Form OGC-1a

SUBMIT IN TRIPLICATE* (other instructions on reverse side)

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

002

ML 45175

5. Lease Designation and Serial No.

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

6. If Indian, Allottee or Tribe Name

1a. Type of Work: DRILL ☒ DEEPEN ☐ PLUG BACK ☐

b. Type of Well: Oil Well ☒ Gas Well ☐ Other Single Zone ☒ Multiple Zone ☐

7. Unit Agreement Name: N/a

8. Farm or Lease Name: State

2. Name of Operator: Pendragon Energy Partners, Inc

9. Well No.: 11-16-10-18

3. Address of Operator: 621 17th Street, Suite 750, Denver CO 80293 Phone 303 926 9402

10. Field and Pool, or Wildcat: Uteland Butte

4. Location of Well (Report location clearly and in accordance with any State Requirement.*)
At surface: 2,022' FSL; 2,104' FWL Sec 16, T10S, R18E
At proposed prod. zone: Same (NE SW Sec 16) 4421716Y 39.94224 593989X -109.89987

11. Sec., T., R., M., or Blk: S16, T10S, R18E, S.L.B. & M.

14. Distance in miles and direction from nearest town or post office*

12. County or Parrish: Uintah 13. State: Utah

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drlg. line, if any): 2,022' FSL Sec 16

16. No. of acres in lease: 640

17. No. of acres assigned to this well: 40

18. Distance from proposed location* to nearest well, drilling, completed, or applied for, on this lease, ft.: None

19. Proposed depth: 5,000

20. Rotary or cable tools: Rotary

21. Elevations (Show whether DF, RT, GR, etc.): 5,215.6' GR

22. Approx. date work will start*: Dec 1, 2002

23. PROPOSED CASING AND CEMENTING PROGRAM

Size of Hole	Size of Casing	Weight per Foot	Setting Depth	Quantity of Cement
12 1/4"	8 5/8"	24#	250	150 cf Lite + 100 cf of premium
7 7/8"	5 1/2"	15.5#	5,000	sufficient volume to 600' above pay.

Proposed Procedure:

1. Level location and construct reserve pit.
2. Drill conductor hole, set conductor casing @ +/- 60' and cement to surface.
3. Move in and rig up rotary drilling equipment, tanks and associated equipment.
4. Drill surface hole to +/- 250', run 8 5/8" casing and cement to surface.
5. Nipple up BOP, pressure test BOP, manifold and floor valve etc.
6. Drill 7 7/8" hole to +/- 5,000', log and or drill stem test if necessary.
7. If commercial oil production is indicated, run and cement 5 1/2" casing.
8. Move off rotary drilling equipment.
9. Move in completion rig, test zones of interest & prepare production facilities.

Exhibits:

A-Survey Plat	F-Cross Section
B-Vicinity Map A	G-Surface Use Plan
C-Vicinity Map B	H-Drilling Plan
D-Location Layout	J-Existing Wells Map
E-Rig Layout	L-BOP Diagram

RECEIVED
OCT 28 2002
DIV OF OIL, GAS & MINING

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

24. Signed: John Luchetta — Title: Agent — Date: Oct 21, 2002

(This space for Federal or State office use)

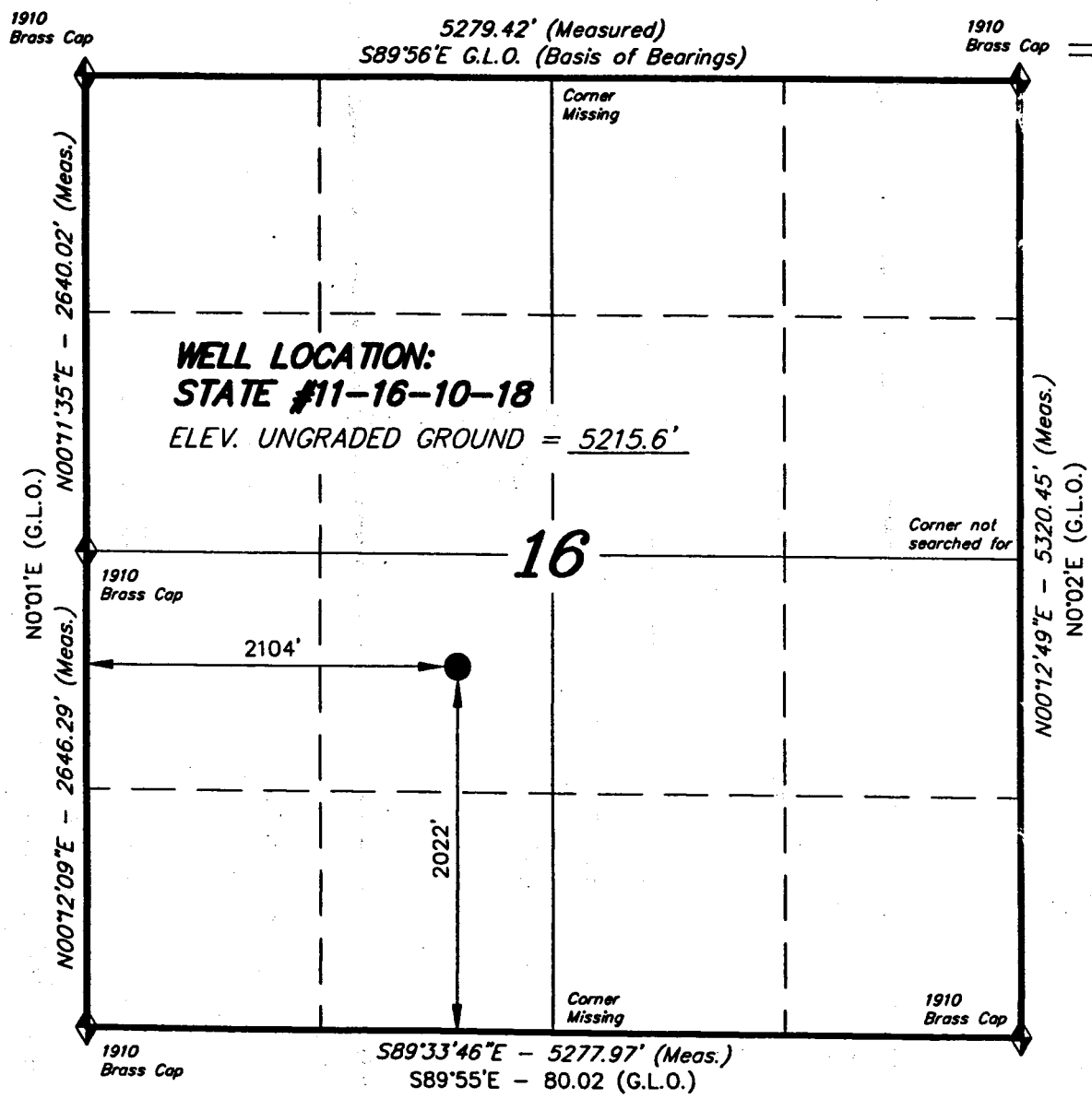
Permit No. 43-047-34767 Approval Date

Approved by Title Date

*See Instructions On Reverse Side

Exhibit A

T10S, R18E, S.L.B.&M.



