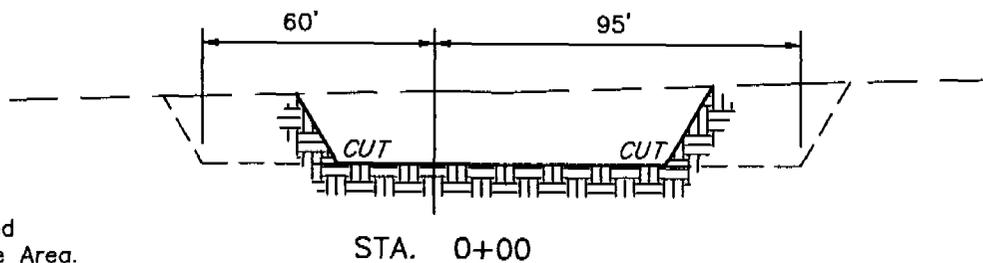
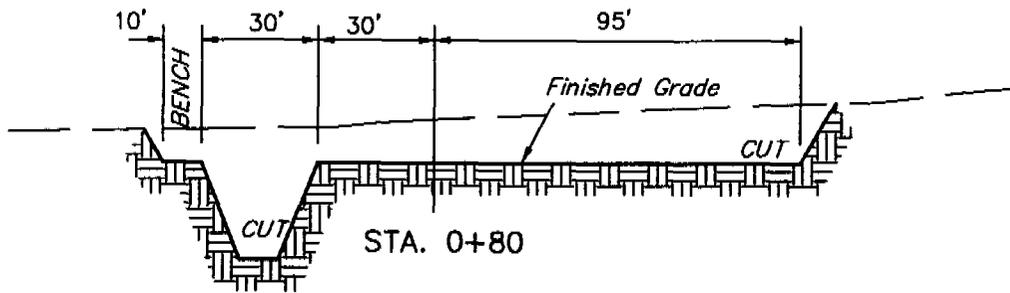
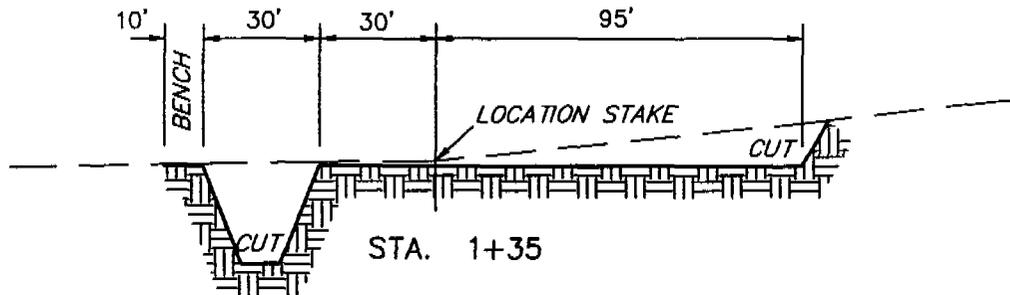
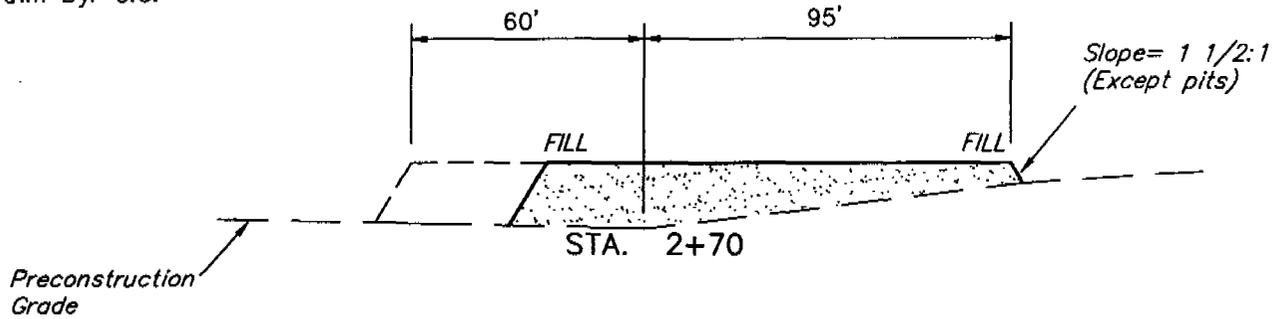
TYPICAL CROSS SECTIONS FOR

BLACKHAWK #A-1
SECTION 20, T13S, R10E, S.L.B.&M.
1173' FSL 867' FEL



1" = 20'
X-Section Scale
1" = 50'

DATE: 10-31-02
Drawn By: C.G.



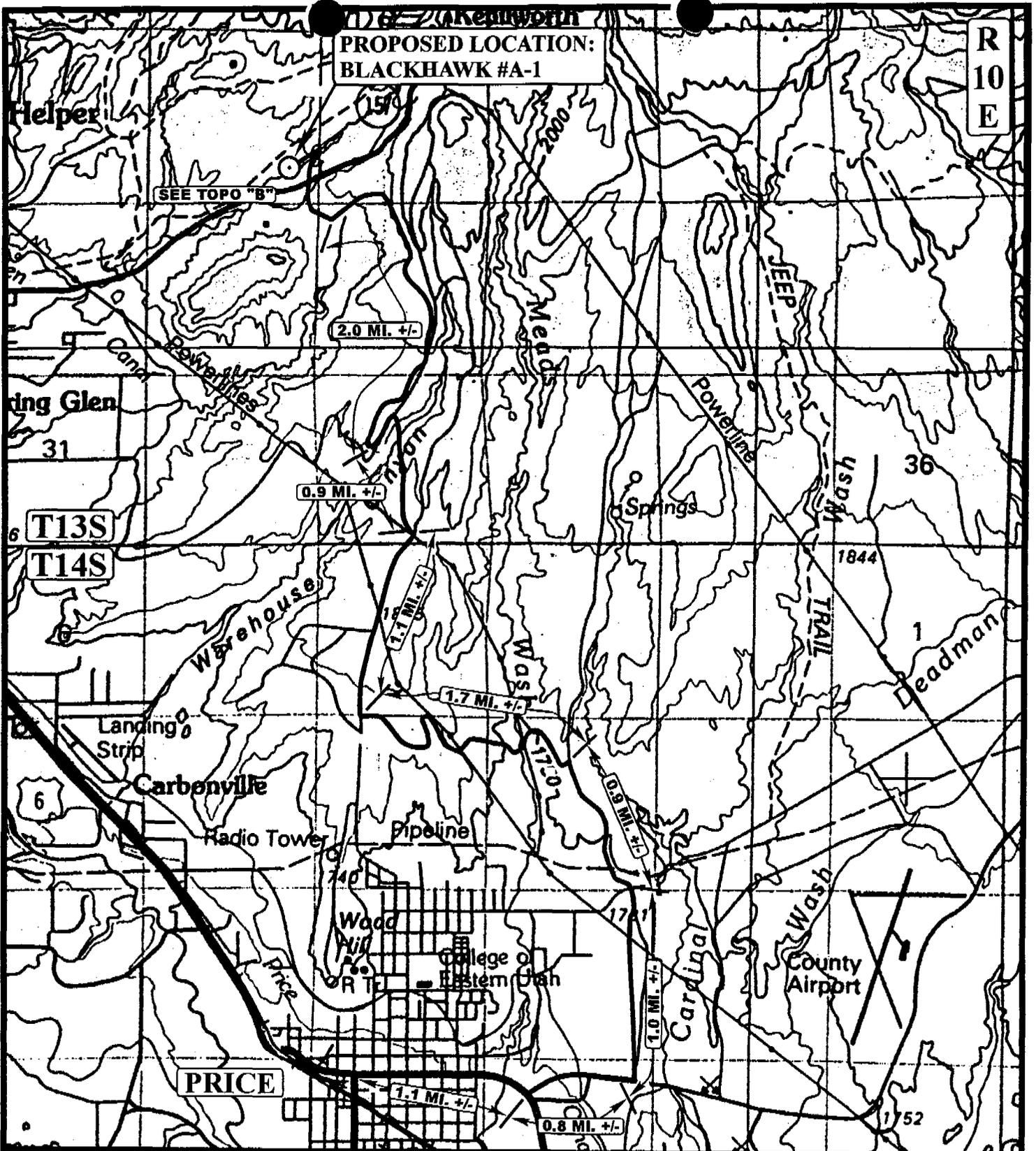
NOTE:
Topsoil should not be Stripped Below Finished Grade on Substructure Area.

APPROXIMATE YARDAGES

CUT	
(6") Topsoil Stripping	= 800 Cu. Yds.
Remaining Location	= 4,680 Cu. Yds.
TOTAL CUT	= 5,480 CU.YDS.
FILL	= 2,170 CU.YDS.

EXCESS MATERIAL AFTER 5% COMPACTION	= 3,200 Cu. Yds.
Topsoil & Pit Backfill (1/2 Pit Vol.)	= 1,070 Cu. Yds.
EXCESS UNBALANCE (After Rehabilitation)	= 2,130 Cu. Yds.

UINTAH ENGINEERING & LAND SURVEYING
85 So. 200 East * Vernal, Utah 84078 * (435) 789-1017



176 Akenworth
**PROPOSED LOCATION:
 BLACKHAWK #A-1**

R
10
E

T13S
T14S

PRICE

LEGEND:

○ PROPOSED LOCATION



ANADARKO PETROLEUM CORP.

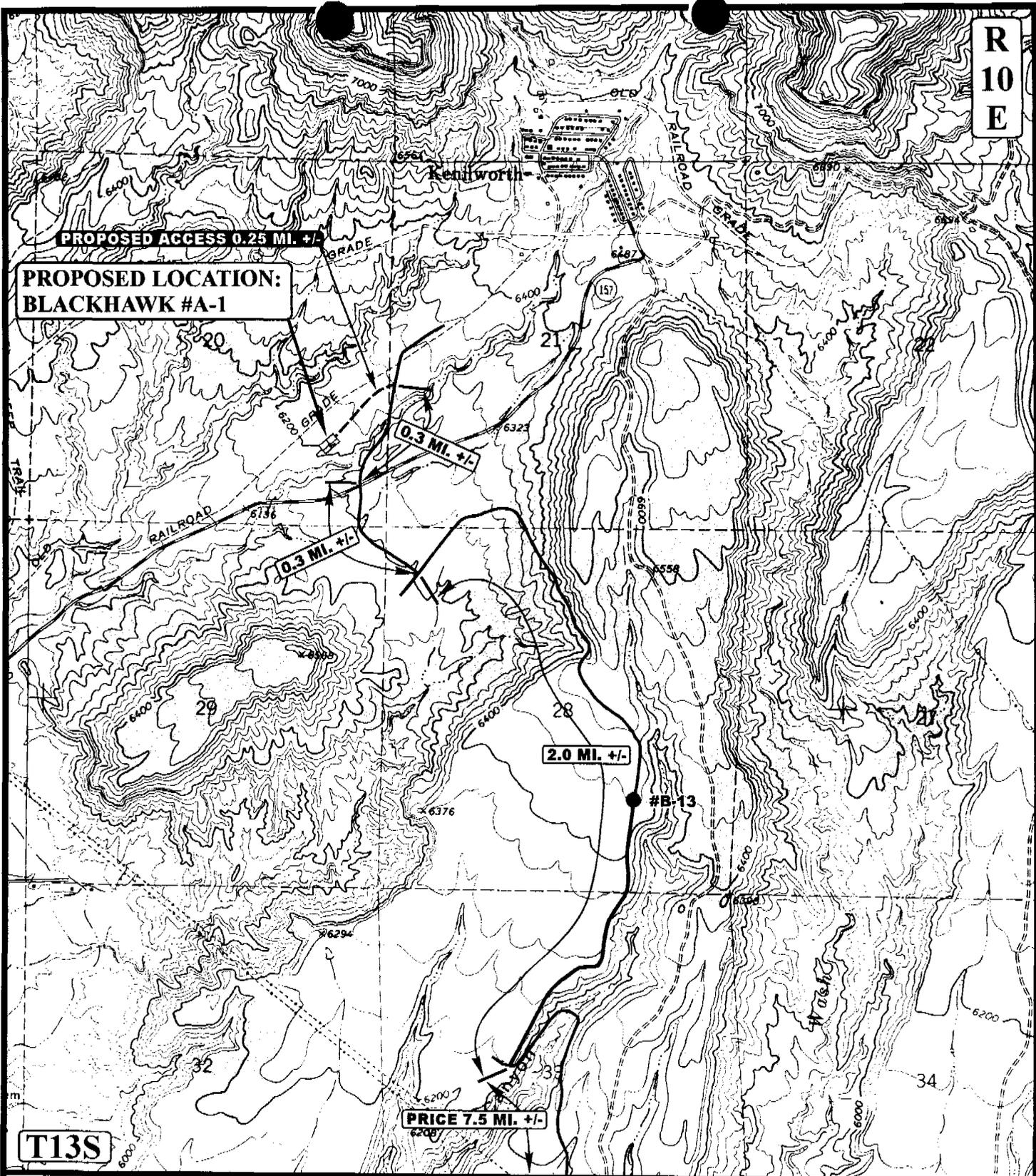
**BLACKHAWK #A-1
 SECTION 20, T13S, R10E, S.L.B.&M.
 1173' FSL 867' FEL**

UELS
 Uintah Engineering & Land Surveying
 85 South 200 East Vernal, Utah 84078
 (435) 789-1017 * FAX (435) 789-1813

TOPOGRAPHIC 9 17 02
 MAP MONTH DAY YEAR
 SCALE: 1" = 4000' DRAWN BY: P.M. REVISED: 10-31-02



R
10
E



**PROPOSED LOCATION:
BLACKHAWK #A-1**

T13S

LEGEND:

- EXISTING ROAD
- - - - - PROPOSED ACCESS ROAD



ANADARKO PETROLEUM CORP.

BLACKHAWK #A-1
SECTION 20, T13S, R10E, S.L.B.&M.
1173' FSL 867' FEL



Utah Engineering & Land Surveying
 85 South 200 East Vernal, Utah 84078
 (435) 789-1017 * FAX (435) 789-1813

**TOPOGRAPHIC
MAP**

9	17	02
MONTH	DAY	YEAR

SCALE: 1" = 2000' DRAWN BY: P.M. REVISED: 10-31-02





MONTGOMERY
ARCHAEOLOGICAL
CONSULTANTS

Box 147, 322 East 100 South, Moab, Utah 84532 (435) 259-5764 Fax (435) 259-5608

April 3, 2003

Mike Hebertson
Division Oil, Gas & Mining
1594 West North Temple
Salt Lake City, UT 84114-5801

Dear Mr. Hebertson,

At the request of Jim Hartley, Anadarko Petroleum, here are the cultural resource reports for well locations Blackhawk A-1, A-3 and A-4. If you require anything else, please let me know.

Sincerely,

Keith R. Montgomery
Keith R. Montgomery

APR 07 2003

APR 07 2003

APR 07 2003

CULTURAL RESOURCE INVENTORY OF THE
BLACKHAWK A-1 ALTERNATE ACCESS/PIPELINE ROUTE
CARBON COUNTY, UTAH

by

Keith Montgomery

ADDENDUM TO: CULTURAL RESOURCE INVENTORIES OF
ANADARKO PETROLEUM'S HELPER FIELD
EIGHT E-SERIES WELL LOCATIONS,
CARBON COUNTY, UTAH

Prepared For:

Bureau of Land Management
Price Field Office

Prepared Under Contract With:

Anadarko Petroleum Corporation
P.O. Box 894
Price, Utah 84501

Prepared By:

Montgomery Archaeological Consultants
P.O. Box 147
Moab, Utah 84532

MOAC Report No. 01-168

October 29, 2001

United States Department of Interior (FLPMA)
Permit No. 01-UT-60122

State of Utah Antiquities Project (Survey)
Permit No. U-01-MQ-246b,p Part 3 of 3

INTRODUCTION

A cultural resource inventory was conducted by Montgomery Archaeological Consultants (MOAC) on October 22, 2001 for Anadarko Petroleum Corporations' proposed Blackhawk #A-1 well location access road and pipeline alternate route. This survey is an addendum to the eight E-Series well locations completed by MOAC in May, 2001 (Montgomery and Kinnear-Ferris 2001). The project area occurs north of the town of Price, Carbon County, Utah. The fieldwork was implemented at the request of Mr. Jim Hartley, Anadarko Petroleum Corporation, Price, Utah. The project area occurs on public land administered by the Bureau of Land Management (BLM) Price Field Office and on private property.

The objective of the inventory was to locate, document, and evaluate any cultural resources within the project area in order to attain compliance with a number of federal and state mandates, including the National Historic Preservation Act of 1966 (as amended), the National Environmental Policy Act of 1969, the Archaeological and Historic Conservation Act of 1972, the Archaeological Resources Protection Act of 1979, the American Indian Religious Freedom Act of 1978, and the Utah State Antiquities Act of 1973 (amended 1992).

The fieldwork was performed by Keith Montgomery (Principal Investigator) under the auspices of U.S.D.I. (FLPMA) Permit No. 01-UT-60122 and State of Utah Antiquities Project (Survey) No. U-01-MQ-0246b,p issued to MOAC, Moab, Utah. A file search for previous inventories and documented cultural resources was performed by Keith Montgomery at the BLM Price Field Office on May 14, 2001 for the previous survey. The result of the consultation indicated that several archaeological projects have been completed in the area. In 1999, MOAC inventoried Anadarko Petroleum's 1999 and 2000 Drilling Program locations in the Helper Field, resulting in the documentation of prehistoric and historic sites (Montgomery, Montgomery, and Wolfe 1999; Montgomery, Kinnear-Ferris, and Ball 2000). In 1999, Environmental Industrial Services (EIS) conducted an inventory of a proposed 40 acre land exchange for the BLM, resulting in the recordation of a section of the Kenilworth and Helper Railroad (42Cb1355.1) (Fergusson 1999). This site occurs in the current project area. In 2001, MOAC inventoried eight Anadarko Petroleum E-Series well locations in the Helper Field, which resulted in the finding of two new historic sites (42Cb1583 and 42Cb1588) and the location of seven previously recorded sites (Montgomery and Kinnear-Ferris 2001). Later that year, MOAC inventoried the Blackhawk A-1 well location and Hausknect A-1 access re-route, an addendum to the eight E-series well locations project, which resulted in the location of the previously documented site, 42Cb1355.1 (Montgomery 2001).