PENDRAGON ENERGY PARTNERS, INC.

WELL LOCATION, STATE #11-16-10-18, LOCATED AS SHOWN IN THE NE 1/4 SW 1/4 OF SECTION 16, T10S, R18E, S.L.B.&M. UINTAH COUNTY, UTAH.

N

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.

REGISTERED LAND SURVEYOR No. 189377 STACY W. STEWART STATE OF UTAH

REGISTERED LAND SURVEYOR
REGISTRATION No. 189377
STATE OF UTAH

= SECTION CORNERS LOCATED

BASIS OF ELEV; U.S.G.S. 7-1/2 min QUAD (CROW KNOLL)

TRI STATE LAND SURVEYING & CONSULTING
180 NORTH VERNAL AVE. - VERNAL, UTAH 84078
(435) 781-2501

SCALE: 1" = 1000'	SURVEYED BY: D.J.S.
DATE: 10-7-02	DRAWN BY: J.R.S.
NOTES:	FILE #

Pendragon Energy Partners Inc.
STATE #11-16-10-18

Multi-Point Surface Use and Operations Plan

PENDRAGON ENERGY PARTNERS INC.
STATE #11-16-10-18
NE S[redacted] SEC. 16, T10S, R18E
UINTAH COUNTY, UTAH

1. **EXISTING ROADS: Refer to maps "A" & "B"**

   A. Map "A" is the vicinity map showing the Access routes from Myton, Utah

   B. Topo Map "B" shows the proposed access road to the pad as well as the existing roads in the immediate area

   C. Occasional maintenance blading and storm repairs will keep roads in good condition.

   D. There shall be no mud blading on the access road. Vehicles may be towed through the mud provided they stay on the roadway.

   E. All road construction and maintenance will conform to standards identified in "Surface Operating Standards for Oil and Gas Exploration and Development" (Gold Book) U.S. Department of the Interior-BLM and U.S. Department of Agriculture-Forest Service; January 1989.

2. **PLANNED ACCESS ROADS:** Refer to Map "B"
   Approximately 1390 feet of new road construction will be required for access to the proposed location.

   A. Width - maximum 30-foot overall right-of-way with an 18-foot road running surface, crowned & ditched and/or sloped and dipped.

   B. Construction standard - the access road will be constructed to same standards as previously accepted in this area.

   The road will be constructed to meet the standards of the anticipated traffic flow and all weather requirements. Construction will include ditching, draining, crowning and capping or sloping and dipping the roadbed as necessary to provide a well constructed and safe road.

   Traveling off of the thirty (30) foot right-of-way will not be allowed.

Road drainage crossings shall be of the typical dry creek drainage crossing type. Crossings shall be designed so they will not cause siltation or the accumulation of debris in the drainage crossing nor shall the drainages be blocked by the roadbed. Erosion of the drainage ditches by runoff water shall be prevented by diverting water off at frequent intervals by means of cutouts.

Upgrading shall not be allowed during muddy conditions.

Should mud holes develop, they will be filled in and detours around them avoided.

C. Maximum grade - grade will be less than 8%.

D. Drainage design - the access road will be crowned and ditched or sloped and dipped, and water turnouts installed as necessary to provide proper drainage along the access road route.

E. Turnouts - none.

F. Culverts – none

G. Surface materials – any surfacing materials required will be purchased from a local contractor having a permitted source of materials in the area. None are anticipated at this time.

H. Gates, cattleguards or fence cuts - none required

I. The proposed access road has been centerline flagged.

J. Dust will be controlled on the roads and locations during construction and drilling by periodic watering of the roads and locations.

3. LOCATION OF EXISTING WELLS WITHIN A ONE MILE RADIUS

None Known

4. LOCATION OF EXISTING AND/OR PROPOSED FACILITIES OWNED BY PENDRAGON ENERGY PARTNERS INC. WITHIN A ONE MILE RADIUS:

A. Existing
   1. Tank batteries - none
   2. Production facilities - none

3. Oil gathering lines – none
4. Gas gathering lines - none
5. Injection lines – none
6. Disposal lines – none

B. New Facilities Contemplated: in the event of production the following will be shown.

1. Proposed location and attendant lines, by flagging, if off well pad.

2. Dimensions of facilities.

3. Construction methods and materials.

4. Protective measures and devices to protect livestock and wildlife.

5. All buried pipelines will be buried to depth of 3 feet except at road crossings where they will be buried to a depth of 4 feet.

6. Construction width of the right-of-way/pipeline route shall be restricted to 50 feet of disturbance.

7. Pendragon Energy Partners Inc. shall condition pipeline right-of-ways in a manner to preclude vehicular travel upon said rights-of-way, except for access to pipeline drips and valves.

8. The area used to contain the proposed production facilities will be built using native materials. If these materials are not acceptable arrangements will be made to acquire appropriate materials from private sources.

9. A dike will be constructed completely around any those production facilities which contain fluids (i.e. production tanks, produced water tanks etc.). These dikes will be constructed of compacted subsoil, be impervious, hold 110% of the capacity of the largest tank and be independent of the back cut.

10. All permanent (onsite for six months or longer) above-the-ground constructed or installed, including pumping units, will be painted a flat non-reflective, earthtone color to match one of the standard environmental colors, as determined by the Five State Rocky Mountain Interagency Committee. All production facilities will be painted within six months of installation. Facilities required to comply with Occupational Health and Safety Act Rules and Regulations will be excluded from this painting requirement.

The required paint color is Carlsbad Canyon (2.5Y 6/2).

C. The production (emergency) pit will be fenced.

D. During drilling and subsequent operations, all equipment and vehicles will be confined to the access road right-of-way and any additional areas as specified in the approved Application for Permit to Drill.

E. Reclamation of disturbed areas no longer needed for operation will be accomplished by grading, leveling and seeding as recommended by the Bureau of Land Management.

F. Pendragon Energy Partners Inc. will be responsible for road maintenance from the beginning to completion of operations.

5. Location and Type of Water Supply

A. Water well in Sec. 34, T3S, R2W, USM operated by Nebeker Trucking, Permit #43-1721

6. Source of Construction Materials

A. No construction materials are needed for drilling operations. In the event of production, the small amount of gravel needed for facilities will be hauled in by truck from a local gravel pit over existing access roads to the area. No special access other than for drilling operations and pipeline construction is needed.

7. Methods of Handling Waste Materials:

A. Cuttings - the cuttings will be deposited in the reserve/blooie pit.

B. Drilling fluids - including salts and chemicals will be contained in the reserve/blooie pit. Upon termination of drilling and completion operations, the liquid contents of the reserve pit will be removed and disposed of at an approved waste disposal facility within ninety (90) days after termination of drilling and completion activities.

In the event adverse weather conditions prevent removal of the fluids from the reserve pit within this time period, an extension may be granted by the Authorized Officer upon receipt of a written request from Pendragon Energy Partners Inc.

The reserve pit will be constructed so as not to allow discharge and if required will be lined with a 12 mil plastic liner.