DESCRIPTION OF PROJECT AREA

The project area occurs along the north side of SR 157 about one mile southwest of the town of Kenilworth (Figure 1). The legal description for the proposed Blackhawk #A-1 alternate access/pipeline route is Township 13 South, Range 10 East, Sections 20 and 21. The well location and access/pipeline route occurs on BLM administered property and private property. In general, the study area lies within the Mancos Shale Lowlands and Book Cliff-Roan Plateau physiographic subdivisions of the Colorado Plateau (Stokes 1986). Topography is characterized by north-south trending ridges and narrow canyons. Geological formations include the Cretaceous Mancos Shale, marine Cretaceous sandstone (Bookcliffs), Paleocene and Eocene river and flood plain deposits (Roan Cliffs), and Eocene lake beds (Badlands Cliffs). The elevation averages 6200 feet a.s.l. Vegetation includes a pinyon-juniper woodland and a sagebrush community. The nearest permanent water is the Price River located to the west of the project area.

SURVEY METHODOLOGY

An intensive pedestrian survey was performed for this project which is considered 100% coverage. The access/pipeline alternate route corridor was 300 feet wide, surveyed by walking parallel transects along the staked centerline, spaced no more than 10 m (30 ft) apart. A total of 7.5 acres was inventoried; 2.5 acres on BLM (Price Field Office) administered land and 5 acres on private land. Modern impacts consist of SR 157, gas field development, and livestock grazing.

INVENTORY RESULTS

The inspection of Anadarko Petroleum's proposed well location and access reroute resulted in the location of a previously-documented historic site (42Cb1355.1).

Smithsonian Site No.: 42Cb1355.1
Temporary Site No.: None
Legal Description: T 13S, R10E, S. 20 and 21
Jurisdiction: Bureau of Land Management
NRHP Eligibility: Eligible

Description: This is a segment of the historic Kenilworth and Helper Railroad, originally documented by Environmental Industrial Services (Fergusson 1999). It was first used by the Independent Coal and Coke Company in 1907 to ship coal from the mines at Kenilworth to the Rio Grande Western railroad line at Spring Glen. In May, 2001 MOAC documented an extension of the railroad segment (42Cb1355.1) originally documented by Fergusson (1999). This portion of the railroad grade is paralleled by an utility line. The railroad grade is raised about 3 feet from the base to the top, and the top averages 6-10 feet wide. A variety of in-period and modern artifacts were observed along this segment, including aluminum beverage cans; clear, brown and green glass pieces; cable wire; assorted pieces of lumber; and assorted tin cans such as sanitary tin cans, evaporated milk cans, and a 5-gallon oil can. The site is considered eligible to the NRHP under criterion A on the basis of its association with events important to the historic events or patterns of the area, in particular the mining activity at Kenilworth.

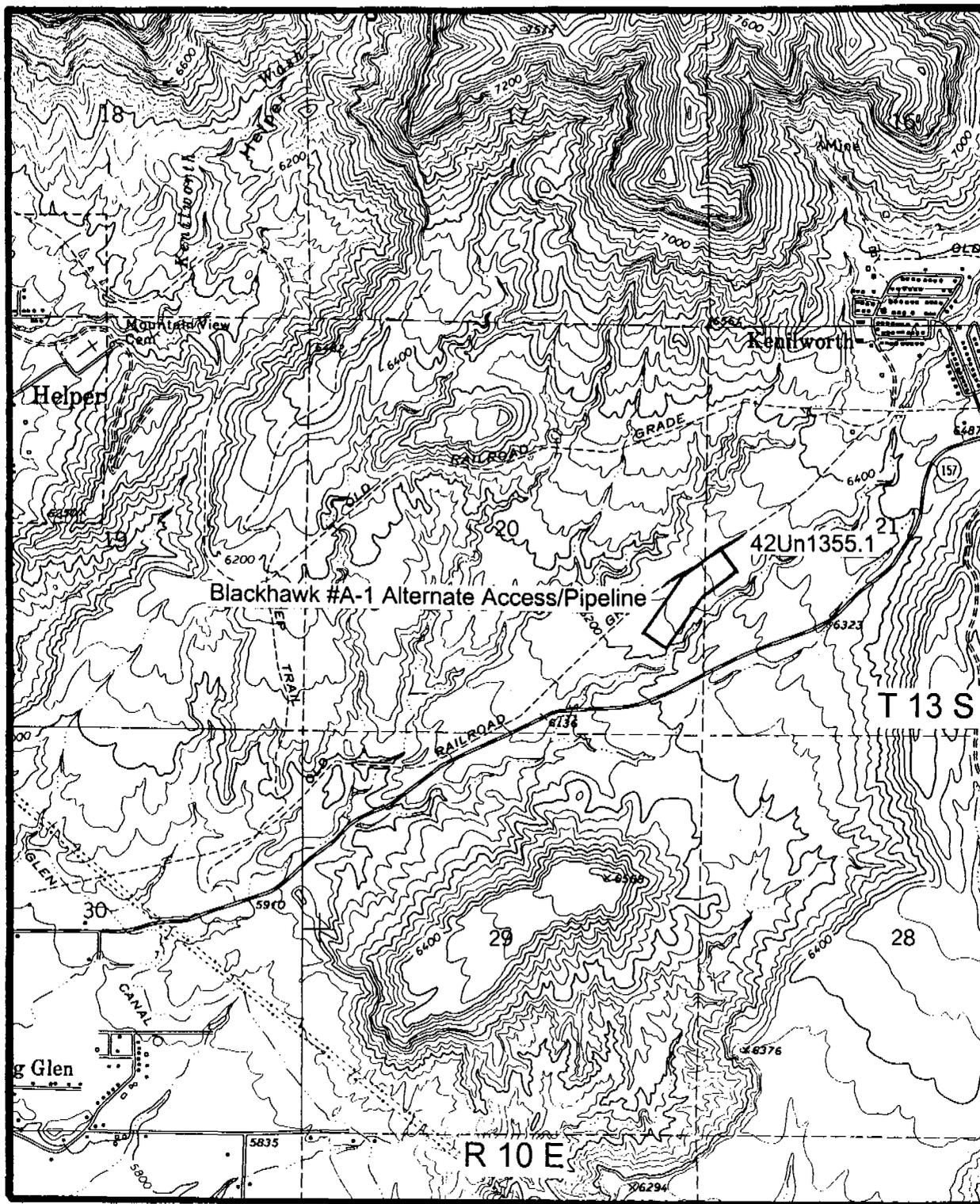


Figure 1. Inventory Area of Anadarko Petroleum's Blackhawk #A-1 Alternate Access/Pipeline route, Carbon County, UT. USGS 7.5' Helper, UT 1972. Scale 1:24000.

MANAGEMENT RECOMMENDATIONS

The cultural resource inventory resulted in the location of a previously documented railroad grade segment (42Cb1355.1). This site occurs outside of the area of potential effect for the proposed Blackhawk #A-1 access/pipeline route. Hence, a recommendation of "no historic properties affected" is proposed pursuant to Section 106, CFR 800 for this project.

REFERENCES CITED

Fergusson, A.

- 1999 Report of a Cultural Resource Inventory of a Proposed 40 Acre Land Exchange, Carbon County, Utah. Environmental Industrial Services, Helper, UT. Report No. U-99-BC-0356 on file at the BLM Price Field Office.

Montgomery, K.R.

- 2001 Cultural Resource Inventories of the Blackhawk A-1 Well Location and Hausknect A-1 Access Re-Route, Carbon County, Utah. Montgomery Archaeological Consultants, Moab, Utah. Report No. 01-0246 part 2 of 2, on file at the BLM Price Field Office.

Montgomery, K.R., J.A. Montgomery and M.S. Wolfe

- 1999 Cultural Resource Inventory of Anadarko Petroleum's 1999 Helper Field Drilling Program, Carbon County, Utah. Montgomery Archaeological Consultants, Moab, Utah. Report No. 98-0593, on file at the BLM Price Field Office, Price, Utah.

Montgomery, K.R., and S. Kinnear-Ferris

- 2001 Cultural Resource Inventories of Anadarko Petroleum's Helper Field Eight E-Series Well Locations, Carbon County, Utah. Montgomery Archaeological Consultants, Moab, Utah. Report No. U-01-MQ-0246. On file at the BLM Price Field Office.

Montgomery, K.R., S. Kinnear-Ferris and S. Ball

- 2000 Cultural Resource Inventory of Anadarko Petroleum's 2000 Helper Field Drilling Program, Carbon County, Utah. Montgomery Archaeological Consultants, Moab, Utah. Report No. 99-0554, on file at the BLM Price/San Rafael Field Office, Price, Utah.

Stokes, W. L.

- 1986 *Geology of Utah*. Utah Museum of Natural History, University of Utah, Salt Lake City.

CULTURAL RESOURCE INVENTORIES OF
ANADARKO PETROLEUM'S HELPER FIELD
EIGHT E-SERIES WELL LOCATIONS,
CARBON COUNTY, UTAH

by

Keith Montgomery
and
Sharyl Kinnear-Ferris

Prepared For:

Bureau of Land Management
Price Field Office

Prepared Under Contract With:

Anadarko Petroleum Corporation
P.O. Box 894
Price, Utah 84501

Prepared By:

Montgomery Archaeological Consultants
P.O. Box 147
Moab, Utah 84532

MOAC Report No.01-62

May 30, 2001

United States Department of Interior (FLPMA)
Permit No. 01-UT-60122

State of Utah Antiquities Project (Survey)
Permit No. U-01-MQ-0246b,p

ABSTRACT

A cultural resource inventory was conducted by Montgomery Archaeological Consultants (MOAC) of eight Anadarko Petroleum's E-Series Well Locations in the Helper Oil Field, Carbon County, Utah. The project area occurs on public land administered by the Bureau of Land Management (BLM), Price Field Office, and on private land.

The inventory of the project area resulted in the documentation of two new historic sites (42Cb1583 and 42Cb1588), and the location of seven previously recorded sites (42Cb533, 42Cb535, 42Cb1084, 42Cb1085, 42Cb1086, 42Cb1355, and 42Cb1385). Site 42Cb1583 consists of an historic artifact scatter of tin cans, glass pieces, and an enamelware washbasin. The site is interpreted as a temporary camp, probably associated with the local coal mines. Two of the tin cans are hole in cap, which suggests an early date for the site of ca. 1810 to 1930. The remainder of the cans are sanitary with cut-around openings, hinged-lid tobacco tins, and an olive oil can with screw cap and spout. The glass pieces are brown and clear, and two brown glass crown bottle finishes were found. There are no structures or features. Site 42Cb1588 is an historic artifact scatter that may be a dumping episode in association with the historic D&RGW Kenilworth Branch Railroad. It consists of a 3.5 meter square area containing glass pieces, tin cans, and ceramic fragments. Two pieces of glass are of a purple color, which date to 1810 through 1917. Evaporated milk cans with solder dot closures were present, and these date to 1917-1929. The previously recorded sites consist of two historic artifact scatters (42Cb535 and 42Cb1085), two historic masonry culverts (42Cb1084 and 42Cb1086), one segment of the Spring Glen Canal (42Cb533.4), three segments of the historic Kenilworth and Helper railroad line (42Cb1355.1, 42Cb1355.2 and 42Cb1355.3), and two segments of the historic D&RGW Kenilworth Branch railroad line (42Cb111385.2 and 42Cb1385.3).

The newly recorded historic sites (42Cb1583 and 42Cb1588) are evaluated as not eligible to the NRHP. The sites lie on residual deposition with limited potential for buried cultural remains. There are no structures or features, and the artifacts exhibit minimal spatial patterning. Previously recorded sites 42Cb1355 and 42Cb1385, historic railroad line segments, have been evaluated as eligible to the NRHP under criterion A. Previously recorded site 42Cb1084, an historic masonry culvert, has been evaluated as eligible for inclusion to the NRHP under criterion C. Site 42Cb533.4 is the previously recorded Spring Glen Canal, evaluated as eligible under criterion A. These eligible sites will require avoidance by the current scope of work.

Based on the findings, and adherence to the recommendation of avoidance of sites 42Cb533, 42Cb1084, 42Cb1355, and 42Cb1385, a determination of "no historic properties affected" is recommended pursuant to Section 106, CFR 800 for this project.

TABLE OF CONTENTS

ABSTRACT i
TABLE OF CONTENTS ii
LIST OF FIGURE ii
LIST OF TABLE ii
INTRODUCTION 1
DESCRIPTION OF PROJECT AREA 2
 Cultural Overview 5
SURVEY METHODOLOGY 8
INVENTORY RESULTS 8
 Archaeological Sites 8
NATIONAL REGISTER OF HISTORIC PLACES EVALUATION 13
MANAGEMENT RECOMMENDATIONS 14
REFERENCES CITED 15
APPENDIX A: INTERMOUNTAIN ANTIQUITIES COMPUTER
 SYSTEM (IMACS) SITE FORMS 18

LIST OF FIGURE

1. Inventory Area of Anadarko Petroleum's E-Series Well Locations in the Helper Oil
 Field, Carbon County, Utah 4

LIST OF TABLE

1. Legal Description and Cultural Resources of Anadarko Petroleum's E-Series Well
 Locations 2

INTRODUCTION

Cultural resource inventories were conducted by Montgomery Archaeological Consultants (MOAC) in May, 2001 for eight of Anadarko Petroleum Corporations' Helper Field well locations, access routes, and pipeline corridors. The project area occurs north of the town of Price, Carbon County, Utah. The work was implemented at the request of Mr. Don Hamilton, Talon Resources, Inc., Price, Utah. The project area occurs on public land administered by the Bureau of Land Management (BLM) Price Field Office and on private property.

The objectives of the inventories were to locate, document, and evaluate any cultural resources within the project area in order to attain compliance with a number of federal and state mandates, including the National Historic Preservation Act of 1966 (as amended), the National Environmental Policy Act of 1969, the Archaeological and Historic Conservation Act of 1972, the Archaeological Resources Protection Act of 1979, the American Indian Religious Freedom Act of 1978, and the Utah State Antiquities Act of 1973 (amended 1992).

The fieldwork was performed on May 14 and 15, 2001 by Keith Montgomery (Principal Investigator) and Sharyl Kinnear-Ferris (Project Archaeologist) on May 23, 2001, under the auspices of U.S.D.I. (FLPMA) Permit No. 01-UT-60122 and State of Utah Antiquities Project (Survey) No. U-01-MQ-0246b,p issued to MOAC, Moab, Utah.

Prior to the fieldwork, a file search for previous inventories and documented cultural resources was performed by Keith Montgomery at the BLM Price Field Office on May 14, 2001. The result of the consultation indicated that several archaeological projects have been completed in the area. In 1997, Alpine Archaeological Consultants conducted a cultural resource inventory of the Utah Department of Transportation's State Road 157 Improvement Project (Reed, Horn, and Chandler 1997). The inventory resulted in the documentation of four historic sites and two isolated finds of artifacts: newly recorded sites 42Cb1084, 42Cb1085, 42Cb1086 and previously recorded site 42Cb535. Site 42Cb1084 is an historic masonry culvert at Milepost 2.6, evaluated as eligible to the National Register of Historic Places (NRHP) under criterion C. Site 42Cb1085 is an historic artifact scatter evaluated as not eligible for inclusion to the NRHP. A second historic masonry culvert at Milepost 3.2, 42Cb1086, is judged to be not eligible to the NRHP because it has been substantially modified. The fourth site, 42Cb535 is an historic artifact scatter determined to be not eligible to the NRHP. Environmental Industrial Services (EIS) inventoried a proposed 40 acre land exchange in 1999 for the BLM, resulting in the documentation of 42Cb1355, a portion of the historic Kenilworth and Helper railroad grade (Fergusson 1999). Also in 1999, MOAC surveyed three well locations for Anadarko Petroleum Corporation in the Helper Field (Montgomery 1999). This inventory resulted in the documentation of a single episode trash dump (42Cb1363), and is evaluated as not eligible to the NRHP. MOAC completed Anadarko Petroleum's 1999 and 2000 Helper Field Drilling Programs that resulted in the documentation of numerous prehistoric and historic sites (Montgomery,

Montgomery and Wolfe 1999; Montgomery, Kinnear-Ferris and Ball 2000). The 1999 inventory resulted in the documentation of 8 newly-found sites, two previously documented historic sites, and 23 isolated finds of artifacts. Cultural resources evaluated as eligible to the NRHP include three historic sites (42Cb533.3, 42Cb1235.1 and 42Cb1286.1) and one prehistoric site (42Cb1302). Site 42Cb533.3 is a segment of the historic Spring Glen Canal and represents a significant type, period and method of construction. Site 42Cb1235.1 is a segment of the Price to Myton Freight Road, a road that was originally recorded by MOAC in 1998. The road is eligible to the NRHP, although this particular segment retains no integrity and is considered non-contributory. The third eligible historic site, 42Cb1286.1, is a segment of the Price Canal, which represents one of the earliest irrigation systems of the area. Site 42Cb1302 is a prehistoric temporary camp containing a roasting pit and associated diagnostic artifacts. Subsurface testing indicated the site's potential for yielding additional information pertaining to the research domains of the area. The 2000 inventory resulted in the recordation of seven newly-found sites (42Cb1380 through 42Cb1386), one previously recorded site (42Cb1355), and 11 isolated finds of artifacts. Cultural resources evaluated as eligible for inclusion to the NRHP include 42Cb1380 (turn-of-the century habitation), 42Cb1382 (historic landfill associated with Kenilworth), and 42Cb1385 (two segments of the D&RGW Kenilworth Branch railroad grade). 42Cb1355.2 is a segment of the previously recorded historic Kenilworth and Helper railroad line, evaluated as eligible for inclusion to the NRHP. The same year, MOAC revisited the Helper Field to inventory Helper Federal E-3 Alternate 2, Helper Federal E-4 Alternate 2, and the Helper State E-3 to Helper Federal G-2 Pipeline (Ball and Montgomery 2000). This inventory resulted in the documentation of another segment of the Kenilworth and Helper railroad grade (42Cb1355.3).

DESCRIPTION OF PROJECT AREA

The project area is situated in Anadarko Petroleum's Helper Gas Field, northeast of the town of Price, Carbon County, Utah. The legal description is Township 13 South, Range 10 East, Sections 19, 20, 29, and 30 (Figure 1). The E-series program consists of twelve well locations and associated access and pipeline routes (Table 1). Of those, eight well locations and associated access and pipeline routes were inventoried during the current project (Hausknect #A-1, Saccomano Federal #A-1, E-3 Alternate 3, E-5, E-6, E-6 Alternate, E-9, and E-10). Four of the well locations were previously inventoried (U-99-MQ-0554 and U-00-MQ-0204).

Table 1. Legal Description and Cultural Resources of Anadarko Petroleum's E-Series Well Locations

Well Number	Legal Location	Access/Pipeline Corridor	Cultural Resources
Blackhawk #A-1 (U-99-MQ-0554)	T13S, R10E, Section 29	1200'	42Cb535, 42Cb1084, 42Cb1085, 42Cb1355.3
Hausknect #A-1	T 13S, R 10E, Section 21	3000'	42Cb1355.1, 42Cb1588

Well Number	Legal Location	Access/Pipeline Corridor	Cultural Resources
Helper Federal #E-3 (U-99-MQ-0554 and U-00-MQ-0204)	T 13S, R 10E, Section 29	3000'	42Cb1086 42Cb1355.3
Helper Federal #E-5	T 13S, R 10E, Section 20	1500'	42Cb1355.2, 42Cb1583
Helper Federal #E-6	T 13S, R 10 E, Section 20	1300'	42Cb1385.3
Helper Federal #E-6 Alternate 1	T 13S, R 10 E, Section 20	None	42Cb1385.3
Helper Federal #E-7 (U-99-MQ-0554)	T 13S, R 10E, Section 19, 30	1500'	42Cb1355.2
Helper Federal #E-8 (U-99-MQ-0554)	T 13S, R 10E, Section 19, 30	2800'	42Cb1385.2
Helper Federal #E-9	T 13S, R 10E, Section 19, 30	1000'	None
Helper Federal #E-10	T 13S, R 10E, Section 19, 30	800'	None
Helper Federal #E-11	T 13S, R 10E, Section 30	1000'	42Cb1355.2
Saccomano Federal #A-1	T 13S, R 10E, Section 29, 30	3000'	42Cb533.4

The project area occurs in an unnamed canyon between Kenilworth and Spring Glen. The study area lies within the Mancos Shale Lowlands and Book Cliff-Roan Plateau physiographic subdivisions of the Colorado Plateau (Stokes 1986). Topography is characterized by north-south trending ridges and narrow canyons. Geological formations include the Cretaceous Mancos Shale, marine Cretaceous sandstone (Bookcliffs), Paleocene and Eocene river and flood plain deposits (Roan Cliffs), and Eocene lake beds (Badlands Cliffs). The elevation averages 6000 feet a.s.l. Situated within the Upper Sonoran life zone, both a pinyon-juniper woodland and a sagebrush community is present. Plant species include pinyon, juniper, sagebrush, greasewood, prickly pear cactus, snakeweed and various grasses. The nearest permanent water is the Price River located to the west of the project area. Various intermittent drainages and springs occur in the area. Modern impacts consist of numerous roads, overhead power lines, buried pipelines, gas field development, and livestock grazing.

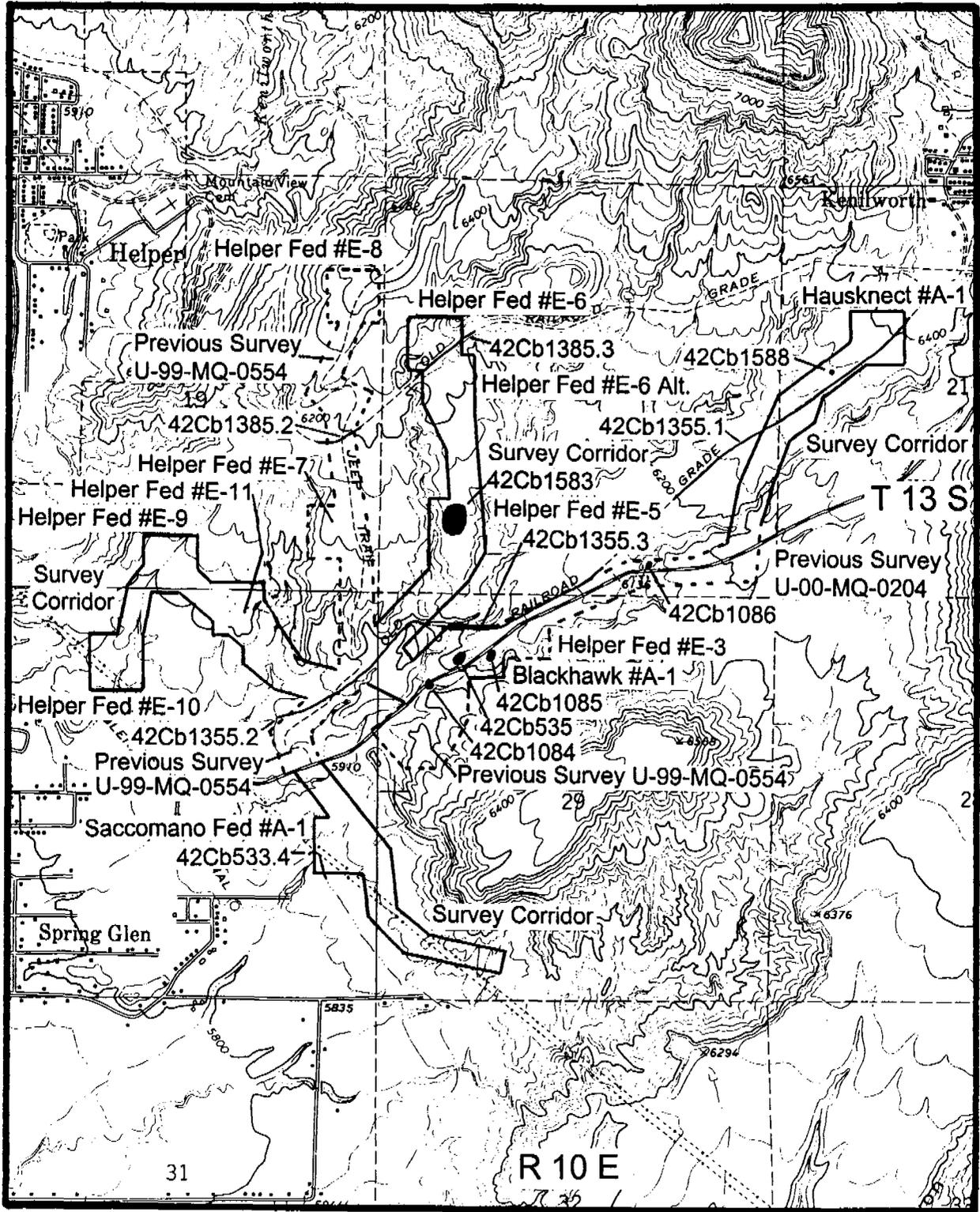


Figure 1. Inventory Area of Anadarko Petroleum's E-Series Well Locations in the Helper Oil Field, Carbon County, UT. USGS 7.5' Helper, UT 1972. Scale 1:24000.

Cultural Overview

Prehistoric occupation of the study area spans the last 10,000-12,000 years. Cultural remains representing the Paleoindian, Archaic, Formative, Late Prehistoric and Historic stages have been identified in the study area. The earliest known archaeological remains in central Utah are attributed to the Paleoindian stage, which have been divided into three complexes: the Llano (ca. 11,500-11,000 B.P.), the Folsom (ca. 11,000-10,000 B.P.) and the Plano (ca. 10,500-7500 B.P.). To date, in Carbon and Emery counties, Paleoindian artifacts have been found as surface isolated finds or lithic scatters (Copeland and Fike 1988). Finds of extinct fauna are also reported from the region, including a mammoth from Huntington Canyon (Gillette 1989).

The termination of the Pleistocene enacted major changes in the environment in Utah. Overall, the climate became warmer and drier, causing expansion of xeric vegetation zones, and a retreat of plant communities requiring cool and moist conditions at higher elevations. Large herd animals were less intensively exploited, replaced by a greater emphasis upon smaller, more dispersed fauna, in addition to plant resource processing. Archaic sites tend to occur in areas which offer overview qualities, proximity to outcrops of tool quality stone, and nearness to major topographic features (Black and Metcalf 1986). The Archaic stage on the northern Colorado Plateau has been divided into several phases by Schroedl (1976). These include the Black Knoll phase, the Castle Valley phase, the Green River phase, and the Dirty Devil phase. Recent investigations along the Muddy Creek in Emery County have defined the Archaic to Formative stage transition as the Confluence phase, dating to the period A.D. 540-630 (Greubel 1996). Material culture associated with this phase includes pithouse architecture, maize horticulture, large bell-shaped storage pits, and use of the bow and arrow (Greubel 1996:517).

The Formative stage is marked by reliance on domesticated plants, most notably corn; settlement in sedentary or semi-sedentary hamlets near areas optimum for horticulture; and the introduction of pottery, the earliest type in the project area being Emery Gray. The study area is within the cultural area of the San Rafael Fremont, as defined by Marwitt (1970). This variant is characterized by circular, stone-lined or earthen pit dwellings, and the clay-rimmed, flagstone paved fireplace. One of the highest San Rafael Fremont site densities is found in the Castle Valley area, especially along the Ferron Creek and Muddy Creek tributaries (Black and Metcalf 1986).

Formative stage populations are theorized to have declined around A.D. 1300, on the basis of a decrease in radiocarbon dates. Evidence from archaeological sites dating post-A.D. 1300 suggests that subsistence and settlement patterns changed, characterized by decreased horticultural practices and use of higher elevation areas. The material culture at sites post-dating A.D. 1100 suggests that a foraging group, unrelated to the local Formative stage groups, began using the area: the Numic cultural tradition. Diagnostic artifacts affiliated with the Numic culture include Desert series side-notched projectile points, Cottonwood Triangular projectile points, brown ware ceramics, certain styles of rock art, a variety of twined basket forms, and wickiup shelters with saucer-shaped floors. Most of the artifact scatters are in open settings, although a number are in rockshelters. In the study area, Numic or Ute dwellings were commonly domed structures with three or four-post foundations and a circular ground plan some 10 to 15 feet in diameter with coverings of brush or bark (Callaway, Janetski, and Stewart 1986:348). Due to preservation factors, very few sites with structural remains are known from the area. The archaeological record indicates fauna exploited for food consisted primarily of deer, elk, pronghorn, bison, and small game. Plants materials gathered included goosefoot, grass seeds, pinyon nuts, juniper berries, sumac berries and leaves, hackberry seeds, and possibly saltbush seeds, knotweed, chokecherry, and chickweed (Reed 1994:191). Numic-speaking peoples occupied the area and were present upon the arrival of Europeans in the 18th century.

In the summer of 1877, the Price River was explored by the Tidwell party who described the land as excellent, although they thought controlling the streams would be difficult (Watt 1997:22). Prior to this time Mormon settlement in southeastern Utah was averted because of the Black Hawk War (1865-1868). The first permanent settlers in the Price River Valley came from Salem, Utah Valley, arriving between 1877 and 1878. These individuals included Caleb B. Rhoades, James D. Gay, Frederick E. Grames, and Charles W. Grames who built dugouts and log cabins in the Price area (Horsely 1984:3). The first colonies in Carbon County were established as agrarian settlements with farming and ranching the primary economic pursuits. The Price Water Company was organized in 1884 with a capital stock of \$20,000 at one dollar per share, to began the construction of a canal to bring water to the town of Price (Watt 1997:47). The Price Canal was completed in May of 1888 to the east side of town and south toward the town of Wellington. The Spring Glen Canal was another important ditch to be constructed through the area. This canal was constructed between 1887 and 1893, prior to the formation of the town of Spring Glen. The ditch began about three-fourths of a mile above Helper. It was dug five miles long at first but later made nine miles long so it would extend as far as Carbonville. The canal was supervised by the LDS church leaders, most notably Spring Glen's Bishop Heber J. Stowell. Almost the entire community of Spring Glen participated in ditch construction with its greatest task being the building of 360 foot tunnel from Helper to the north, where water had already been brought from the Price River (Taniguchi 1981:45).

Coal mining began in Utah in the mid-nineteenth century. Early settlers discovered coal in 1849 at Coalville, 40 miles east of Salt Lake City. In 1882, the Denver and Rio Grande Western (D&RGW) railroad extended its narrow gauge line into Utah. As the railroad was changing to standard gauge rails, railroad officials decided a freight terminal and center for attaching "helper" engines was required in the area. Around 1887 the railroad built 7 residences, a bunkhouse, and a passenger station in what became Helper (Watt 1997:38). The first of the independent coal companies was organized in 1906: the Independent Coal and Coke Company. Prior to this time most of the coal development in Carbon County was monopolized by the D&RGW's Utah Fuel Company (Nielson and Merrill 1983:1-2). Mining operations by the Independent Coal and Coke Company commenced at Kenilworth in 1907, with coal being shipped over its railroad between the mining complex at Kenilworth and the town of Spring Glen (Kenilworth & Helper line). This railroad line was situated on a steep grade with sharp curves, and a special locomotive was required to pull the coal cars. In 1926, the Denver and Rio Grand Western built a new railroad line between Kenilworth and Helper, thus ending use of the Kenilworth & Helper line (Watt 1997:108-129). The coal mining industry experienced an economic downfall after World War I until 1940. In 1951, the Independent Coal & Coke Company purchased the holdings of the Utah Fuel Company, and thus acquired the Clear Creek mine and the Castle Gate mine and coal washing plant. In 1959-60, a tunnel was constructed from the Kenilworth mine to the Castle Gate mine and washer, thus eliminating the need to haul the Kenilworth coal around the mountain.

Settlement in the project area commenced around 1906 when the Independent Coal and Coke Company began operations at the Aberdeen Mine, followed by the Royal Blue and Kenilworth mines. By 1910 the company employed 485 men and the company-owned town of Kenilworth was developed on the flats south of the tippel with a population of 750 people (Nielson and Merrill 1983:16). In Kenilworth the house lots were relatively large with many landscaped lawns and small gardens. There was no private ownership of land, although individuals might be permitted to construct businesses or residences on company-owned land. Also the company dominated all economic activities either through company-operated stores and businesses or private enterprises that operated by permission of the coal company (Powell 1981:14). Mining companies in the county built stores where the miners could purchase food and clothing. Because of their lack of transportation, most families made most of their purchases at company stores and did not travel regularly to Helper or Price (Watt 1997:186). The main business in the town was the Kenilworth Mercantile Company store which in 1918 boasted 8,000 sq. feet of floor space and sold groceries, hardware, dry goods, furniture, clothing, hats, caps, crockery, powder and auto supplies, with an inventory of \$45,000. The employees at the Kenilworth mines consisted of various immigrant heritages including Greeks, Italians, Japanese, Slovenians, and Germans. In 1920 Kenilworth had 316 foreign born, who had 242 children, totaling 558, or 67 % of the total towns population (Watt 1997:211). The mines at Kenilworth were closed in 1960, although the town is still occupied by individuals occupying privately-owned residences.

SURVEY METHODOLOGY

An intensive pedestrian survey was performed for this project which is considered 100% coverage. At each of the well locations, a 10-acre square parcel was defined, laid out on the cardinal directions and centered on the well pad's center stake. The interiors of the parcels were examined for cultural resources with a series of parallel sweeps, spaced at 10 m (30 ft) intervals. The access route and pipeline corridors were 300 feet wide, surveyed by walking parallel transects along the staked centerline, spaced no more than 10 m (30 ft) apart. A total of 204 acres was inventoried; 141.5 acres on BLM (Price Field Office) administered land and 62.5 acres on private land.

Cultural resources were recorded as either an archaeological site or isolated find of artifact. Archaeological sites were defined as spatially definable areas with features and/or ten or more artifacts. Sites were documented by the archaeologists walking transects across the site, spaced no more than 3 meters apart, and marking the locations of cultural materials with pinflags. This procedure allowed clear definition of site boundaries and artifact concentrations. At the completion of the surface inspection, a transit was employed to point-provenance diagnostic artifacts and other relevant features in reference to the site datum. Archaeological sites were plotted on a 7.5' USGS quadrangle, photographed, with site data entered on an Intermountain Antiquities Computer System (IMACS, 1990 version) inventory form (Appendix A).

INVENTORY RESULTS

Two new archaeological sites (42Cb1583 and 42Cb1588) were documented during the inventory of Anadarko Petroleum's eight well locations in the Helper Field. Seven previously recorded sites were re-visited (42Cb533, 42Cb535, 42Cb1084, 42Cb1085, 42Cb1086, 42Cb1355, and 42Cb1385), with new segments recorded for three of the sites (42Cb533, 42Cb1355, and 42Cb1385).