C. Produced fluids - liquid hydrocarbons produced during completion operations will be placed in test tanks on the location. Produced waste water will be confined to a lined pit (reserve pit) or storage tank for a period not to exceed ninety (90) days after initial production. During the ninety (90) day period, in accordance with Onshore Order 7, an application for approval of a permanent disposal method and location, along with the required water analysis, shall be submitted for the Authorized Officer's approval. Failure to file an application within the time frame allowed will be considered an incidence of noncompliance.

Any spills of oil, gas, salt water or other noxious fluids will be immediately cleaned up and removed to an approved disposal site.

D. Sewage - self-contained, chemical toilets will be provided for human waste disposal. Upon completion of operations, or as needed, the toilet holding tanks will be pumped and the contents thereof disposed of in the nearest, approved, sewage disposal facility.

E. Garbage and other waste material - garbage, trash and other waste materials will be collected in a portable, self-contained and fully-enclosed trash cage during drilling and completion operations. Upon completion of operations (or as needed) the accumulated trash will be disposed of at an authorized sanitary landfill. No trash will be burned on location or placed in the reserve pit.

F. Immediately after removal of the drilling rig, all debris and other waste materials not contained in the trash cage will be cleaned up and removed from the well location. No adverse materials will be left on the location. Any open pits will be fenced during the drilling operation and the fencing will be maintained until such time as the pits are backfilled.

G. The reserve and/or production pit will be constructed on the existing location and will not be located in natural drainages where a flood hazard exists or surface runoff will destroy or damage the pit walls. All pits will be constructed so as not to leak, break, or allow the discharge of liquids therefrom.

H. Hazardous materials: No chemicals subject to reporting under SARA Title III (hazardous materials) in an amount greater than 10,000# will be used, produced, stored, transported or disposed of annually in association with the drilling, testing or completing of wells within the Desert Spring area. Furthermore, extremely hazardous substances, as defined in 40 CFR 355, in threshold planning quantities, will not be used, produced, stored transported or

disposed of in association with the drilling, testing or completing of wells within this area.

8. Ancillary Facilities: None anticipated

9. Wellsite Layout:

A. Plat #1 shows the drill site layout as staked. Cross sections have been drafted to visualize the planned cuts and fills across the location. An average minimum of six (6) inches of topsoil will be stripped from the location (including areas of cut, fill, and/or subsoil storage) and stockpiled for future reclamation of the well site. Topsoil stockpile will be seeded with a seed mixture to be recommended by the B.L.M. Refer to Figure #1 for the location of the topsoil and subsoil stockpiles.

B. Plat #2 is a diagram showing the rig layout. No permanent living facilities are planned. There will be one (1) trailer on location during drilling operation for the toolpusher.

C. A diagram showing the proposed production facility layout will be submitted to the Authorized Officer via Sundry Notice (Form 3160-5) for approval of subsequent operations.

D. Prior to the commencement of drilling operations, the reserve pit will be fenced on three (3) sides using 39 inch net wire with at least one strand of barbed wire on top of the net wire.

1. The net wire shall be no more than 2-inches above the ground. The barbed wire shall be 3-inches above the net wire. Total height of fence shall be at least 42-inches.

2. Corner posts shall be cemented and/or braced in such a manner to keep the fence tight at all times

3. Standard steel, wood, or pipe posts shall be used between the corner braces. The maximum distance between any two (2) posts shall be no greater than sixteen (16) feet.

4. All wire shall be stretched, by using a stretching device, before it is attached to the corner posts.

The fourth side of the reserve pit will be fenced immediately upon removal of

the drilling rig and the fencing will be maintained until the pit is backfilled.

F. Any hydrocarbons on the pit will be removed from the pit as soon as possible after drilling operations are completed.

10. Plans for Reclamation of the Surface:

The B.L.M. will be contacted prior to commencement of any reclamation operations.

A. Production

1. Immediately upon well completion, the well location and surrounding area(s) will be cleared of all debris, materials, trash and junk not required for production.

2. Immediately upon well completion, any hydrocarbons in the pit shall be removed in accordance with 43 CFR 3162.7-1.

3. If a plastic or nylon reinforced pit liner is used, it shall be torn and perforated before backfilling of the reserve pit.

4. Before any dirt work to restore the location takes place, the reserve pit will be completely dry and all cans, barrels, pipe, etc. will be removed.

   Other waste and spoil materials will be disposed of immediately upon completion of drilling and workover activities.

5. The flare pit and that portion of the location and access road not needed for production facilities/operations will be reclaimed within ninety (90) days from the date of well completion, weather permitting.

6. If the well is a producer, Pendragon will: Upgrade and maintain access roads as necessary prevent soil erosion, and accommodate year traffic. Reshape areas unnecessary to operations. distribute topsoil, disk and seed all disturbed area outside the work area according to the BLM recommended seed mixture.

   If the well is abandoned/dry hole, Pendragon will: Restore the access road and location to approximately the original contours. During reclamation of the site, push the fill material into cuts and up over the backslope. Leave no depressions that will trap water or form ponds. Distribute topsoil evenly over the location, and seed according to the above seed mixture. The access road and location shall be ripped or disked prior to seeding. Perennial vegetation must be established. Additional work shall be required in case of seeding failures, etc.

Seedbed will be prepared by disking. Seed will be drilled on contours at a depth no greater than one-half inch (1/2"). In areas that cannot be drilled, seed will be broadcast at double the seeding rate and harrowed into soil. Certified seed will be used whenever available.

Fall seeding will be completed after September 1 and prior to prolonged ground frost.

7. Upon completion of backfilling, leveling and recontouring, the stockpiled topsoil will be evenly spread over the reclaimed area(s). Prior to reseeding, all disturbed surfaces will be scarified and left with a rough surface. No depressions will be left that would trap water and form ponds. All disturbed surfaces will be reseeded with a seed mixture to be recommended by the Bureau of Land Management.

   Seed will be drilled on the contour to a approximate depth of one-half (1/2) inch. All seeding will be conducted after September 1 and prior to ground frost. Spring seeding will be done after the frost leaves the ground and no later than May 15. If the seeding is unsuccessful, Pendragon Energy Partners Inc. may be required to make subsequent seedings.

B. Dry Hole/Abandoned Location

1. On lands administered by the Bureau of Land Management, abandoned well sites, roads, or other disturbed areas will be restored to near their original condition. This procedure will include:
   ensuring revegetation of the disturbed areas to the specifications of the Bureau of Land Management at the time of abandonment.

2. All disturbed surfaces will be recontoured to the approximate natural contours and reseeded according to BLM specifications. Reclamation of the well pad and access road will be performed as soon as practical after final abandonment and reseeding operations will be performed in the fall following completion of reclamation operations.

11. Surface Ownership:

The well site and proposed access road are situated on surface lands administered by State of Utah.

12. Other Information:

Pendragon Energy Partners Inc.
STATE #11-16-10-18

A. Topographic features of the area (reference Topographic Map #A)

The majority of the numerous washes and draws in the area are of a non-perennial nature flowing during the early spring run-off and heavy rain storms of long duration which are rare as the normal annual rainfall in the area is only 8".