Smithsonian Site No.: 42Cb1583
Temporary Site No.: MOAC 62-1
Legal Description: NE/SW/SW of S. 20, T 13S, R 10E
Jurisdiction: Bureau of Land Management
NRHP Eligibility: Not Eligible

Description: This site is situated on a gravel-capped ridge in a canyon formed by a tributary of the Price River. It consists of a low density trash scatter of tin cans, glass pieces, and an enamelware wash basin. The site is interpreted as a temporary camp, probably associated with the local coal mines. Two of the tin cans are hole in cap, which suggests an early date of ca. 1810 to 1930 for the site. The remainder of the cans are sanitary with cut-around openings of unknown function, hinged-lid tobacco tins, and an olive oil can with screw cap opening and spout. Approximately 50 pieces of brown and clear glass fragments were found, including 2 brown glass crown finishes. No structures or hearth features were observed. Heavy erosion of the site has contributed to the moving of artifacts and may have displaced any in-situ features.



42Cb1583. Overview of site viewed to the west. Roll 62/1:10.

Smithsonian Site No.: 42Cb1588
Temporary Site No.: MOAC 62-2
Legal Description: NE/SW/SW of S. 21, T 13S, R 10
Jurisdiction: Private
NRHP Eligibility: Not Eligible

Description: This site is situated on a residual slope in an unnamed canyon between the towns of Kenilworth and Spring Glen, Utah. It consists of a small historic artifact concentration located approximately 28 meters from the historic railroad bed (D&RGW Kenilworth Branch Railroad). Artifacts include numerous pieces of glass, two of which were purple; assorted tin cans; and several sherds of a ceramic bowl and plate. Coal slag pieces were dumped in a mound, and the artifacts were atop the coal pile. Also found was a modern plastic perforated plate. The purple glass pieces suggest an early date of 1810, since glass containing manganese was produced from approximately 1810 to 1917.



42Cb1588. Overview of site, viewed to the northeast. Roll 62/2:5.

Smithsonian Site No.: 42Cb533.4
Temporary Site No.: None
Legal Description: SW/NE/SE of S. 30, T 13S, R 10E
Jurisdiction: Private
NRHP Eligibility: Eligible

Description: This is a segment of the Spring Glen Canal, constructed between 1887 and 1893. It consists of an earthen ditch, approximately 4 feet wide and 3 feet deep. It retains good physical integrity. No other structural features were noted. Vegetation observed includes willow, Russian olive, rabbitbrush, sagebrush, cottonwood, and grasses.

Smithsonian Site No.: 42Cb535
Temporary Site No.: UDOT J/3
Legal Description: SE/NW/NW of S. 29, T 13S, R 10E
Jurisdiction: Private
NRHP Eligibility: Not Eligible

Description: This is a historic temporary camp originally documented in 1986 by Abajo Archaeology (Montgomery 1986). It may be associated with the Old Railroad Grade (Kenilworth & Helper Railroad, ca. 1907) and consists of seven clusters of broken bottle glass and one cluster of modern sanitary tin cans. The bottles appear to date from 1903 to the 1930's, on the basis of manufacture and color. One prehistoric semitranslucent clear chert biface fragment was found in the east portion of the site. The majority of the artifacts are fragmented as a result of target practice, and the site has minimal potential for additional buried cultural artifacts or features.

Smithsonian Site No.: 42Cb1084
Temporary Site No.: None
Legal Description: NW/SW/NW of S. 29, T 13S, R10E
Jurisdiction: Utah Department of Transportation
NRHP Eligibility: Eligible under criterion C

Description: This is a masonry culvert located along State Road 157 recorded by Alpine Archaeological Consultants (Reed, Horn and Chandler 1997). It spans an intermittent stream emanating from the Kenilworth area. The culvert consists of two masonry abutments, steel stringers, a wooden deck, and post and board railings. The date of the culvert's construction is unknown. Wire nails used in the deck construction suggest the feature post-dates 1900. It was evaluated as eligible for inclusion to the NRHP on the basis that it embodies distinctive characteristics of a type of construction.

Smithsonian Site No.: 42Cb1085
Temporary Site No.: Ken #1
Legal Description: SW/NE/NW of S. 29, T 13S, R 10E
Jurisdiction: Utah Department of Transportation
NRHP Eligibility: Not Eligible

Description: This site is a single episode trash scatter documented by Alpine Archaeological Consultants in 1996 (Reed, Horn and Chandler 1997). Artifacts consist of metal cans, bottles, earthenware, and nails. The scatter covers a distance of 30 m. The presence of hole in cap tin cans and tobacco can lids suggests the site dates from 1880 to 1920. Research potential of the site has been exhausted by recordation, and it was evaluated as not eligible for inclusion to the NRHP.

Smithsonian Site No.: 42Cb1086
Temporary Site No.: None
Legal Description: SE/SW/SE of S. 20, T 13S, R 10E
Jurisdiction: Utah Department of Transportation
NRHP Eligibility: Not Eligible

Description: This site consists of a historic masonry culvert with out-of-period modifications. A 7 ft diameter steel culvert drains water from an unnamed tributary stream. The visible portion of the culvert consists of two abutments, steel stringers, and a wooden deck. A suggested construction date is placed at the 1920s or 1930s. There is no evidence the feature is associated with historic events or persons, and its integrity has been compromised by later additions of masonry and steel culvert.

Smithsonian Site No.: 42Cb1355.1; 42Cb1355.2; and 42Cb1355.3
Temporary Site No.: None
Legal Description: T 13S, R10E, S. 20, 29, 30
Jurisdiction: Bureau of Land Management
NRHP Eligibility: Eligible

Description: These are three segments of the historic Kenilworth and Helper Railroad, originally documented by Environmental Industrial Services (Fergusson 1999). It was first used by the Independent Coal and Coke Company in 1907 to ship coal from the mines at Kenilworth to the Rio Grande Western railroad line at Spring Glen. The proposed access

route to Hausknect #A-1 crosses segment 42Cb1355.1. This segment of the railroad is located west of Kenilworth, and is an extension of the railroad segment originally documented by Fergusson (1999). It is a section of railroad grade that is paralleled by a utility line. The railroad grade is raised about 3 feet from the base to the top, and the top averages 6-10 feet wide. A variety of in-period and modern artifacts were observed along this segment, including aluminum beverage cans; clear, brown and green glass pieces; cable wire; assorted pieces of lumber; and assorted tin cans such as sanitary tin cans, evaporated milk cans, and a 5-gallon oil can. The access road to Helper Federal E-7 crosses the railroad bed of 42Cb1355.2 (U-99-MQ-0554). The third segment, 42Cb1355.3, is located within and extends from the Helper Federal E-3 Alternate 3 well location 10-acre parcel (U-99-MQ-0204).

Smithsonian Site No.: 42Cb1385.3
Temporary Site No.: MOAC 554-9
Legal Description: T13S, R 10 E, Section 19
Jurisdiction: Bureau of Land Management
NRHP Eligibility: Eligible

Description: This site consists of a segment of the D&RGW Kenilworth Branch abandoned railroad grade which dates from 1927 to about 1961. Two segments of the railroad were previously documented by MOAC in 2000 (Montgomery, Kinnear-Ferris, and Ball 2000). The Independent Coal and Coke Company began mining operations at Kenilworth in 1906, and shipped its first coal in 1907 on a Rio Grande Western railroad line between Kenilworth and Spring Glen (Kenilworth & Helper line). This line remained in operation until 1926 when the Denver and Rio Grande Western replaced it with a new railroad north of Helper, thereby eliminating the steep grades and sharp curves (Watt 1997:113). This railroad was abandoned by 1961 when the Kenilworth and Castle Gate mines were connected by an underground tunnel. At that time, coal from Kenilworth was transported via the tunnel to the washer and preparation plant at Castle Gate (Watt 1997:125). Segment 3 is located at T 13S, R 10E, Section 20. The raised railroad grade averages 12 feet from the base to the top, and the top measures 12 to 16 feet wide. The bottom is 45 to 50 feet wide. All of the rails and ties have been removed. There are twelve 6" spikes on top of the slopes. Three powder cans (9-1/2" diameter, 10-1/2" height) are observed at the site. The cans have a spout opening and the words "25 LBS" and "EXPLOSIVE" are present.

NATIONAL REGISTER OF HISTORIC PLACES EVALUATION

The National Register Criteria for Evaluation of Significance and procedures for nominating cultural resources to the National Register of Historic Places (NRHP) are outlined in 36 CFR 60.4 as follows:

The quality of significance in American history, architecture, archaeology, and culture is present in districts, sites, buildings, structures, and objects of State and local importance that possess integrity of location, design, setting, material, workmanship, feeling, and association, and that they:

- a)...are associated with events that have made a significant contribution to the broad patterns of our history; or
- b)...are associated with the lives of persons significant to our past; or
- c)...embody the distinctive characteristics of a type, period, or method of construction; or that represents the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- d)...have yielded or may be likely to yield information important in prehistory or history.

The inventory of Anadarko Petroleum's proposed E-series well locations in the Helper Field resulted in the documentation of two newly found historic sites, and the location of seven previously recorded sites. Cultural resources which are evaluated as eligible to the NRHP include four previously recorded sites: 42Cb533, 42Cb1084, 42Cb1355, and 42Cb1385. Site 42Cb533.4 is a segment of the historic Spring Glen Canal which represents a water control system associated with a municipal water district. It is evaluated as eligible to the NRHP under criterion A, since it is significant for its association with events and broad patterns important to local history. Site 42Cb1084 is a historic culvert recommended as eligible to the NRHP under criterion C because it embodies the distinctive characteristics of a type of construction. The third eligible site consists of three segments (42Cb1355.1, 42Cb1355.2 and 42Cb1355.3) of the Kenilworth & Helper Railroad. It is evaluated as eligible to the NRHP under criterion A because of its significance to area history. The fourth eligible site consists of two segments of the historic D&RGW Kenilworth Branch abandoned railroad grade (42Cb1385.2 and 42Cb1385.3). This site is evaluated as eligible to the NRHP under criterion A since it is associated with events important to the historic events or patterns of the area, in particular the mining activity at Kenilworth.

The two newly recorded sites (42Cb1583 and 42Cb1588) and three of the previously documented sites (42Cb535, 42Cb1085 and 42Cb1086) are not eligible for inclusion to the NRHP. Sites 42Cb535, 42Cb1085, 42Cb1583, and 42Cb1588 consist of historic artifact concentrations. They are evaluated as not eligible for inclusion to the NRHP on the basis that they lie on residual soils with minimal potential for buried cultural materials. There are no structures or features present, and the artifacts exhibit minimal spatial patterning. The research potential of these sites is depleted through documentation. Site 42Cb1086, a historic culvert, has been substantially modified and is judged to be not eligible to the NRHP.

MANAGEMENT RECOMMENDATIONS

The cultural resource inventory resulted in the documentation or location of four historic sites which are evaluated as eligible for inclusion to the NRHP: 42Cb533, 42Cb1084, 42Cb1355, and 42Cb1385. These sites will be avoided from project impacts since they occur outside of Anadarko Petroleum's construction zones. At 42Cb1355.1, the proposed road to Hausknect #A-1 will cross the railroad grade. This undertaking will not effect the characteristics which make this historic property eligible (criterion A). Hence, a determination of "no historic properties affected" is proposed.

REFERENCES CITED

- Ball, S. and K.R. Montgomery
2000 Cultural Resource Inventory of Helper Federal E-3 Alternate 2, Helper Federal E-4 Alternate 2, and Helper State E-3 to Helper Federal G-2 Pipeline, Carbon County, Utah. Montgomery Archaeological Consultants, Moab, Utah. Project No. U-00-MQ-0204. On file at the BLM Price Field Office.
- Callaway, D., J. Janetski, and O.C. Stewart
1986 Ute. In *Great Basin*, edited by Warren L. D'Azevedo, pp. 336-367. Handbook of North American Indians, Volume II: Great Basin, edited by William C. Sturtevant, Smithsonian Institution, Washington.
- Black, K.D. and M. Metcalf
1986 The Castle Valley Archaeological Project: An Inventory and Predictive Model of Selected Tracts. *Cultural Resource Series* No. 19. Bureau of Land Management, Salt Lake City, Utah.
- Copeland, J.M. and R.E. Fike
1988 Fluted Projectile Points of Utah. *Utah Archaeology* 1988 1(1): 5-28.
- Fergusson, A.
1999 Report of a Cultural Resource Inventory of a Proposed 40 Acre Land Exchange, Carbon County, Utah. Environmental Industrial Services, Helper, UT. Report No. U-99-BC-0356 on file at the BLM Price Resource Area.
- Gillette, David
1989 The Huntington Mountain Mammoth: The Last Holdout?. *Canyon Legacy* Vol. 1, No. 1. Dan O' Laurie Museum. Moab, Utah.
- Greubel, R. A.
1996 Archaeological Investigations of 11 Sites Along Interstate 70: Castle Valley to Rattlesnake Bench. Alpine Archaeological Consultants, Inc., Montrose, Colorado.
- Horsley, E.S.
1984 *Carbon County Journal: Price's Early Settlement*. Volume 3, Number 1. Price, Utah.
- Marwitt, J.P.
1970 Median Village and Fremont Cultural Regional Variation. *University of Utah Anthropological Papers* No. 95, Salt Lake City, Utah.

- Montgomery, K.R.
 1999 Cultural Resource Inventory of Well Locations Chubbuck A-2 and Helper State A-16 and E-4 in Anadarko Petroleum's Helper Field, Carbon County, Utah. Montgomery Archaeological Consultants, Moab, Utah. Report No. U-99-MQ-0591. On file at the BLM Price Field Office.
- Montgomery, K.R., J.A. Montgomery, and M.S. Wolfe
 1999 Cultural Resource Inventory of Anadarko Petroleum's 1999 Helper Field Drilling Program, Carbon County, Utah. Report No. 98-0593, on file at the BLM Price/San Rafael Field Office, Price, Utah.
- Montgomery, K. R., S. Kinnear-Ferris, and S. Ball
 2000 Cultural Resource Inventory of Anadarko Petroleum's 2000 Helper Field Drilling Program, Carbon County, Utah. Montgomery Archaeological Consultants, Moab, Utah. Report No.99-0554 available at the BLM, Price/ San Rafael Field Office, Price, Utah.
- Nielson, A.S., and D.B. Merrill
 1983 Historic Mitigation Independent Coal & Coke Company Kenilworth Mine Workings. Brigham Young University, Cultural Resource Management Services, Provo, UT. Report No. 83-880 on file at the Division of State Historic, SLC, Utah.
- Powell, A.K.
 1981 Land of Three Heritages: Mormons, Immigrants, and Miners. In *Carbon County: Eastern Utah's Industrialized Island*, edited by Philip F. Notarianni. Utah State Historical Society.
- Reed, A.D.
 1994 The Numic Occupation of Western Colorado and Eastern Utah during the Prehistoric and Protohistoric Periods. In *Across the West: Human Population Movement and the Expansion of the Numa*, edited by D.B. Madsen and D. Rhode. University of Utah Press.
- Reed, A.D., J.C. Horn, and S.M. Chandler
 1997 Cultural Resource Inventory of the Utah Department of Transportation State Road 157 Improvement Project and Intensive Level Survey Documentation of Two Historic Culverts, Carbon County, Utah. Project No. SP-157(1)1. On file with the Utah Department of Transportation Region Four office
- Schroedl, A.R.
 1976 *The Archaic of the Northern Colorado Plateau*. Ph.D. dissertation, Department of Anthropology, University of Utah, Salt Lake City, Utah.
- Stokes, W. L.
 1986 *Geology of Utah*. Utah Museum of Natural History, University of Utah, Salt Lake City.

Taniguchi, N.

1981

Common Ground: The Coalescence of Spring Glen, 1878-1920. MA thesis,
Department of History, University of Utah, Salt Lake City.

Watt, R.G.

1997

A History of Carbon County. Utah State Historical Society and Emery
County Commission.

APPENDIX A
INTERMOUNTAIN ANTIQUITIES COMPUTER SYSTEM (IMACS)
SITE INVENTORY FORMS

On File At:

U.S. Bureau of Land Management
Price Field Office
Price, Utah

003

WORKSHEET
APPLICATION FOR PERMIT TO DRILL

APD RECEIVED: 05/23/2003

API NO. ASSIGNED: 43-007-30923

WELL NAME: BLACKHAWK A-1 (RIGSKID)
OPERATOR: ANADARKO PETROLEUM CORP (N0035)
CONTACT: CARLA GHAZIZADEH

RIG SKID

PHONE NUMBER: 832-636-3315

PROPOSED LOCATION:

SESE 20 130S 100E
SURFACE: 1157 FSL 0886 FEL
BOTTOM: 1157 FSL 0886 FEL
CARBON
HELPER (18)

INSPECT LOCATN BY: / /		
Tech Review	Initials	Date
Engineering	DKD	5/23/03
Geology		
Surface		

LEASE TYPE: 4 - Fee
LEASE NUMBER: FEE
SURFACE OWNER: 4 - Fee

LATITUDE: 39.67678

LONGITUDE: 110.81869

PROPOSED FORMATION: TNUNK

RECEIVED AND/OR REVIEWED:

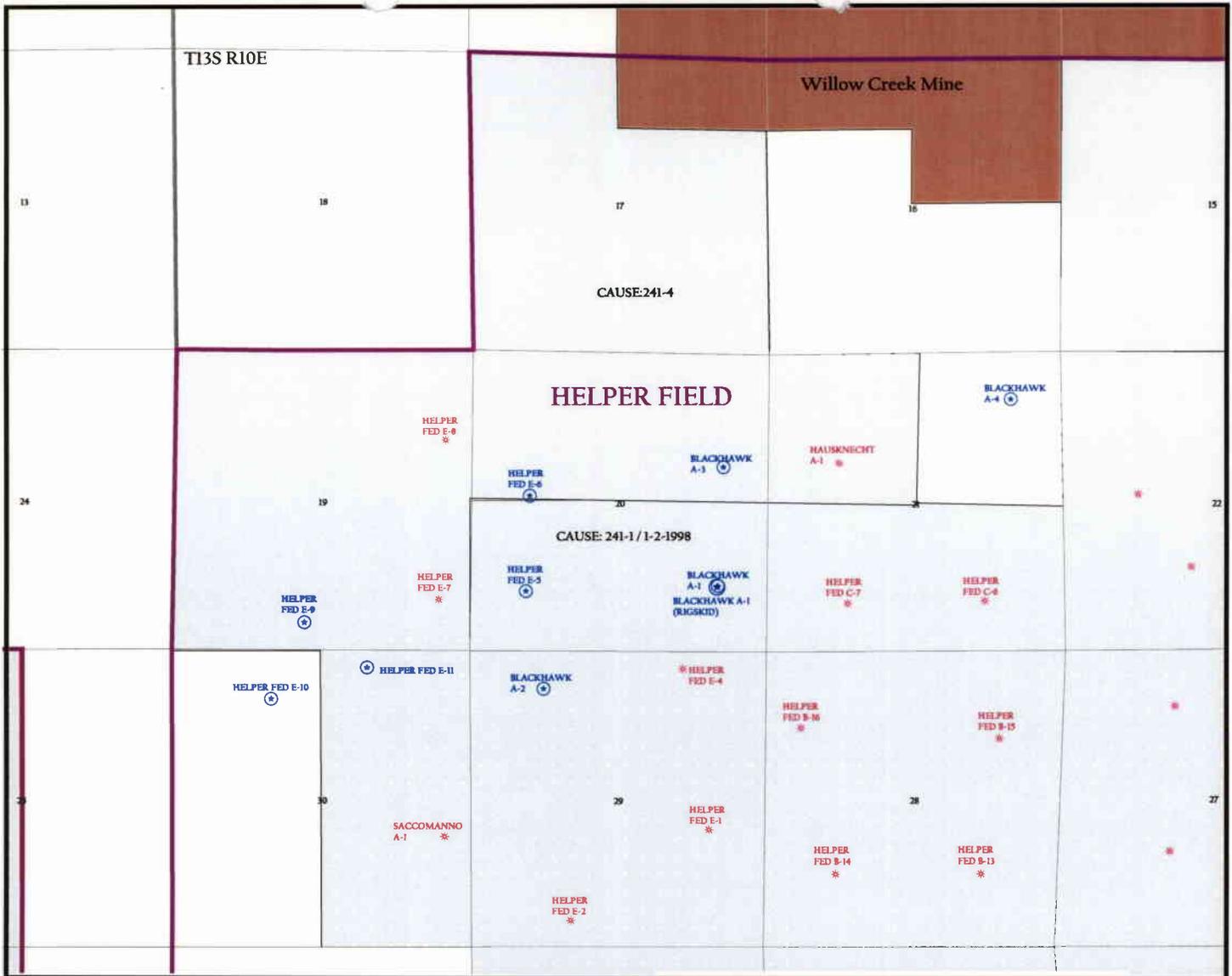
- Plat
- Bond: Fed[] Ind[] Sta[] Fee[4]
(No. 224351)
- Potash (Y/N)
- Oil Shale 190-5 (B) or 190-3 or 190-13
- Water Permit
(No. MUNICIPAL)
- RDCC Review (Y/N)
(Date: _____)
- ~~Fee~~ (Y/N)

LOCATION AND SITING:

- R649-2-3.
Unit _____
- R649-3-2. General
Siting: 460' From Qtr/Qtr & 920' Between Wells
- R649-3-3. Exception
- Drilling Unit
Board Cause No: 241-1
Eff Date: 1-7-1998
Siting: 460' fr W boundary, 920' fr other wells.
- R649-3-11. Directional Drill

COMMENTS: 2nd Prosite not required

STIPULATIONS: ① Surface Casing Cement Stip
② Statement of Basis



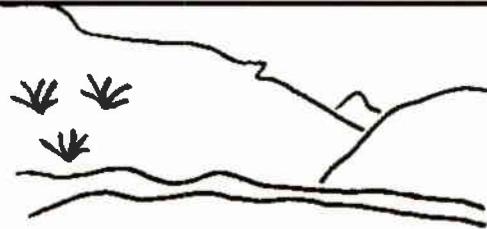
OPERATOR: ANADARKO PETRO (N0035)

SEC. 20 T13S, R10E

FIELD: HELPER (18)

COUNTY: CARBON

CAUSE: 241-1 / 1-2-1998



Utah Oil Gas and Mining

WELLS

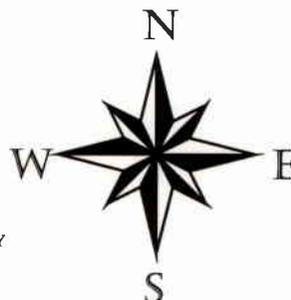
- ∕ GAS INJECTION
- GAS STORAGE
- × LOCATION ABANDONED
- ⊙ NEW LOCATION
- ⋄ PLUGGED & ABANDONED
- PRODUCING GAS
- PRODUCING OIL
- SHUT-IN GAS
- SHUT-IN OIL
- × TEMP. ABANDONED
- TEST WELL
- △ WATER INJECTION
- ⋄ WATER SUPPLY
- ∕ WATER DISPOSAL

UNIT STATUS

- EXPLORATORY
- GAS STORAGE
- NF PP OIL
- NF SECONDARY
- PENDING
- PI OIL
- PP GAS
- PP GEOTHERML
- PP OIL
- SECONDARY
- TERMINATED

FIELD STATUS

- ABANDONED
- ACTIVE
- COMBINED
- INACTIVE
- PROPOSED
- STORAGE
- TERMINATED
- COUNTY BOUNDARY
- SECTION LINES
- TOWNSHIP LINES



PREPARED BY: DIANA MASON
DATE: 23-MAY-2003

03-03 Anadarko Blackhawk A-1 (rig skid)

Casing Schematic

Surface

Energy

8-5/8"
MW 8.3
Frac 19.3

TOC @
77.

Surface
300. MD

w/208 Washout
* Cement Stop

BoP

$$(0.052)(8.4)(3950) = 1725 \text{ psi}$$

Gas

$$(0.12)(3950) = 474 \text{ psi}$$

$$\text{MASP} = 1251 \text{ psi}$$

2 in BoPE proposed

Adequate DSD
5/23/03

3462'
Ferran 55

3667'
Tunk 5-1/2"
MW 8.3

TOC @
3066.

→ w/250 cf tuxo

3239' w/200 cf tuxo

w/158 washout

3477' coals

3607'

Production
3950. MD

Well name: **05-03 Anadarko Blackhawk A-1(rig skid)**
 Operator: **Anadarko Petroleum Corp.**
 String type: **Surface** Project ID: **43-007-30923**
 Location: **Carbon County, Utah**

Design parameters:

Collapse
 Mud weight: 8.330 ppg
 Design is based on evacuated pipe.

Minimum design factors:

Collapse:
 Design factor 1.125

Environment:

H2S considered? No
 Surface temperature: 65 °F
 Bottom hole temperature: 69 °F
 Temperature gradient: 1.40 °F/100ft
 Minimum section length: 300 ft

Burst:
 Design factor 1.00

Cement top: 77 ft
 *Surface Stip

Burst

Max anticipated surface pressure: 0 psi
 Internal gradient: 0.433 psi/ft
 Calculated BHP 130 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)

Non-directional string.

Tension is based on air weight.
 Neutral point: 262 ft

Re subsequent strings:
 Next setting depth: 3,950 ft
 Next mud weight: 8.330 ppg
 Next setting BHP: 1,709 psi
 Fracture mud wt: 19.250 ppg
 Fracture depth: 300 ft
 Injection pressure 300 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	300	8.625	24.00	J-55	ST&C	300	300	7.972	14.4

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	130	1370	<u>10.56</u>	130	2950	<u>22.74</u>	7	244	<u>33.91 J</u>

Prepared by: Dustin K. Doucet
 Utah Dept. of Natural Resources

Phone: (801) 538-5281
 FAX: (801) 359-3940

Date: May 23, 2003
 Salt Lake City, Utah

ENGINEERING STIPULATIONS - Surface Casing must be cemented back to surface.
 Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.
 Collapse is based on a vertical depth of 300 ft, a mud weight of 8.33 ppg The casing is considered to be evacuated for collapse purposes.
 Burst strength is not adjusted for tension.

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

Well name:	05-03 Anadarko Blackhawk A-1(rig skid)		
Operator:	Anadarko Petroleum Corp.		
String type:	Production	Project ID:	43-007-30923
Location:	Carbon County, Utah		

Design parameters:

Collapse
Mud weight: 8.330 ppg
Design is based on evacuated pipe.

Minimum design factors:

Collapse:
Design factor 1.125

Environment:

H2S considered? No
Surface temperature: 65 °F
Bottom hole temperature: 120 °F
Temperature gradient: 1.40 °F/100ft
Minimum section length: 1,500 ft

Burst:
Design factor 1.00

Cement top: 3,066 ft

Burst

Max anticipated surface pressure: 0 psi
Internal gradient: 0.433 psi/ft
Calculated BHP 1,709 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)

Non-directional string.

Tension is based on air weight.
Neutral point: 3,451 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	3950	5.5	17.00	N-80	LT&C	3950	3950	4.767	136.1

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	1709	6290	3.68	1709	7740	4.53	67	348	5.18 J

Prepared by: Dustin K. Doucet
Utah Dept. of Natural Resources

Phone: (801) 538-5281
FAX: (801)359-3940

Date: May 23,2003
Salt Lake City, Utah

ENGINEERING STIPULATIONS - Surface Casing must be cemented back to surface.
Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.
Collapse is based on a vertical depth of 3950 ft, a mud weight of 8.33 ppg The casing is considered to be evacuated for collapse purposes.
Burst strength is not adjusted for tension.

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

ON-SITE PREDRILL EVALUATION
Division of Oil, Gas and Mining

OPERATOR: Anadarko Petroleum Corp.
WELL NAME & NUMBER: BlackHawk A-1
API NUMBER: 43-007-30885
LEASE: Fee FIELD/UNIT: _____
LOCATION: 1/4, 1/4 SESE Sec: 20 TWP: 13S RNG: 10E 853 FEL 1143 FSL
LEGAL WELL SITING: 460 F UNIT BOUNDARY 920 F ANOTHER WELL.
GPS COORD (UTM): X = 515560 E; Y = 4391686 N
SURFACE OWNER: Black Hawk Coal Company.

PARTICIPANTS

M. Jones (DOGM), Jim Hartley (Anadarko), Johnny Pappas (surface).

REGIONAL/LOCAL SETTING & TOPOGRAPHY

The proposed location lies ~2.1 miles East of Spring Glen, Utah and ~1.0 miles West of Kenilworth, Utah. The closest live, year-round water source is the Price River, located ~2.22 miles to the west. The direct area drains to the east into the Price River. Other water sources such as dry washes, the Spring Glen irrigation system, and municipal drinking water systems are located within a 1 miles radius of the proposed gas well. Price River Water Imp. Dist., operates a municipal water distribution line that runs in a West to East direction ~50 feet North of the proposed well site.

SURFACE USE PLAN

CURRENT SURFACE USE: Wildlife habitat and grazing.

PROPOSED SURFACE DISTURBANCE: 155'x270' w/ a 80'x30'x10' pit. (interior).

LOCATION OF EXISTING WELLS WITHIN A 1 MILE RADIUS: 6 proposed gas wells and 7 producing gas wells are located within a 1 mile radius of the above mentioned well.

LOCATION OF PRODUCTION FACILITIES AND PIPELINES: Along roadside.

SOURCE OF CONSTRUCTION MATERIAL: Obtained locally and transported in.

ANCILLARY FACILITIES: None anticipated.

WASTE MANAGEMENT PLAN:

Portable chemical toilets which will be emptied into the municipal waste treatment system; garbage cans on location will be emptied into centralized dumpsters which will be emptied into an approved landfill. Crude oil production is unlikely. Drilling fluid, completion / frac fluid and cuttings will be buried in the pit after evaporation and slashing the pit liner. Produced water will be gathered to the evaporation pit and eventually injected into the Navajo Sandstone via a salt-water disposal well. Used oil from drilling operations and support is hauled to a used oil recycler and reused.

ENVIRONMENTAL PARAMETERS

AFFECTED FLOODPLAINS AND/OR WETLANDS: Dry washes draining eventually to the Price River ~2.22 miles West.

FLORA/FAUNA: Pinion Juniper, Basin Big Sagebrush, cheat grass, deer, small game, rodents.

SOIL TYPE AND CHARACTERISTICS: Gravelly sandy clay.

EROSION/SEDIMENTATION/STABILITY: Erosive when disturbed.

PALEONTOLOGICAL POTENTIAL: None observed.

RESERVE PIT

CHARACTERISTICS: Dugout earthen pit.

LINER REQUIREMENTS (Site Ranking Form attached): Liner required.

SURFACE RESTORATION/RECLAMATION PLAN

As per surface use agreement.

SURFACE AGREEMENT: In negotiation.

CULTURAL RESOURCES/ARCHAEOLOGY: Completed and on file.

OTHER OBSERVATIONS/COMMENTS

T&E study has been completed for this site. Access will be from the East across State and BLM surface.

ATTACHMENTS

Photos of this location were taken and placed on file.

Mark L. Jones
DOGM REPRESENTATIVE

November 11, 2002 / 10:00 am
DATE/TIME

**Evaluation Ranking Criteria and Ranking 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>0</u>
Distance to Surf. Water (feet)		
>1000	0	
300 to 1000	2	
200 to 300	10	
100 to 200	15	
< 100	20	<u>0</u>
Distance to Nearest Municipal Well (feet)		
>5280	0	
1320 to 5280	5	
500 to 1320	10	
<500	20	<u>0</u>
Distance to Other Wells (feet)		
>1320	0	
300 to 1320	10	
<300	20	<u>0</u>
Native Soil Type		
Low permeability	0	
Mod. permeability	10	
High permeability	20	<u>20</u>
Fluid Type		
Air/mist	0	
Fresh Water	5	
TDS >5000 and <10000	10	
TDS >10000 or Oil Base Mud Fluid	15	
containing significant levels of hazardous constituents	20	<u>0</u>
Drill Cuttings		
Normal Rock	0	
Salt or detrimental	10	<u>0</u>
Annual Precipitation (inches)		
<10	0	
10 to 20	5	
>20	10	<u>5</u>
Affected Populations		
<10	0	
10 to 30	6	
30 to 50	8	
>50	10	<u>10</u>
Presence of Nearby Utility Conduits		
Not Present	0	
Unknown	10	
Present	15	<u>15</u>

Final Score 50 (Level I Sensitivity)

Sensitivity Level I = 20 or more; total containment is required.

Sensitivity Level II = 15-19; lining is discretionary.

Sensitivity Level III = below 15; no specific lining 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)

May 23, 2003

Anadarko Petroleum Corporation
P O Box 1330
Houston, TX 77251-1330

Re: Blackhawk A-1X Well, 1157' FSL, 886' FEL, SE SE, Sec. 20, T. 13 South, R. 10 East,
Carbon 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 43-007-30923.

Sincerely,

A handwritten signature in black ink, appearing to read "John R. Baza".

John R. Baza
Associate Director

pab
Enclosures

cc: Carbon County Assessor

Operator: Anadarko Petroleum Corporation
Well Name & Number Blackhawk A-1X
API Number: 43-007-30923
Lease: Fee

Location: SE SE Sec. 20 T. 13 South R. 10 East

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

The operator is required to notify the Division of Oil, Gas and Mining of the following actions during drilling of this well:

- 24 hours prior to cementing or testing casing
- 24 hours prior to testing blowout prevention equipment
- 24 hours prior to spudding the well
- within 24 hours of any emergency changes made to the approved drilling program
- prior to commencing operations to plug and abandon the well

The following are Division of Oil, Gas and Mining contacts and their work telephone numbers (please leave a voice mail message if the person is not available to take the call):

- Dan Jarvis at (801) 538-5338
- Carol Daniels at (801) 538-5284 (spud)

3. Reporting Requirements

All required reports, forms and submittals will 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. Surface casing shall be cemented to the surface.

006

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

AMENDED REPORT [] FORM 8
(highlight changes)

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

1a. TYPE OF WELL: OIL WELL [] GAS WELL [] DRY [] OTHER CBM
b. TYPE OF WORK: NEW WELL [x] HORIZ. LATS. [] DEEP-EN [] RE-ENTRY [] DIFF. RESVR. [] OTHER []

2. NAME OF OPERATOR: Anadarko Petroleum Corporation

3. ADDRESS OF OPERATOR: 17001 Northchase Drive CITY Houston STATE TX ZIP 77251 PHONE NUMBER: (832) 636-3315

4. LOCATION OF WELL (FOOTAGES) AT SURFACE: 1157' FSL x 886' FEL AT TOP PRODUCING INTERVAL REPORTED BELOW: AT TOTAL DEPTH: Same As Above

5. LEASE DESIGNATION AND SERIAL NUMBER: Fee

6. IF INDIAN, ALLOTTEE OR TRIBE NAME: N/A

7. UNIT or CA AGREEMENT NAME: N/A

8. WELL NAME and NUMBER: Blackhawk A-1X

9. API NUMBER: 4300730923

10. FIELD AND POOL, OR WILDCAT: Helper CBM/Ferron

11. QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: SESE 20 13S 10E

12. COUNTY: Carbon 13. STATE: UTAH

14. DATE SPUDDED: 5/26/2003 15. DATE T.D. REACHED: 6/5/2003 16. DATE COMPLETED: 7/7/2003 ABANDONED [] READY TO PRODUCE [x] 17. ELEVATIONS (DF, RKB, RT, GL): 6209 GL

18. TOTAL DEPTH: MD 3,870 TVD 19. PLUG BACK T.D.: MD 3,755 TVD 20. IF MULTIPLE COMPLETIONS, HOW MANY? n/a 21. DEPTH BRIDGE MD PLUG SET: TVD

22. TYPE ELECTRIC AND OTHER MECHANICAL LOGS RUN (Submit copy of each) GR, BD, ND/DP, SP, IND, CCL, CBL Rec 7-7-03 23. WAS WELL CORED? NO [x] YES [] (Submit analysis) WAS DST RUN? NO [x] YES [] (Submit report) DIRECTIONAL SURVEY? NO [x] YES [] (Submit copy)

24. CASING AND LINER RECORD (Report all strings set in well)

Table with columns: HOLE SIZE, SIZE/GRADE, WEIGHT (#/ft.), TOP (MD), BOTTOM (MD), STAGE CEMENTER DEPTH, CEMENT TYPE & NO. OF SACKS, SLURRY VOLUME (BBL), CEMENT TOP **, AMOUNT PULLED. Rows include 12 1/4" 8 5/8" J55 24# 301 and 7 7/8" 5.5" N80 17# 3,813.