The flora of the area includes pinon and juniper trees, sagebrush, greasewood, four-wing saltbush, Gambel scrub oak, willow, tamarack, shadscale, indian rice grass, cheatgrass, wheatgrass, curly grass, crested wheatgrass, foxtail, Russian thistle, Kochia, and cacti.

The fauna of the area includes cattle, horses, elk, deer, coyotes, rabbits, rodents, lizards, bull snakes, rattle snakes, water snakes and horned toads. Birds of the area are ground sparrows, bluejays, bluebirds, magpies, ravens, rapters, morning doves, swallows, nighthawks, hummingbirds, and chukar.

B. The surface ownership is federal. The surface use is grazing and petroleum production.

C. 1. The nearest live water is the Green River.

2. There are no dwellings in the area. No significant archaeological, historical or cultural sites are known to be present.

3. An archaeological report will be forwarded upon completion.

4. There are no reported restrictions or reservations noted on the oil and gas lease.

Pendragon Energy Partners Inc.
STATE #11-16-10-18

13. Lessee's or Operator's Representative:

John Luchetta
Agent for
Pendragon Energy Partners Inc.
2020 Foothills Road
Golden, CO 80401
(303) 278-3347

Certification:

All lease and/or unit operations will be conducted in such a manner that full compliance is made with all applicable laws, regulations, Onshore Oil & Gas Orders, the approved plan of operations, and any applicable Notice to Lessees.

Pendragon Energy Partners Inc. will be fully responsible for the actions of their subcontractors.

A complete copy of the approved Application for Permit to Drill will be furnished to the field representative(s) to ensure compliance and shall be on location during all construction and drilling operations.

I hereby certify that I, or persons under my direct supervision, have inspected the proposed drill site and access route; that I am familiar with the conditions which currently exist; that the statements made in this plan are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed by Pendragon Energy Partners Inc. its' contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved. This statement is subject to the provisions of 18 U.S.C. 1001 for the filing of a false statement.

Luchetta

John Luchetta
Agent

Oct 25-02

Date

EXHIBIT "H"
PROPOSED DRILLING PROGRAM

ONSHORE ORDER NO.1
Pendragon Energy Partners, Inc.
Desert Spring State No. 11-16-10-18
NE SW-Sec 16 –T10S – R18E
Uintah County, Utah

OIL & GAS ORDER NO. 1 (APPROVAL OF OPERATIONS ON ONSHORE, FEDERAL AND INDIAN OIL AND GAS LEASES).

All lease and/or unit operations will be conducted in a manner so that full compliance is made with the applicable laws, regulations (CFR 43, Part 3160) and the approved Application for Permit to Drill. The operator assumes full responsibility for the actions of its contractors and subcontractors. A copy of the approved APD will be on location during construction, drilling and completion operations.

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

1. ESTIMATED FORMATION TOPS : (Elevation – 5,216')

FORMATION	DRILLED (ft)	SUBSEA	PORE PRESSURE (psi/ft)
Green River	680	+ 4,536	Normal
Wasatch /Green River	4,800	+ 416	Normal
Total Depth	5,000	+ 216	Normal

* Offset pressure data supports pore pressure gradient @ 0.42 psi/ft in the Green River.

2. ESTIMATED DEPTH OF OIL, GAS, WATER OR OTHER MINERALS:		
SUBSTANCE	FORMATION	DEPTH (ft)
Water	None anticipated	
Gas	None	
Oil	Green River	4,700 – 5,000

3. PRESSURE CONTROL EQUIPMENT & SPECIFICATIONS :

- **Anticipated maximum surface shut-in pressure gradient:**

  . **Ps = BHP – (0.22 * 5,000) = (0.42 * 5,000) - (0.22 * 5,000) = 1,000 psi.**

  . **If a pressure anomaly occurs, API pressure control methods will be immediately imposed.**

  . **Drilling fluid density materials will be available on location.**

  . **Poison gas is not known to exist in the area.**

- **<u>BOP EQUIPMENT</u>: (See Exhibit "H")**

  . **Type: Nominal 10" hydraulic double ram, 2,000 psi working pressure.**

  . **Ram type preventers shall be installed after the prescribed WOC time has expired. The casing will be cut off and a weld-on companion flange fastened.**

  . **Pipe & blank rams will be used.**

  . **The BOP will be inspected, operated daily and on trips with the drill string. All tests will be recorded on the daily drilling log.**

- **<u>CHOKE MANIFOLD EQUIPMENT</u>: (See Exhibit "H")**

  . **The hydraulic closing unit will be located @ least 100' upwind from the BOP stack.**

  . **A remote BOP closing unit will be positioned near the driller's operating station.**

. Burst pressure rating – 2,000 psi.

. The choke manifold, BOP extension rods and handwheels will be located outside the substructure.

. The kill line will be 2" nominal rated @ 2,000 psi.

- **BOP TESTING:**

. Upon installation.

. If any seal subject to pressure is broken.

. Every 30 days if drilling operations continue beyond anticipated 10 days.

. A test plug will not be used since testing can be accomplished w/o exposing surface casing to excess pressures (70% of internal yield).

4. TEST PRESSURES AND OTHER SPECIFICATIONS ANTICIPATED:

UNIT	PROPOSED TEST PRESSURE (psi)
Pipe rams	2,000
Blind rams	2,000
Manifold	2,000
Surface casing	1,500 (or .70 x rated burst)
Floor valve	2,000
Annular	2,000

. Upper & lower kelly cock will be maintained in the drill string.

. Drill string float will not be used.

. The floor valve will be available in the open position @ all times and will be operated daily.

. A State O&G agent will be notified 24 hours before all BOP tests.

. BOP & pressure control drills will be conducted.

5. PROPOSED CASING & CEMENTING PROGRAM:								
PROPOSED CASING	HOLE SIZE	CASING SIZE	TOP OF SECTION (ft)	SECTION LENGTH (ft)	PHYSICAL DATA	Pressure Rating (psi) Burst	Collapse	Cement Top
Conductor	17 ½"	16"	0	60	Steel			Surface.
Surface	12 ¼"	8 5/8"	0	250	24# J55 STC	2,950	2,210	Surface
Production	7 7/8"	5 ½"	0	5,000'	15.5# J55 STC	4,800	4,040	NA

- **CASING SPECIFICATIONS AND CONDITIONS:**

. Stage cementing is not anticipated.

. The production casing will be tested @ 2,000 psi or 70% of minimum yield for a period of 30 minutes with not more than 10% drop.

. Formation Pore Pressure (from offset pressure data) -- 0.420 psi/ft.

. Formation Fracturing Gradient ---------- 0.700 psi/ft.

. Mud Density (Max lbs/gal) ---------- 9 ppg @ 5,000'.

. Collapse ---------- 1.120.

. Burst ---------- 1.000.

. Tension ---------- ---------- 1.800.

. Casing joints will be torqued according to API standards.

. Three centralizers will be placed on collars of the bottom 3 joints (Surface and Intermediate casing).

. A centralizer will be placed on each collar through production zones and every joint 300' above and below production zones (Production casing).

- **CEMENTING PROGRAM:**

. CONDUCTOR CASING: Cement to surface w/ ready mix.

. SURFACE CASING: Cement to surface w/150 cuft "Lite" tailed w/100 cuft premium.
1.8 cf/sx
1.18 cf/sx

. PRODUCTION CASING: Will be cemented from TD to 600' above top pay zone. Volume of cement will be determined from caliper log.
± 500cf (±385sx) 1.3 cf/sx poz

6. PROPOSED DRILLING FLUID SPECIFICATIONS:					
DEPTH INTERVAL	TYPE	DENSITY Lbs/gal	VISCOSITY	FLUID LOSS	MAKE UP WATER
0 - 250'	Gel	8.7 – 9.0	26-40	NC	Fresh
250' - TD	Gel	8.4 – 9.0	26-50	NC	Fresh

- OTHER DRILLING FLUID SPECIFICATIONS AND CONDITIONS:

. LCM will be present on location @ all times during drilling.

. Fluids parameters to be measured daily - density, viscosity, fluid loss, pH, solids, chlorides, bicarbonate and carbonates.

. Concentration of hazardous substances in the reserve pit will not exceed standards set forth in the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA).

. Oil & gas related CERCLA hazardous waste substances will be removed from location and will be disposed of according to EPA approved methods.

7. EVALUATION OF OPERATIONS WHILE DRILLING:

- MUD MONITORING SYSTEMS (Swaco):

. Pit level indicator, flow sensor w/alarms, PVT and stroke counter will not be used.

. A trip tank will not be used.

. Gas detection equipment (mud logger) will not be used.

. A mud-gas separator will not be used.

- **DRILL STEM TESTS: None anticipated.**

  . If it becomes necessary to conduct a drill stem test, initial opening of the test will be restricted to daylight hours.

  . If a test is initiated during daylight hours, it will be allowed to continue assuming OSHA considerations are strictly met.

  . The DST string will not be pulled out of the hole after dark unless recovered fluids have first been reverse circulated to a suitable closed steel tank placed at least 100' down wind from the wellhead.

  . Smoking will not be allowed on the rig floor or within 100' upwind from the rig floor during test operations.

  . Only rig engines will be allowed to run during testing. All others will be moved at least 100' upwind from the rig floor.

- **LOGGING PROGRAM:**

  . The following open hole logs are anticipated:

  Run #1 @ TD

  (1) GR - DLL ---------- TD to base of Surface casing.

  (2) CNL - Density – Caliper --- TD to +/-3,500'.

  . The following cased hole logs are anticipated:

  (1) GR-CCL ---------- PBTD to 500' above the pay zone.

  (2) CBL (Cement Bond Log) ---------- PBTD to cement top.

- **SAMPLING PROGRAM:**

  . 250 to +/- 4,000' ---------- 30' samples will be collected.
  . 4,000' to TD ---------- 10' samples may be collected as necessary.

  CORING: Not anticipated.

8. ANTICIPATED PORE PRESSURES & HAZARDOUS MATERIALS:

- **PORE PRESSURE:**
  - In the surface hole – normal to subnormal pressures are anticipated.
  - In the Green River – normal to subnormal pore pressures are anticipated (0.420 psi per ft.).
- **HAZARDOUS MATERIALS:** None anticipated.

9. OTHER INFORMATION, NOTIFICATION & REPORTING:

OPERATION	DATE OR ANTICIPATED TIME
Proposed start time	Dec 15, 2002
Drill pad & road construction time	2 - 4 days
Drilling operations & formation evaluation	8 – 10 days
Completion & testing time	5 – 10 days
Facilities installation	5 – 10 days
Initial restoration start time	180 days or as weather permits
Final restoration time	5 - 10 days

- **INFORMATION & REPORTING PLAN:**
  - **DRILLERS LOG:**
    - BOP, manifold, casing pressure tests - as done.
    - BOP mechanical test – as done.
    - Blowout prevention drills – as done.
    - Casing installation & cementing – as done.
    - WOC time – as done.
    - Incidents of lost circulation or pressure anomalies – as occurs.
  - **REGULATORY REPORTING:**
    - Notification of location construction - 24 hours prior to start up.
    - Notification of spud – prior to spud and/or within 48 hours after.

- **Notification of BOP test – at least 24 hours prior to testing.**
- **P&A – Utah State OGMC will be contacted prior to plugging.**
- **Form OGCC-1b Sundry - monthly.**
- **Form OGCC-3 - within 30 days after P&A or completion of the well.**
- **Facilities diagram – per CFR 43 Part 3162.7-2 and 3162.7-4.**
- **Undesirable events will be reported immediately. All other significant events will be reported within 15 days.**

10. OPERATOR'S REPRESENTATIVES AND CERTIFICATION:

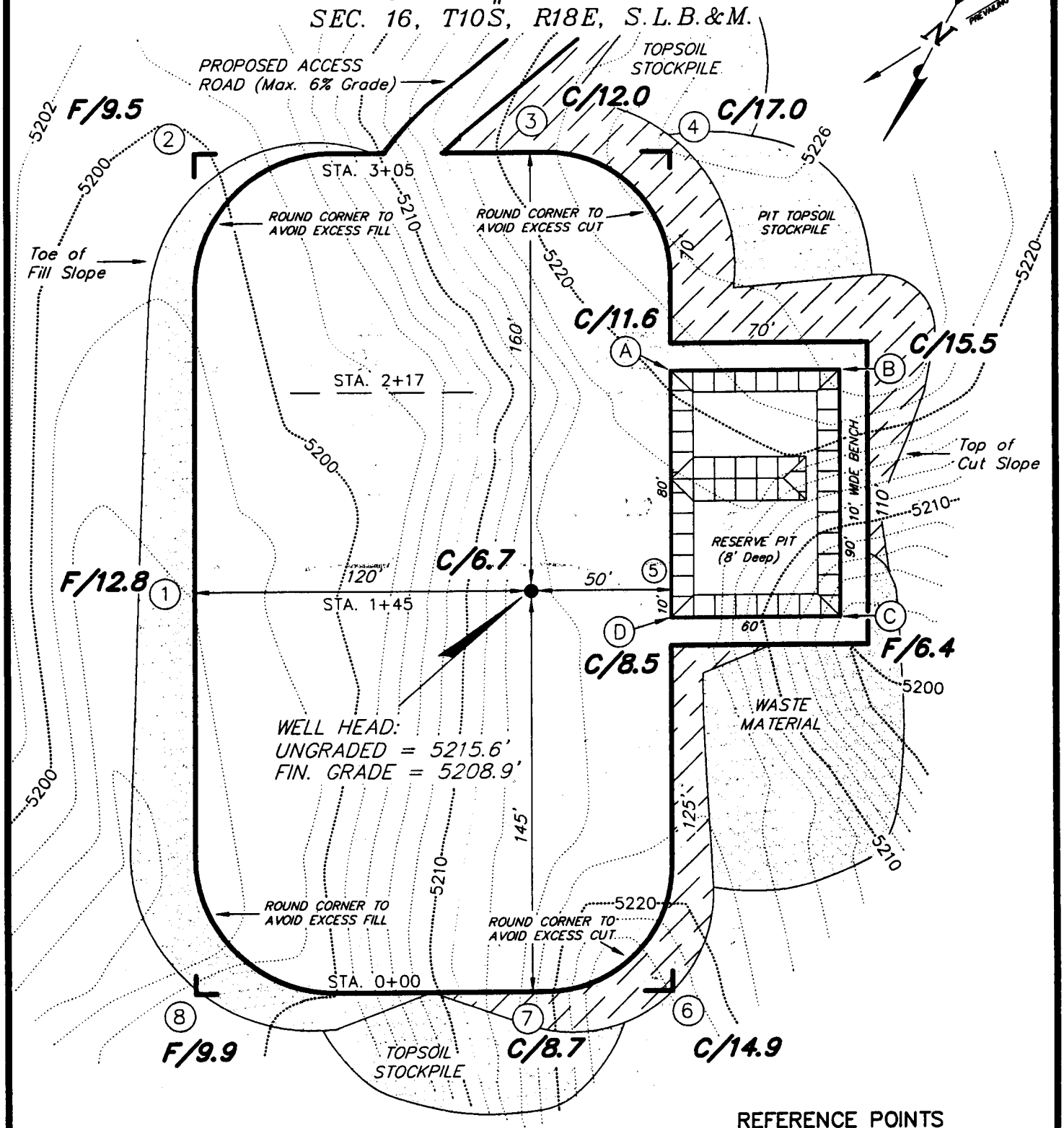
	ADDRESS	PHONE #	FAX #	HOME #
Al Nicol	621 17th Street, Suite 750 Denver, CO 80293	303 296 9402	303 296 9410	303 425 4115
John Luchetta	2020 Foothills Rd. Golden, CO 80401	303 278 3347	303 278 9506	303 278 3347