25. TUBING RECORD

Table with columns: SIZE, DEPTH SET (MD), PACKER SET (MD). Row: 2.375, 3,647.

26. PRODUCING INTERVALS

Table with columns: FORMATION NAME, TOP (MD), BOTTOM (MD), TOP (TVD), BOTTOM (TVD). Row (A) Ferron: 3,567, 3,619.

27. PERFORATION RECORD

Table with columns: INTERVAL (Top/Bot - MD), SIZE, NO. HOLES, PERFORATION STATUS. Row: 3,609 3,619 .66 60 Open [x] Squeezed []

28. ACID, FRACTURE, TREATMENT, CEMENT SQUEEZE, ETC.

Table with columns: DEPTH INTERVAL, AMOUNT AND TYPE OF MATERIAL. Row: 3567-3619, 5220 BBLS, 25# XLG Fluid and 500,600# 16/30 proppant

29. ENCLOSED ATTACHMENTS:

- [] ELECTRICAL/MECHANICAL LOGS [] GEOLOGIC REPORT [] DST REPORT [] DIRECTIONAL SURVEY [] SUNDRY NOTICE FOR PLUGGING AND CEMENT VERIFICATION [] CORE ANALYSIS [] OTHER:

30. WELL STATUS:

PGW

OCT 22 2003

31. INITIAL PRODUCTION

INTERVAL A (As shown in item #26)

DATE FIRST PRODUCED: 8/1/2003		TEST DATE: 8/1/2003		HOURS TESTED: 24		TEST PRODUCTION RATES: →		OIL - BBL: 0	GAS - MCF: 0	WATER - BBL: 165	PROD. METHOD: Flowing
CHOKE SIZE:	TBG. PRESS.	CSG. PRESS. 55	API GRAVITY	BTU - GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	OIL - BBL: 0	GAS - MCF: 0	WATER - BBL: 165	INTERVAL STATUS:	

INTERVAL B (As shown in item #26)

DATE FIRST PRODUCED:		TEST DATE:		HOURS TESTED:		TEST PRODUCTION RATES: →		OIL - BBL:	GAS - MCF:	WATER - BBL:	PROD. METHOD:
CHOKE SIZE:	TBG. PRESS.	CSG. PRESS.	API GRAVITY	BTU - GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	OIL - BBL:	GAS - MCF:	WATER - BBL:	INTERVAL STATUS:	

INTERVAL C (As shown in item #26)

DATE FIRST PRODUCED:		TEST DATE:		HOURS TESTED:		TEST PRODUCTION RATES: →		OIL - BBL:	GAS - MCF:	WATER - BBL:	PROD. METHOD:
CHOKE SIZE:	TBG. PRESS.	CSG. PRESS.	API GRAVITY	BTU - GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	OIL - BBL:	GAS - MCF:	WATER - BBL:	INTERVAL STATUS:	

INTERVAL D (As shown in item #26)

DATE FIRST PRODUCED:		TEST DATE:		HOURS TESTED:		TEST PRODUCTION RATES: →		OIL - BBL:	GAS - MCF:	WATER - BBL:	PROD. METHOD:
CHOKE SIZE:	TBG. PRESS.	CSG. PRESS.	API GRAVITY	BTU - GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	OIL - BBL:	GAS - MCF:	WATER - BBL:	INTERVAL STATUS:	

32. DISPOSITION OF GAS (Sold, Used for Fuel, Vented, Etc.)

33. SUMMARY OF POROUS ZONES (Include Aquifers):

Show all important zones of porosity and contents thereof: Cored intervals and all drill-stem tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures and recoveries.

34. FORMATION (Log) MARKERS:

Formation	Top (MD)	Bottom (MD)	Descriptions, Contents, etc.	Name	Top (Measured Depth)
				Ferron Tununk	3,482 3,729

35. ADDITIONAL REMARKS (Include plugging procedure)

36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records.

NAME (PLEASE PRINT) Kristina Lee TITLE Agent for Anadarko (303) 423-5749
 SIGNATURE *Kristina Lee* DATE 10/17/03

This report must be submitted within 30 days of

- completing or plugging a new well
- reentering a previously plugged and abandoned well
- drilling horizontal laterals from an existing well bore
- significantly deepening an existing well bore below the previous bottom-hole depth
- recompleting to a different producing formation
- drilling hydrocarbon exploratory holes, such as core samples and stratigraphic tests

* ITEM 20: Show the number of completions if production is measured separately from two or more formations.

** ITEM 24: Cement Top - Show how reported top(s) of cement were determined (circulated (CIR), calculated (CAL), cement bond log (CBL), temperature survey (TS)).

Send to: Utah Division of Oil, Gas and Mining
 1594 West North Temple, Suite 1210
 Box 145801
 Salt Lake City, Utah 84114-5801

Phone: 801-538-5340
 Fax: 801-359-3940



JUDY GOAD
ADMINISTRATIVE ASSISTANT
CBM AND UNCONVENTIONAL RESERVOIRS
PHONE: 832-636-8690
FAX: 832-636-8095

ORIGINAL

T 135 R 10E S- 20
43-009-30923

Transmittal Form

TO: Carol Daniels
Utah Division of Oil, Gas and Mining

RECEIVED

DATE: January 16, 2004

JAN 20 2004

SUBJECT: Black A-4 and Blackhawk A-1X - LOGS filed with log files

DIV. OF OIL, GAS & MINING

The subject logs are being sent on behalf of Andy Klein. If you should have any questions, please call Andy at 832-636-1742.

Sincerely,

Judy Goad
Administrative Assistant

Enclosures
TF089



United States Department of the Interior

BUREAU OF LAND MANAGEMENT

Utah State Office
P.O. Box 45155
Salt Lake City, UT 84145-0155



IN REPLY REFER TO
3105
UT-922

January 12, 2006

Anadarko Petroleum Corporation
Attn: Jane Jones
PO Box 1330
Houston, Texas 77251

Gentlemen:

Enclosed is one approved copy of Communitization Agreement No. UTU84242. This agreement communitizes all rights as to natural gas and associated liquid hydrocarbons producible from the Ferron Coal Formation, covering SE $\frac{1}{4}$ of Section 20, Township 13 South, Range 10 East, SLB&M, Carbon County, Utah. This agreement conforms with the spacing set forth in Order No. 241-1 which was issued by the State of Utah, Board of Oil, Gas and Mining on January 2, 1998.

This agreement is effective as of June 1, 2003. The communitized area covers 160.00 acres and includes portions of Federal oil and gas lease UTU81693.

Approval of this agreement does not warrant or certify that the operator thereof and other holders of operating rights hold legal or equitable title to those rights in the subject leases which are committed hereto.

Minerals Management Service Form MMS-4054, "Oil & Gas Operations Report", must be submitted for this agreement beginning with the month in which drilling operations commence for Well No. Blackhawk A-1X, SESE, Section 20, Township 13 South, Range 10 East, SLB&M, Carbon County, Utah, API # 43-007-30923, on a state lease. Form MMS-4054 is to be mailed to the Minerals Management Service, Minerals Revenue Management Reporting Services, P. O. Box 17110, Denver, Colorado 80217-0110.

Please furnish all interested principals with necessary evidence of this approval.

Sincerely,

/s/ David H. Murphy

David H. Murphy
Acting Chief, Branch of Fluid Minerals

Enclosure

RECEIVED
JAN 17 2006
DIV. OF OIL, GAS & MINING

K

Division of Oil, Gas and Mining
OPERATOR CHANGE WORKSHEET (for state use only)

ROUTING
 CDW

X - Change of Operator (Well Sold)

Operator Name Change/Merger

The operator of the well(s) listed below has changed, effective:

4/1/2013

FROM: (Old Operator): N0035-Anadarko Petroleum Corporation PO Box 173779 Denver, CO, 80214 Phone: 1 (720) 929-6000	TO: (New Operator): N3940- Anadarko E&P Onshore LLC PO Box 173779 Denver, CO 802014 Phone: 1 (720) 929-6000
---	---

CA No.			Unit:					
WELL NAME	SEC	TWN	RNG	API NO	ENTITY NO	LEASE TYPE	WELL TYPE	WELL STATUS
See Attached List								

OPERATOR CHANGES DOCUMENTATION

Enter date after each listed item is completed

- (R649-8-10) Sundry or legal documentation was received from the **FORMER** operator on: 4/9/2013
- (R649-8-10) Sundry or legal documentation was received from the **NEW** operator on: 4/9/2013
- The new company was checked on the **Department of Commerce, Division of Corporations Database** on: 4/10/2013
- a. Is the new operator registered in the State of Utah: Business Number: 593715-0161
- a. (R649-9-2)Waste Management Plan has been received on: Yes
- b. Inspections of LA PA state/fee well sites complete on: 4/10/2013
- c. Reports current for Production/Disposition & Sundries on: 4/10/2013
- Federal and Indian Lease Wells:** The BLM and or the BIA has approved the merger, name change, or operator change for all wells listed on Federal or Indian leases on: BLM 4/2/2013 BIA N/A
- Federal and Indian Units:**
 The BLM or BIA has approved the successor of unit operator for wells listed on: N/A
- Federal and Indian Communization Agreements ("CA"):**
 The BLM or BIA has approved the operator for all wells listed within a CA on: N/A
- Underground Injection Control ("UIC")** Division has approved UIC Form 5 Transfer of Authority to **Inject**, for the enhanced/secondary recovery unit/project for the water disposal well(s) listed on: 4/10/2013

DATA ENTRY:

- Changes entered in the **Oil and Gas Database** on: 4/11/2013
- Changes have been entered on the **Monthly Operator Change Spread Sheet** on: 4/11/2013
- Bond information entered in RBDMS on: 4/10/2013
- Fee/State wells attached to bond in RBDMS on: 4/11/2013
- Injection Projects to new operator in RBDMS on: 4/11/2013
- Receipt of Acceptance of Drilling Procedures for APD/New on: N/A

BOND VERIFICATION:

- Federal well(s) covered by Bond Number: WYB000291
- Indian well(s) covered by Bond Number: N/A
- a. (R649-3-1) The **NEW** operator of any state/fee well(s) listed covered by Bond Number 22013542
- b. The **FORMER** operator has requested a release of liability from their bond on: N/A

LEASE INTEREST OWNER NOTIFICATION:

- (R649-2-10) The **NEW** operator of the fee wells has been contacted and informed by a letter from the Division of their responsibility to notify all interest owners of this change on: 4/11/2013

COMMENTS:

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

FORM 9

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

1. TYPE OF WELL OIL WELL <input type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <u>CBM Wells</u>		5. LEASE DESIGNATION AND SERIAL NUMBER: See Wells
2. NAME OF OPERATOR: Anadarko Petroleum Corporation		6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
3. ADDRESS OF OPERATOR: P.O. Box 173779 CITY <u>Denver</u> STATE <u>CO</u> ZIP <u>80217</u>		7. UNIT or CA AGREEMENT NAME:
4. LOCATION OF WELL FOOTAGES AT SURFACE: _____ QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: _____		8. WELL NAME and NUMBER:
		9. API NUMBER: See Wells
		10. FIELD AND POOL, OR WILDCAT:
		COUNTY: _____ STATE: UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
<input type="checkbox"/> NOTICE OF INTENT (Submit in Duplicate) Approximate date work will start: <u>4/8/2013</u>	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> REPERFORATE CURRENT FORMATION
	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> SIDETRACK TO REPAIR WELL
<input type="checkbox"/> SUBSEQUENT REPORT (Submit Original Form Only) Date of work completion: _____	<input type="checkbox"/> CASING REPAIR	<input type="checkbox"/> NEW CONSTRUCTION	<input type="checkbox"/> TEMPORARILY ABANDON
	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input checked="" type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> TUBING REPAIR
	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> VENT OR FLARE
	<input type="checkbox"/> CHANGE WELL NAME	<input type="checkbox"/> PLUG BACK	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> PRODUCTION (START/RESUME)	<input type="checkbox"/> WATER SHUT-OFF
	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> OTHER: _____
	<input type="checkbox"/> CONVERT WELL TYPE	<input type="checkbox"/> RECOMPLETE - DIFFERENT FORMATION	

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

The operator is requesting authorization to transfer the wells from Anadarko Petroleum Corporation and Anadarko Production Company to Anadarko E&P Onshore, LLC. Please see the attached list of 181 wells that are currently filed under Anadarko Petroleum Corporation and Anadarko Production Company. The state/fee wells will be under bond number 22013542, and the federal wells will be under bond number WYB000291.

Effective 4/1/13

Please contact the undersigned if there are any questions.

RECEIVED
APR 09 2013

Jaime Scharnowske
Jaime Scharnowske
Regulatory Analyst

DIV. OF OIL, GAS & MINING
Jaime Scharnowske
Jaime Scharnowske
Regulatory Analyst

Anadarko Petroleum Corporation **N0035**
P.O. Box 173779
Denver, CO 80214
(720) 929-6000

Anadarko E&P Onshore, LLC **N3940**
P.O. Box 173779
Denver, CO 80214
(720) 929-6000

NAME (PLEASE PRINT) <u>Jaime Scharnowske</u>	TITLE <u>Regulatory Analyst</u>
SIGNATURE <i>Jaime Scharnowske</i>	DATE <u>4/8/2013</u>

(This space for State use only)

APPROVED

APR 11 2013

Rachel Medina

Anadarko Petroleum Corporation (N0035) to Anadarko E&P Onshore, LLC (N3940)
 Effective 1st April-2013

Well Name	Sec	Twncshp	Range	API	Entity No.	Lease Type	Well Type	Well status
HELPER ST SWD 1	03	140S	100E	4300730361	12258	State	WD	A
FED F-2 SWD	08	140S	100E	4300730555	12557	Federal	WD	A
CLAWSON SPRING ST SWD 4	13	160S	080E	4301530477	12979	State	WD	A
CLAWSON SPRING ST SWD 1	36	150S	080E	4300730721	12832	State	WD	I
HELPER FED B-1	33	130S	100E	4300730189	11537	Federal	GW	P
HELPER FED A-1	23	130S	100E	4300730190	11517	Federal	GW	P
HELPER FED A-3	22	130S	100E	4300730213	11700	Federal	GW	P
HELPER FED C-1	22	130S	100E	4300730214	11702	Federal	GW	P
HELPER FED B-5	27	130S	100E	4300730215	11701	Federal	GW	P
HELPER FED A-2	22	130S	100E	4300730216	11699	Federal	GW	P
HELPER FED D-1	26	130S	100E	4300730286	12061	Federal	GW	P
BIRCH A-1	05	140S	100E	4300730348	12120	Fee	GW	P
HELPER ST A-1	03	140S	100E	4300730349	12122	State	GW	P
HELPER ST D-7	04	140S	100E	4300730350	12121	State	GW	P
CHUBBUCK A-1	31	130S	100E	4300730352	12397	Fee	GW	P
VEA A-1	32	130S	100E	4300730353	12381	Fee	GW	P
VEA A-2	32	130S	100E	4300730354	12483	Fee	GW	P
VEA A-3	32	130S	100E	4300730355	12398	Fee	GW	P
VEA A-4	32	130S	100E	4300730356	12482	Fee	GW	P
HELPER ST A-8	02	140S	100E	4300730357	12257	State	GW	P
HELPER ST A-3	02	140S	100E	4300730358	12254	State	GW	P
HELPER ST A-4	02	140S	100E	4300730359	12255	State	GW	P
HELPER ST A-7	02	140S	100E	4300730360	12256	State	GW	P
HELPER ST A-2	03	140S	100E	4300730362	12232	State	GW	P
HELPER ST A-5	03	140S	100E	4300730363	12231	State	GW	P
HELPER ST A-6	03	140S	100E	4300730364	12233	State	GW	P
HELPER ST D-4	04	140S	100E	4300730365	12228	State	GW	P
HELPER ST D-3	05	140S	100E	4300730366	12184	State	GW	P
HELPER ST D-5	04	140S	100E	4300730367	12226	State	GW	P
HELPER ST D-8	04	140S	100E	4300730368	12229	State	GW	P
HELPER ST D-2	05	140S	100E	4300730369	12481	State	GW	P
HELPER ST D-6	05	140S	100E	4300730370	12234	State	GW	P
HELPER ST D-1	06	140S	100E	4300730371	12399	State	GW	P
BIRCH A-2	08	140S	100E	4300730372	12189	Fee	GW	P
HELPER ST A-9	10	140S	100E	4300730373	12230	State	GW	P
HELPER ST B-1	09	140S	100E	4300730376	12227	State	GW	P
HELPER FED F-3	08	140S	100E	4300730378	12252	Federal	GW	P
HELPER FED F-4	09	140S	100E	4300730379	12253	Federal	GW	P
HELPER ST A-10	10	140S	100E	4300730433	12488	State	GW	P
HELPER ST A-11	11	140S	100E	4300730434	12487	State	GW	P
HELPER ST A-12	10	140S	100E	4300730435	12486	State	GW	P
HELPER ST A-13	10	140S	100E	4300730436	12485	State	GW	P
HELPER ST B-2	09	140S	100E	4300730437	12484	State	GW	P
HELPER FED E-7	19	130S	100E	4300730508	13623	Federal	GW	P
HELPER FED B-2	33	130S	100E	4300730530	12619	Federal	GW	P
HELPER FED B-3	33	130S	100E	4300730531	12622	Federal	GW	P
HELPER FED B-4	33	130S	100E	4300730532	12623	Federal	GW	P
HELPER FED B-6	27	130S	100E	4300730533	12644	Federal	GW	P
HELPER FED B-7	27	130S	100E	4300730534	12645	Federal	GW	P
HELPER FED B-8	27	130S	100E	4300730535	12631	Federal	GW	P