Exhibit D

PENDRAGON ENERGY PARTNERS, INC.

STATE #11-16-10-18

SEC. 16, T10S, R18E, S.L.B.&M.



REFERENCE POINTS

195' NORTHWEST = 5217.0'
245' NORTHWEST = 5228.1'
160' NORTHEAST = 5195.2'
220' NORTHEAST = 5211.2'

SURVEYED BY: D.J.S.		SCALE:	1" = 50'
DRAWN BY: J.R.S.		DATE:	10-7-02

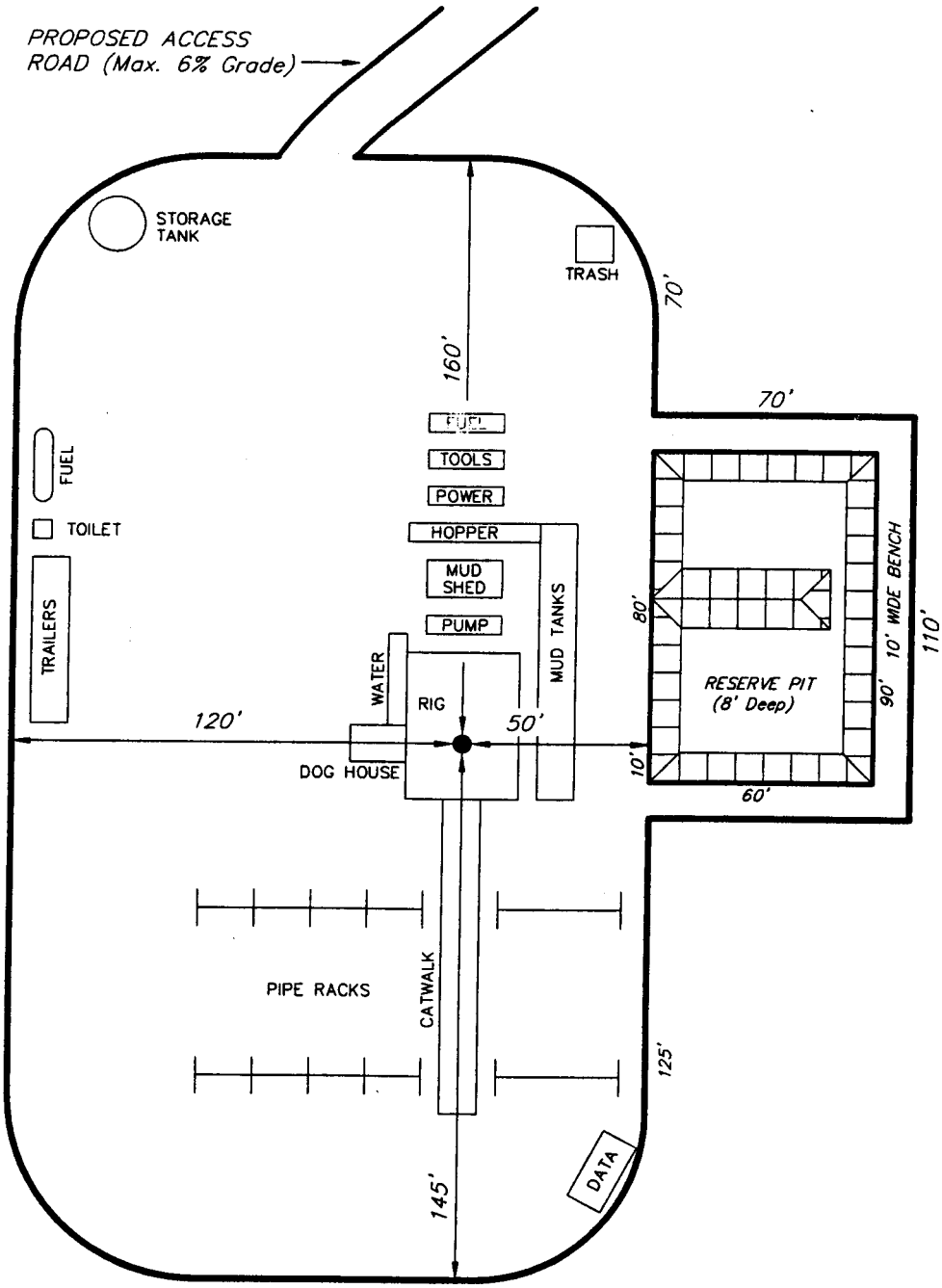
Tri State Land Surveying, Inc. (435) 781-2501
180 NORTH VERNAL AVE. VERNAL, UTAH 84078

Exhibit E

PENDRAGON ENERGY PARTNERS, INC.