Anadarko Petroleum Corporation (N0035) to Anadarko E&P Onshore, LLC (N3940)
Effective 1-April-2013

Well Name	Sec	Twnshp	Range	API	Entity No.	Lease Type	Well Type	Well status
HELPER FED B-9	34	130S	100E	4300730536	12646	Federal	GW	P
HELPER FED B-10	34	130S	100E	4300730537	12626	Federal	GW	P
HELPER FED B-11	34	130S	100E	4300730538	12628	Federal	GW	P
HELPER FED B-12	34	130S	100E	4300730539	12627	Federal	GW	P
HELPER FED B-13	28	130S	100E	4300730540	12621	Federal	GW	P
HELPER FED B-14	28	130S	100E	4300730541	12620	Federal	GW	P
HELPER FED D-2	26	130S	100E	4300730542	12650	Federal	GW	P
HELPER FED D-3	26	130S	100E	4300730543	12634	Federal	GW	P
HELPER FED D-4	35	130S	100E	4300730544	12625	Federal	GW	P
HELPER FED D-5	35	130S	100E	4300730545	12637	Federal	GW	P
HELPER FED D-6	35	130S	100E	4300730546	12635	Federal	GW	P
HELPER FED E-1	29	130S	100E	4300730547	13246	Federal	GW	P
HELPER FED E-2	29	130S	100E	4300730548	12636	Federal	GW	P
HELPER FED H-1	01	140S	100E	4300730549	12653	Federal	GW	P
HELPER FED H-2	01	140S	100E	4300730550	12647	Federal	GW	P
OLIVETO FED A-2	08	140S	100E	4300730556	12630	Federal	GW	P
HELPER FED F-1	08	140S	100E	4300730557	12629	Federal	GW	P
SMITH FED A-1	09	140S	100E	4300730558	13004	Federal	GW	P
SE INVESTMENTS A-1	06	140S	100E	4300730570	12624	Fee	GW	P
HELPER ST A-14	11	140S	100E	4300730571	12612	State	GW	P
HELPER ST A-15	11	140S	100E	4300730572	12613	State	GW	P
HELPER ST E-1	36	130S	100E	4300730573	12615	State	GW	P
HELPER ST E-2	36	130S	100E	4300730574	12614	State	GW	P
HARMOND A-1	07	140S	100E	4300730586	12616	Fee	GW	P
HELPER ST E-3	36	130S	100E	4300730592	12868	State	GW	P
HELPER FED A-6	23	130S	100E	4300730593	12649	Federal	GW	P
HELPER FED D-7	26	130S	100E	4300730594	12651	Federal	GW	P
HELPER FED D-8	35	130S	100E	4300730595	12652	Federal	GW	P
CLAWSON SPRING ST A-1	36	150S	080E	4300730597	12618	State	GW	P
HELPER ST E-4	36	130S	100E	4300730598	12825	State	GW	P
HELPER ST A-16	11	140S	100E	4300730603	12638	State	GW	P
CHUBBUCK A-2	06	140S	100E	4300730604	12648	Fee	GW	P
CLAWSON SPRING ST A-2	36	150S	080E	4300730635	12856	State	GW	P
CLAWSON SPRING ST A-3	36	150S	080E	4300730636	13001	State	GW	P
CLAWSON SPRING ST A-4	36	150S	080E	4300730637	12844	State	GW	P
CLAWSON SPRING ST D-5	31	150S	090E	4300730642	12852	State	GW	P
CLAWSON SPRING ST D-6	31	150S	090E	4300730643	12847	State	GW	P
CLAWSON SPRING ST D-7	31	150S	090E	4300730644	12849	State	GW	P
HELPER FED A-5	23	130S	100E	4300730677	13010	Federal	GW	P
HELPER FED A-7	22	130S	100E	4300730678	13346	Federal	GW	P
HELPER FED B-15	28	130S	100E	4300730679	13015	Federal	GW	P
HELPER FED B-16	28	130S	100E	4300730680	13203	Federal	GW	P
HELPER FED C-2	24	130S	100E	4300730681	13016	Federal	GW	P
HELPER FED C-4	24	130S	100E	4300730682	13012	Federal	GW	P
HELPER FED C-7	21	130S	100E	4300730684	13204	Federal	GW	P
HELPER FED D-9	25	130S	100E	4300730685	13245	Federal	GW	P
HELPER FED D-10	25	130S	100E	4300730686	12993	Federal	GW	P
HELPER FED D-11	25	130S	100E	4300730687	12992	Federal	GW	P
HELPER FED D-12	25	130S	100E	4300730688	13005	Federal	GW	P
HELPER FED E-4	29	130S	100E	4300730689	13229	Federal	GW	P

Anadarko Petroleum Corporation (N0035) to Anadarko E&P Onshore, LLC (N3940)
 Effective 1-April-2013

Well Name	Sec	Twنشp	Range	API	Entity No.	Lease Type	Well Type	Well status
HELPER FED A-4	23	130S	100E	4300730692	13009	Federal	GW	P
HELPER FED C-5	24	130S	100E	4300730693	13013	Federal	GW	P
HELPER FED G-1	30	130S	110E	4300730694	13006	Federal	GW	P
HELPER FED G-2	30	130S	110E	4300730695	13007	Federal	GW	P
HELPER FED G-3	31	130S	110E	4300730696	13002	Federal	GW	P
HELPER FED G-4	31	130S	110E	4300730697	13003	Federal	GW	P
HELPER FED H-3	01	140S	100E	4300730698	12831	Federal	GW	P
HELPER FED H-4	01	140S	100E	4300730699	12833	Federal	GW	P
CLAWSON SPRING ST D-8	31	150S	090E	4300730701	12851	State	GW	P
HELPER FED C-3	24	130S	100E	4300730702	13011	Federal	GW	P
CLAWSON SPRING ST J-1	35	150S	080E	4300730726	13299	Fee	GW	P
PIERUCCI 1	35	150S	080E	4300730727	13325	Fee	GW	P
POTTER ETAL 1	35	150S	080E	4300730728	12958	Fee	GW	P
POTTER ETAL 2	35	150S	080E	4300730737	12959	Fee	GW	P
HELPER FED G-5	30	130S	110E	4300730770	13655	Federal	GW	P
HELPER FED G-6	30	130S	110E	4300730771	13656	Federal	GW	P
HELPER FED G-7	31	130S	110E	4300730772	13657	Federal	GW	P
HELPER FED G-8	31	130S	110E	4300730773	13658	Federal	GW	P
GOODALL A-1	06	140S	110E	4300730774	13348	Fee	GW	P
HELPER FED E-8	19	130S	100E	4300730776	13624	Federal	GW	P
HAUSKNECHT A-1	21	130S	100E	4300730781	13347	Fee	GW	P
HELPER FED E-9	19	130S	100E	4300730868	13628	Federal	GW	P
HELPER FED E-5	20	130S	100E	4300730869	13625	Federal	GW	P
HELPER FED E-6	20	130S	100E	4300730870	13631	Federal	GW	P
HELPER FED E-10	30	130S	100E	4300730871	13629	Federal	GW	P
SACCOMANNO A-1	30	130S	100E	4300730872	13622	Fee	GW	P
HELPER FED E-11	30	130S	100E	4300730873	13630	Federal	GW	P
BLACKHAWK A-2	29	130S	100E	4300730886	13783	Fee	GW	P
BLACKHAWK A-3	20	130S	100E	4300730914	13794	Fee	GW	P
BLACKHAWK A-4	21	130S	100E	4300730915	13795	Fee	GW	P
BLACKHAWK A-1X	20	130S	100E	4300730923	13798	Fee	GW	P
HELPER STATE 12-3	03	140S	100E	4300750070	17824	State	GW	P
HELPER STATE 32-3	03	140S	100E	4300750071	17827	State	GW	P
HELPER STATE 32-36	36	130S	100E	4300750072	17825	State	GW	P
VEA 32-32	32	130S	100E	4300750075	17826	Fee	GW	P
CLAWSON SPRING ST E-7	07	160S	090E	4301530392	12960	State	GW	P
CLAWSON SPRING ST E-8	07	160S	090E	4301530394	12964	State	GW	P
CLAWSON SPRING ST E-3	06	160S	090E	4301530403	12965	State	GW	P
CLAWSON SPRING ST E-1	06	160S	090E	4301530404	12966	State	GW	P
CLAWSON SPRING ST E-2	06	160S	090E	4301530405	12961	State	GW	P
CLAWSON SPRING ST E-4	06	160S	090E	4301530406	12962	State	GW	P
CLAWSON SPRING ST C-1	12	160S	080E	4301530410	12617	State	GW	P
CLAWSON SPRING ST B-1	01	160S	080E	4301530427	12845	State	GW	P
CLAWSON SPRING ST B-2	01	160S	080E	4301530428	12846	State	GW	P
CLAWSON SPRING ST B-3	01	160S	080E	4301530429	12848	State	GW	P
CLAWSON SPRING ST B-4	01	160S	080E	4301530430	12854	State	GW	P
CLAWSON SPRING ST B-5	12	160S	080E	4301530431	12963	State	GW	P
CLAWSON SPRING ST B-8	11	160S	080E	4301530432	12863	State	GW	P
CLAWSON SPRING ST B-9	11	160S	080E	4301530433	12864	State	GW	P
CLAWSON SPRING ST C-2	12	160S	080E	4301530434	12850	State	GW	P

Anadarko Petroleum Corporation (N0035) to Anadarko E&P Onshore, LLC (N3940)
 Effective 1-April-2013

Well Name	Sec	Twnshp	Range	API	Entity No.	Lease Type	Well Type	Well status
CLAWSON SPRING ST C-4	14	160S	080E	4301530435	13199	State	GW	P
CLAWSON SPRING ST B-7	11	160S	080E	4301530460	12967	State	GW	P
CLAWSON SPRING ST C-6	14	160S	080E	4301530461	13355	State	GW	P
CLAWSON SPRING ST C-3	12	160S	080E	4301530463	12968	State	GW	P
CLAWSON SPRING ST B-6	11	160S	080E	4301530465	12969	State	GW	P
CLAWSON SPRING ST H-1	13	160S	080E	4301530466	13323	State	GW	P
CLAWSON SPRING ST H-2	13	160S	080E	4301530467	12955	State	GW	P
CLAWSON SPRING ST IPA-1	10	160S	080E	4301530468	12956	Fee	GW	P
CLAWSON SPRING ST IPA-2	15	160S	080E	4301530469	13200	Fee	GW	P
CLAWSON SPRING ST E-5	07	160S	090E	4301530470	12971	State	GW	P
CLAWSON SPRING ST G-1	02	160S	080E	4301530471	13014	State	GW	P
CLAWSON SPRING ST F-2	03	160S	080E	4301530472	13282	State	GW	P
CLAWSON SPRING ST F-1	03	160S	080E	4301530473	13278	State	GW	P
CLAWSON SPRING ST E-6	07	160S	090E	4301530474	13052	State	GW	P
CLAWSON SPRING ST G-2	02	160S	080E	4301530475	12957	State	GW	P
CLAWSON SPRING ST M-1	02	160S	080E	4301530488	13201	State	GW	P
CLAWSON SPRING ST K-1	02	160S	080E	4301530489	13202	State	GW	P
SHIMMIN TRUST 3	14	120S	100E	4300730119	11096	Fee	GW	PA
SHIMMIN TRUST 1	11	120S	100E	4300730120	11096	Fee	GW	PA
SHIMMIN TRUST 2	14	120S	100E	4300730121	11096	Fee	GW	PA
SHIMMIN TRUST 4	11	120S	100E	4300730123	11096	Fee	GW	PA
ST 9-16	16	120S	100E	4300730132	11402	State	GW	PA
ST 2-16	16	120S	100E	4300730133	11399	State	GW	PA
MATTS SUMMIT ST A-1	14	120S	090E	4300730141	11273	State	GW	PA
SLEMAKER A-1	05	120S	120E	4300730158	11441	Fee	GW	PA
JENSEN 16-10	10	120S	100E	4300730161	11403	Fee	GW	PA
JENSEN 7-15	15	120S	100E	4300730165	11407	Fee	GW	PA
SHIMMIN TRUST 12-12	12	120S	100E	4300730168	11420	Fee	GW	PA
JENSEN 11-15	15	120S	100E	4300730175	11425	Fee	GW	PA
BRYNER A-1	11	120S	120E	4300730188	11503	Fee	GW	PA
BRYNER A-1X (RIG SKID)	11	120S	120E	4300730209	11503	Fee	GW	PA
BLACKHAWK A-1	20	130S	100E	4300730885	13798	Fee	D	PA
BLACKHAWK A-5H	20	130S	100E	4300731402	17029	Fee	D	PA
CLAWSON SPRING ST SWD 3	06	160S	090E	4301530476	12978	State	D	PA
HELPER FED C-6	21	130S	100E	4300730683	13008	Federal	GW	S
UTAH 10-415	10	160S	080E	4301530391	12632	State	GW	TA

	API Well Number	Well Name	Qtr/Qtr	Section	Township	Range	Mineral Lease Type	Mineral Lease Number	Well Status
1	4300730189	HELPER FED B-1	NESW	33	13S	10E	Federal	USA UTU 71392	Producing
2	4300730190	HELPER FED A-1	C-SW	23	13S	10E	Federal	USA UTU 58434	Producing
3	4300730213	HELPER FED A-3	SESE	22	13S	10E	Federal	USA UTU 58434	Producing
4	4300730214	HELPER FED C-1	SENE	22	13S	10E	Federal	USA UTU 71391	Producing
5	4300730215	HELPER FED B-5	NENE	27	13S	10E	Federal	USA UTU 71392	Producing
6	4300730216	HELPER FED A-2	NESW	22	13S	10E	Federal	USA UTU 58434	Producing
7	4300730286	HELPER FED D-1	SWNE	26	13S	10E	Federal	USA UTU 68315	Producing
8	4300730378	HELPER FED F-3	NENE	8	14S	10E	Federal	USA UTU 65762	Producing
9	4300730379	HELPER FED F-4	NWNW	9	14S	10E	Federal	USA UTU 65762	Producing
10	4300730508	HELPER FED E-7	SESE	19	13S	10E	Federal	USA UTU 77980	Producing
11	4300730530	HELPER FED B-2	SENE	33	13S	10E	Federal	USA UTU 71392	Producing
12	4300730531	HELPER FED B-3	NESE	33	13S	10E	Federal	USA UTU 71392	Producing
13	4300730532	HELPER FED B-4	NENE	33	13S	10E	Federal	USA UTU 71392	Producing
14	4300730533	HELPER FED B-6	NENW	27	13S	10E	Federal	USA UTU 71392	Producing
15	4300730534	HELPER FED B-7	NESW	27	13S	10E	Federal	USA UTU 71392	Producing
16	4300730535	HELPER FED B-8	SESE	27	13S	10E	Federal	USA UTU 71392	Producing
17	4300730536	HELPER FED B-9	SENE	34	13S	10E	Federal	USA UTU 71392	Producing
18	4300730537	HELPER FED B-10	NWNE	34	13S	10E	Federal	USA UTU 71392	Producing
19	4300730538	HELPER FED B-11	SESW	34	13S	10E	Federal	USA UTU 71392	Producing
20	4300730539	HELPER FED B-12	NESE	34	13S	10E	Federal	USA UTU 71392	Producing
21	4300730540	HELPER FED B-13	SWSE	28	13S	10E	Federal	USA UTU 71392	Producing
22	4300730541	HELPER FED B-14	SWSW	28	13S	10E	Federal	USA UTU 71392	Producing
23	4300730542	HELPER FED D-2	SWNW	26	13S	10E	Federal	USA UTU 68315	Producing
24	4300730543	HELPER FED D-3	SESW	26	13S	10E	Federal	USA UTU 68315	Producing
25	4300730544	HELPER FED D-4	NWNW	35	13S	10E	Federal	USA UTU 68315	Producing
26	4300730545	HELPER FED D-5	SESW	35	13S	10E	Federal	USA UTU 68315	Producing
27	4300730546	HELPER FED D-6	NWSE	35	13S	10E	Federal	USA UTU 68315	Producing
28	4300730547	HELPER FED E-1	NESE	29	13S	10E	Federal	USA UTU 71675	Producing
29	4300730548	HELPER FED E-2	SESW	29	13S	10E	Federal	USA UTU 71675	Producing
30	4300730549	HELPER FED H-1	NENW	1	14S	10E	Federal	USA UTU 72352	Producing
31	4300730550	HELPER FED H-2	SESW	1	14S	10E	Federal	USA UTU 72352	Producing
32	4300730556	OLIVETO FED A-2	NESW	8	14S	10E	Federal	USA UTU 65762	Producing
33	4300730557	HELPER FED F-1	SESE	8	14S	10E	Federal	USA UTU 65762	Producing
34	4300730558	SMITH FED A-1	NWSW	9	14S	10E	Federal	USA UTU 65762	Producing
35	4300730593	HELPER FED A-6	SESE	23	13S	10E	Federal	USA UTU 58434	Producing
36	4300730594	HELPER FED D-7	C-SE	26	13S	10E	Federal	USA UTU 68315	Producing
37	4300730595	HELPER FED D-8	NENE	35	13S	10E	Federal	USA UTU 68315	Producing
38	4300730677	HELPER FED A-5	NENE	23	13S	10E	Federal	USA UTU 58434	Producing
39	4300730678	HELPER FED A-7	SENE	22	13S	10E	Federal	USA UTU 58434	Producing
40	4300730679	HELPER FED B-15	SENE	28	13S	10E	Federal	USA UTU 71392	Producing
41	4300730680	HELPER FED B-16	SWNW	28	13S	10E	Federal	USA UTU 71392	Producing
42	4300730681	HELPER FED C-2	NENW	24	13S	10E	Federal	USA UTU 71391	Producing