TYPICAL RIG LAYOUT

STATE #11-16-10-18



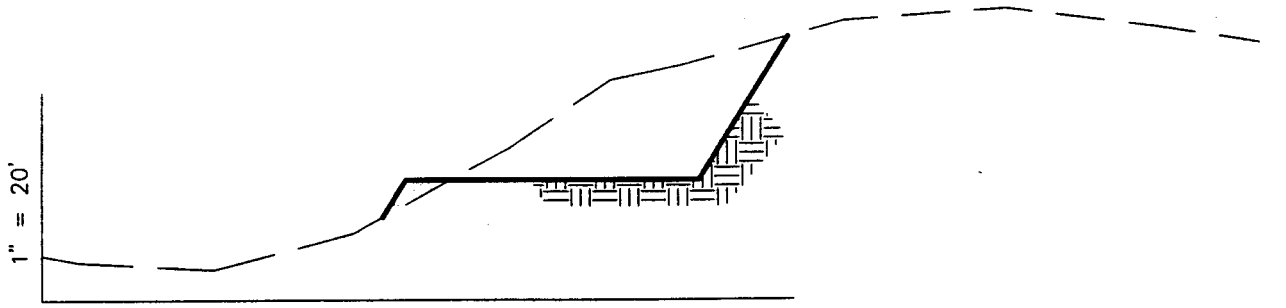
SURVEYED BY:	D.J.S.	SCALE:	1" = 50'	Tri State Land Surveying, Inc. (435) 781-2501
DRAWN BY:	J.R.S.	DATE:	10-7-02	180 NORTH VERNAL AVE. VERNAL, UTAH 84078

Exhibit F

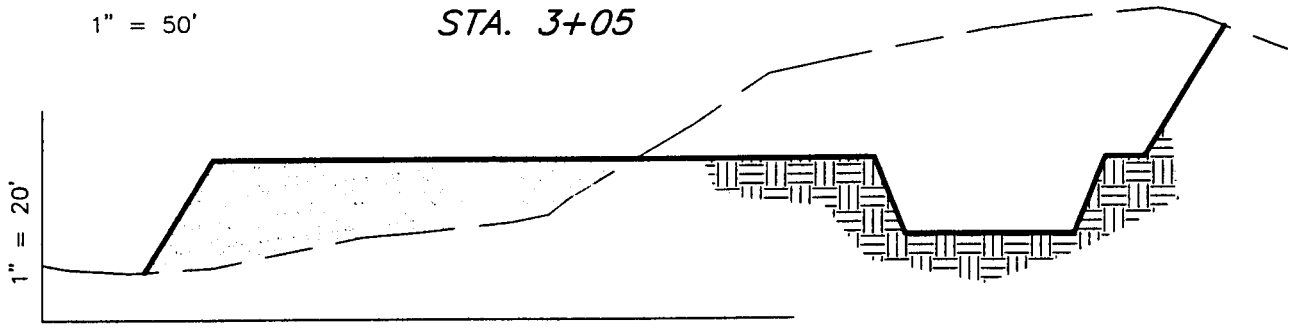
PENDRAGON ENERGY PARTNERS, INC.