API Well Number	Well Name	Qtr/Qtr	Section	Township	Range	Mineral Lease Type	Mineral Lease Number	Well Status	
43	4300730682	HELPER FED C-4	NWSW	24	13S	10E	Federal	USA UTU 71391	Producing
44	4300730683	HELPER FED C-6	SWSE	21	13S	10E	Federal	USA UTU 71391	Shut-In
45	4300730684	HELPER FED C-7	SESW	21	13S	10E	Federal	USA UTU 71391	Producing
46	4300730685	HELPER FED D-9	NWNW	25	13S	10E	Federal	USA UTU 68315	Producing
47	4300730686	HELPER FED D-10	SENE	25	13S	10E	Federal	USA UTU 68315	Producing
48	4300730687	HELPER FED D-11	SESW	25	13S	10E	Federal	USA UTU 68315	Producing
49	4300730688	HELPER FED D-12	SESE	25	13S	10E	Federal	USA UTU 68315	Producing
50	4300730689	HELPER FED E-4	NWNE	29	13S	10E	Federal	USA UTU 71675	Producing
51	4300730692	HELPER FED A-4	SWNW	23	13S	10E	Federal	USA UTU 58434	Producing
52	4300730693	HELPER FED C-5	SWNE	24	13S	10E	Federal	USA UTU 71391	Producing
53	4300730694	HELPER FED G-1	C-NW	30	13S	11E	Federal	USA UTU 71677	Producing
54	4300730695	HELPER FED G-2	SWSW	30	13S	11E	Federal	USA UTU 71677	Producing
55	4300730696	HELPER FED G-3	SENE	31	13S	11E	Federal	USA UTU 71677	Producing
56	4300730697	HELPER FED G-4	SESW	31	13S	11E	Federal	USA UTU 71677	Producing
57	4300730698	HELPER FED H-3	SWNE	1	14S	10E	Federal	USA UTU 72352	Producing
58	4300730699	HELPER FED H-4	NESE	1	14S	10E	Federal	USA UTU 72352	Producing
59	4300730702	HELPER FED C-3	SESW	24	13S	10E	Federal	USA UTU 71391	Producing
60	4300730770	HELPER FED G-5	SWNE	30	13S	11E	Federal	USA UTU 71677	Producing
61	4300730771	HELPER FED G-6	SWSE	30	13S	11E	Federal	USA UTU 71677	Producing
62	4300730772	HELPER FED G-7	NWNE	31	13S	11E	Federal	USA UTU 71677	Producing
63	4300730773	HELPER FED G-8	NESE	31	13S	11E	Federal	USA UTU 71677	Producing
64	4300730776	HELPER FED E-8	SENE	19	13S	10E	Federal	USA UTU 77980	Producing
65	4300730868	HELPER FED E-9	SESW	19	13S	10E	Federal	USA UTU 77980	Producing
66	4300730869	HELPER FED E-5	SWSW	20	13S	10E	Federal	USA UTU 71675	Producing
67	4300730870	HELPER FED E-6	SWNW	20	13S	10E	Federal	USA UTU 71675	Producing
68	4300730871	HELPER FED E-10	NENW	30	13S	10E	Federal	USA UTU 71675	Producing
69	4300730873	HELPER FED E-11	NWNE	30	13S	10E	Federal	USA UTU 71675	Producing
70	4300730119	SHIMMIN TRUST 3	SENE	14	12S	10E	Fee (Private)		Plugged and Abandoned
71	4300730120	SHIMMIN TRUST 1	SESE	11	12S	10E	Fee (Private)		Plugged and Abandoned
72	4300730121	SHIMMIN TRUST 2	SENE	14	12S	10E	Fee (Private)		Plugged and Abandoned
73	4300730123	SHIMMIN TRUST 4	SESW	11	12S	10E	Fee (Private)		Plugged and Abandoned
74	4300730158	SLEMAKER A-1	SWNE	5	12S	12E	Fee (Private)		Plugged and Abandoned
75	4300730161	JENSEN 16-10	SESE	10	12S	10E	Fee (Private)		Plugged and Abandoned
76	4300730165	JENSEN 7-15	SWNE	15	12S	10E	Fee (Private)		Plugged and Abandoned
77	4300730168	SHIMMIN TRUST 12-12	NWSW	12	12S	10E	Fee (Private)		Plugged and Abandoned
78	4300730175	JENSEN 11-15	NESW	15	12S	10E	Fee (Private)		Plugged and Abandoned
79	4300730188	BRYNER A-1	NESE	11	12S	12E	Fee (Private)		Plugged and Abandoned
80	4300730209	BRYNER A-1X (RIG SKID)	NESE	11	12S	12E	Fee (Private)		Plugged and Abandoned
81	4300730348	BIRCH A-1	NWSW	5	14S	10E	Fee (Private)		Producing
82	4300730352	CHUBBUCK A-1	NESE	31	13S	10E	Fee (Private)		Producing
83	4300730353	VEA A-1	SWNW	32	13S	10E	Fee (Private)		Producing
84	4300730354	VEA A-2	NENE	32	13S	10E	Fee (Private)		Producing

	API Well Number	Well Name	Qtr/Qtr	Section	Township	Range	Mineral Lease Type	Mineral Lease Number	Well Status
85	4300730355	VEA A-3	SESW	32	13S	10E	Fee (Private)		Producing
86	4300730356	VEA A-4	NWSE	32	13S	10E	Fee (Private)		Producing
87	4300730372	BIRCH A-2	NWNW	8	14S	10E	Fee (Private)		Producing
88	4300730570	SE INVESTMENTS A-1	NESE	6	14S	10E	Fee (Private)		Producing
89	4300730586	HARMOND A-1	SENE	7	14S	10E	Fee (Private)		Producing
90	4300730604	CHUBBUCK A-2	SESW	6	14S	10E	Fee (Private)		Producing
91	4300730726	CLAWSON SPRING ST J-1	SESW	35	15S	8E	Fee (Private)		Producing
92	4300730727	PIERUCCI 1	SESW	35	15S	8E	Fee (Private)		Producing
93	4300730728	POTTER ETAL 1	SWNE	35	15S	8E	Fee (Private)		Producing
94	4300730737	POTTER ETAL 2	NESE	35	15S	8E	Fee (Private)		Producing
95	4300730774	GOODALL A-1	NWSW	6	14S	11E	Fee (Private)		Producing
96	4300730781	HAUSKNECHT A-1	SWNW	21	13S	10E	Fee (Private)		Producing
97	4300730872	SACCOMANNO A-1	NESE	30	13S	10E	Fee (Private)		Producing
98	4300730885	BLACKHAWK A-1	SESE	20	13S	10E	Fee (Private)		Plugged and Abandoned
99	4300730886	BLACKHAWK A-2	NWNW	29	13S	10E	Fee (Private)		Producing
100	4300730914	BLACKHAWK A-3	SENE	20	13S	10E	Fee (Private)		Producing
101	4300730915	BLACKHAWK A-4	NENE	21	13S	10E	Fee (Private)		Producing
102	4300730923	BLACKHAWK A-1X	SESE	20	13S	10E	Fee (Private)		Producing
103	4300731402	BLACKHAWK A-5H	NENE	20	13S	10E	Fee (Private)		Plugged and Abandoned
104	4300750075	VEA 32-32	SWNE	32	13S	10E	Fee (Private)		Producing
105	4301530468	CLAWSON SPRING ST IPA-1	SESE	10	16S	8E	Fee (Private)		Producing
106	4301530469	CLAWSON SPRING ST IPA-2	NENE	15	16S	8E	Fee (Private)		Producing
107	4300730132	ST 9-16	NESE	16	12S	10E	State	ML-44443	Plugged and Abandoned
108	4300730133	ST 2-16	NWNE	16	12S	10E	State	ML-44443	Plugged and Abandoned
109	4300730141	MATTS SUMMIT ST A-1	NWNW	14	12S	9E	State	ML-44496	Plugged and Abandoned
110	4300730349	HELPER ST A-1	SESW	3	14S	10E	State	ST UT ML 45805	Producing
111	4300730350	HELPER ST D-7	NWSW	4	14S	10E	State	ST UT ML 45804	Producing
112	4300730357	HELPER ST A-8	NWSE	2	14S	10E	State	ST UT ML 45805	Producing
113	4300730358	HELPER ST A-3	NWNW	2	14S	10E	State	ST UT ML 45805	Producing
114	4300730359	HELPER ST A-4	NWNE	2	14S	10E	State	ST UT ML 45805	Producing
115	4300730360	HELPER ST A-7	NESW	2	14S	10E	State	ST UT ML 45805	Producing
116	4300730362	HELPER ST A-2	NENE	3	14S	10E	State	ST UT ML 45805	Producing
117	4300730363	HELPER ST A-5	NESW	3	14S	10E	State	ST UT ML 45805	Producing
118	4300730364	HELPER ST A-6	NESE	3	14S	10E	State	ST UT ML 45805	Producing
119	4300730365	HELPER ST D-4	SWNW	4	14S	10E	State	ST UT ML 45804	Producing
120	4300730366	HELPER ST D-3	NENE	5	14S	10E	State	ST UT ML 45804	Producing
121	4300730367	HELPER ST D-5	NWNE	4	14S	10E	State	ST UT ML 45804	Producing
122	4300730368	HELPER ST D-8	SESE	4	14S	10E	State	ST UT ML 45804	Producing
123	4300730369	HELPER ST D-2	NENW	5	14S	10E	State	ST UT ML 45804	Producing
124	4300730370	HELPER ST D-6	SESE	5	14S	10E	State	ST UT ML 45804	Producing
125	4300730371	HELPER ST D-1	NENE	6	14S	10E	State	ST UT ML 45804	Producing
126	4300730373	HELPER ST A-9	SESW	10	14S	10E	State	ST UT ML 45805	Producing

	API Well Number	Well Name	Qtr/Qtr	Section	Township	Range	Mineral Lease Type	Mineral Lease Number	Well Status
127	4300730376	HELPER ST B-1	SWNE	9	14S	10E	State	ST UT ML 47556	Producing
128	4300730433	HELPER ST A-10	NWNE	10	14S	10E	State	ST UT ML 45805	Producing
129	4300730434	HELPER ST A-11	SWNW	11	14S	10E	State	ST UT ML 45805	Producing
130	4300730435	HELPER ST A-12	NWSW	10	14S	10E	State	ST UT ML 45805	Producing
131	4300730436	HELPER ST A-13	NESE	10	14S	10E	State	ST UT ML 45805	Producing
132	4300730437	HELPER ST B-2	NESE	9	14S	10E	State	ST UT ML 47556	Producing
133	4300730571	HELPER ST A-14	SESW	11	14S	10E	State	ST UT ML 45805	Producing
134	4300730572	HELPER ST A-15	SENE	11	14S	10E	State	ST UT ML 45805	Producing
135	4300730573	HELPER ST E-1	SESW	36	13S	10E	State	ST UT ML 45802	Producing
136	4300730574	HELPER ST E-2	SWNW	36	13S	10E	State	ST UT ML 45802	Producing
137	4300730592	HELPER ST E-3	NENE	36	13S	10E	State	ST UT ML 45802	Producing
138	4300730597	CLAWSON SPRING ST A-1	SWSE	36	15S	8E	State	ST UT ML 46106	Producing
139	4300730598	HELPER ST E-4	SWSE	36	13S	10E	State	ST UT ML 45802	Producing
140	4300730603	HELPER ST A-16	SWSE	11	14S	10E	State	ST UT ML 45805	Producing
141	4300730635	CLAWSON SPRING ST A-2	NWNW	36	15S	8E	State	ST UT ML 46106	Producing
142	4300730636	CLAWSON SPRING ST A-3	NESW	36	15S	8E	State	ST UT ML 46106	Producing
143	4300730637	CLAWSON SPRING ST A-4	NWNE	36	15S	8E	State	ST UT ML 46106	Producing
144	4300730642	CLAWSON SPRING ST D-5	NENW	31	15S	9E	State	ML-48226	Producing
145	4300730643	CLAWSON SPRING ST D-6	SWSW	31	15S	9E	State	ML-48226	Producing
146	4300730644	CLAWSON SPRING ST D-7	NWNE	31	15S	9E	State	ML-48226	Producing
147	4300730701	CLAWSON SPRING ST D-8	NWSE	31	15S	9E	State	ML-48226	Producing
148	4300750070	HELPER STATE 12-3	SWNW	3	14S	10E	State	ST UT ML 45805	Producing
149	4300750071	HELPER STATE 32-3	SWNE	3	14S	10E	State	ST UT ML 45805	Producing
150	4300750072	HELPER STATE 32-36	SWNE	36	13S	10E	State	ST UT ML 45802	Producing
151	4301530391	UTAH 10-415	NENE	10	16S	8E	State	ST UT ML 48189	Temporarily-Abandoned
152	4301530392	CLAWSON SPRING ST E-7	SENE	7	16S	9E	State	ST UT ML 48220-A	Producing
153	4301530394	CLAWSON SPRING ST E-8	SWSE	7	16S	9E	State	ST UT ML 48220-A	Producing
154	4301530403	CLAWSON SPRING ST E-3	SENE	6	16S	9E	State	ST UT ML 48220-A	Producing
155	4301530404	CLAWSON SPRING ST E-1	SENE	6	16S	9E	State	ST UT ML 48220-A	Producing
156	4301530405	CLAWSON SPRING ST E-2	NESW	6	16S	9E	State	ST UT ML 48220-A	Producing
157	4301530406	CLAWSON SPRING ST E-4	NWSE	6	16S	9E	State	ST UT ML 48220-A	Producing
158	4301530410	CLAWSON SPRING ST C-1	SWNW	12	16S	8E	State	ST UT UO 48209	Producing
159	4301530427	CLAWSON SPRING ST B-1	NENW	1	16S	8E	State	ST UT ML 48216	Producing
160	4301530428	CLAWSON SPRING ST B-2	NWSW	1	16S	8E	State	ST UT ML 48216	Producing
161	4301530429	CLAWSON SPRING ST B-3	NWNE	1	16S	8E	State	ST UT ML 48216	Producing
162	4301530430	CLAWSON SPRING ST B-4	SESE	1	16S	8E	State	ST UT ML 48216	Producing
163	4301530431	CLAWSON SPRING ST B-5	SWSW	12	16S	8E	State	ST UT ML 48216	Producing
164	4301530432	CLAWSON SPRING ST B-8	SENE	11	16S	8E	State	ST UT ML 48216	Producing
165	4301530433	CLAWSON SPRING ST B-9	NWSE	11	16S	8E	State	ST UT ML 48216	Producing
166	4301530434	CLAWSON SPRING ST C-2	SENE	12	16S	8E	State	ST UT UO 48209	Producing
167	4301530435	CLAWSON SPRING ST C-4	SWNW	14	16S	8E	State	ST UT UO 48209	Producing
168	4301530460	CLAWSON SPRING ST B-7	NWSW	11	16S	8E	State	ST UT ML 48216	Producing

	API Well Number	Well Name	Qtr/Qtr	Section	Township	Range	Mineral Lease Type	Mineral Lease Number	Well Status
169	4301530461	CLAWSON SPRING ST C-6	SENE	14	16S	8E	State	ST UT UO 48209	Producing
170	4301530463	CLAWSON SPRING ST C-3	C-SE	12	16S	8E	State	ST UT UO 48209	Producing
171	4301530465	CLAWSON SPRING ST B-6	NENW	11	16S	8E	State	ST UT ML 48216	Producing
172	4301530466	CLAWSON SPRING ST H-1	NENW	13	16S	8E	State	ST UT ML 48217-A	Producing
173	4301530467	CLAWSON SPRING ST H-2	NENE	13	16S	8E	State	ST UT ML 48217-A	Producing
174	4301530470	CLAWSON SPRING ST E-5	NENW	7	16S	9E	State	ST UT ML 48220-A	Producing
175	4301530471	CLAWSON SPRING ST G-1	NWNW	2	16S	8E	State	ST UT ML 46314	Producing
176	4301530472	CLAWSON SPRING ST F-2	NESE	3	16S	8E	State	ST UT ML 48515	Producing
177	4301530473	CLAWSON SPRING ST F-1	SENE	3	16S	8E	State	ST UT ML 48514	Producing
178	4301530474	CLAWSON SPRING ST E-6	SESW	7	16S	9E	State	ST UT ML 48220-A	Producing
179	4301530475	CLAWSON SPRING ST G-2	NESW	2	16S	8E	State	ST UT ML 46314	Producing
180	4301530488	CLAWSON SPRING ST M-1	NWNE	2	16S	8E	State	ST UT ML 47561	Producing
181	4301530489	CLAWSON SPRING ST K-1	SESE	2	16S	8E	State	ST UT ML 46043	Producing