CROSS SECTIONS

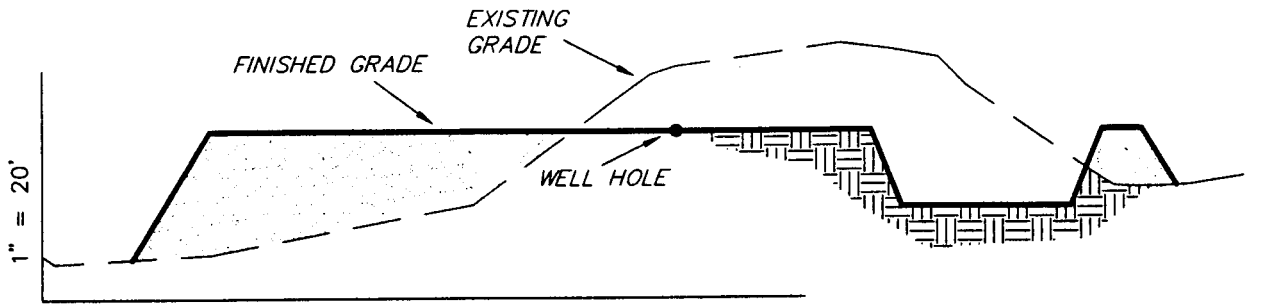
STATE #11-16-10-18



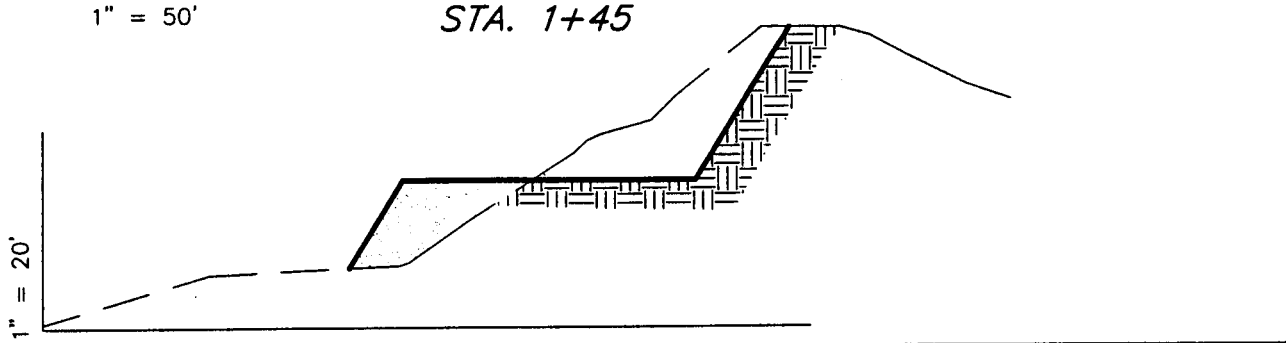
STA. 3+05



STA. 2+17



STA. 1+45



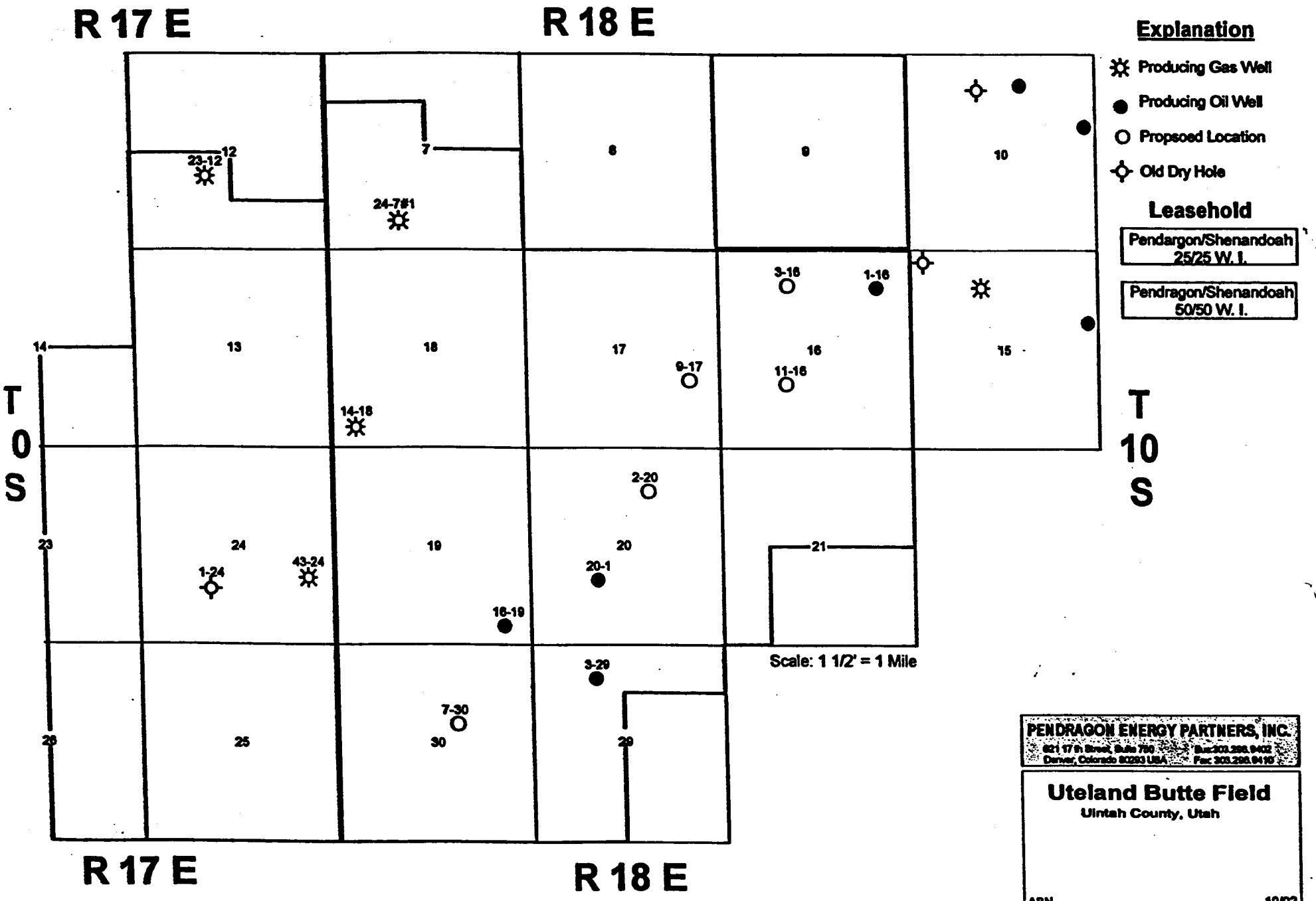
STA. 0+00

ESTIMATED EARTHWORK QUANTITIES
(Expressed in Cubic Yards)

ITEM	CUT	FILL	6" TOPSOIL	EXCESS
PAD	10,280	10,280	Topsoil is not included in Pad Cut	0
PIT	1,000	0		1,170
TOTALS	12,280	10,280	1,100	1,170

NOTE:
UNLESS OTHERWISE NOTED
ALL CUT/FILL SLOPES ARE
AT 1.5:1

SURVEYED BY: D.J.S.	SCALE: 1" = 50'	Tri State Land Surveying, Inc.	(435) 781-2501
DRAWN BY: J.R.S.	DATE: 10-7-02	180 NORTH VERNAL AVE. VERNAL, UTAH 84078	



PENDRAGON ENERGY PARTNERS, INC.
621 17th Street, Suite 750
Denver, Colorado 80293 USA
Bus 303.293.9402
Fax 303.293.9410

Uteland Butte Field
Uintah County, Utah

ABN 10/02

Exhibit J

LUCHETTA OPERATING CO., INC.
2020 FOOTHILLS RD. • GOLDEN, CO 80401

BOP & MANIFOLD SPECIFICATIONS
(MEETS 43 CFR, PARTS 3160 DESIGN)
SERIES 600 2,000 PSI RATING

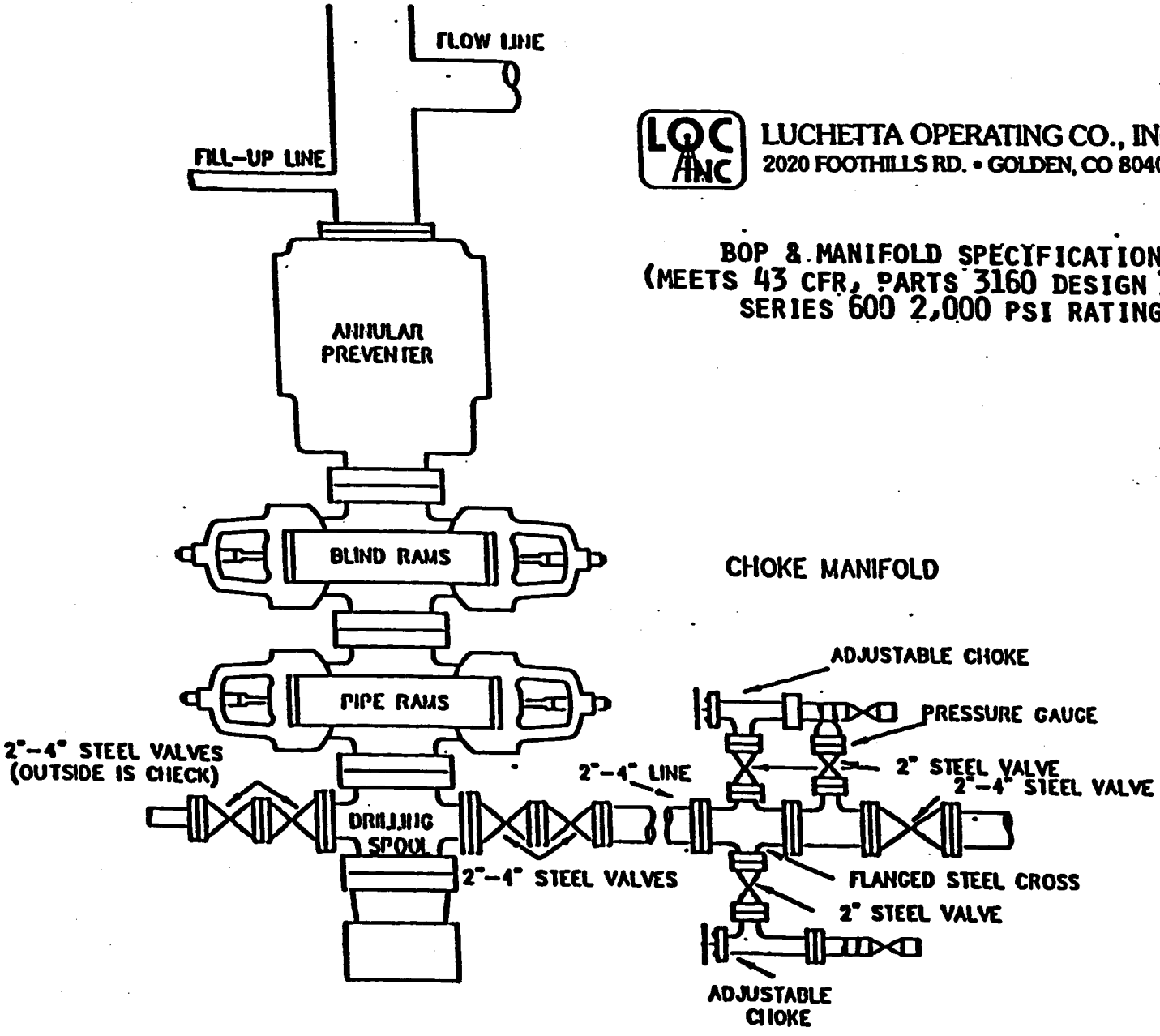
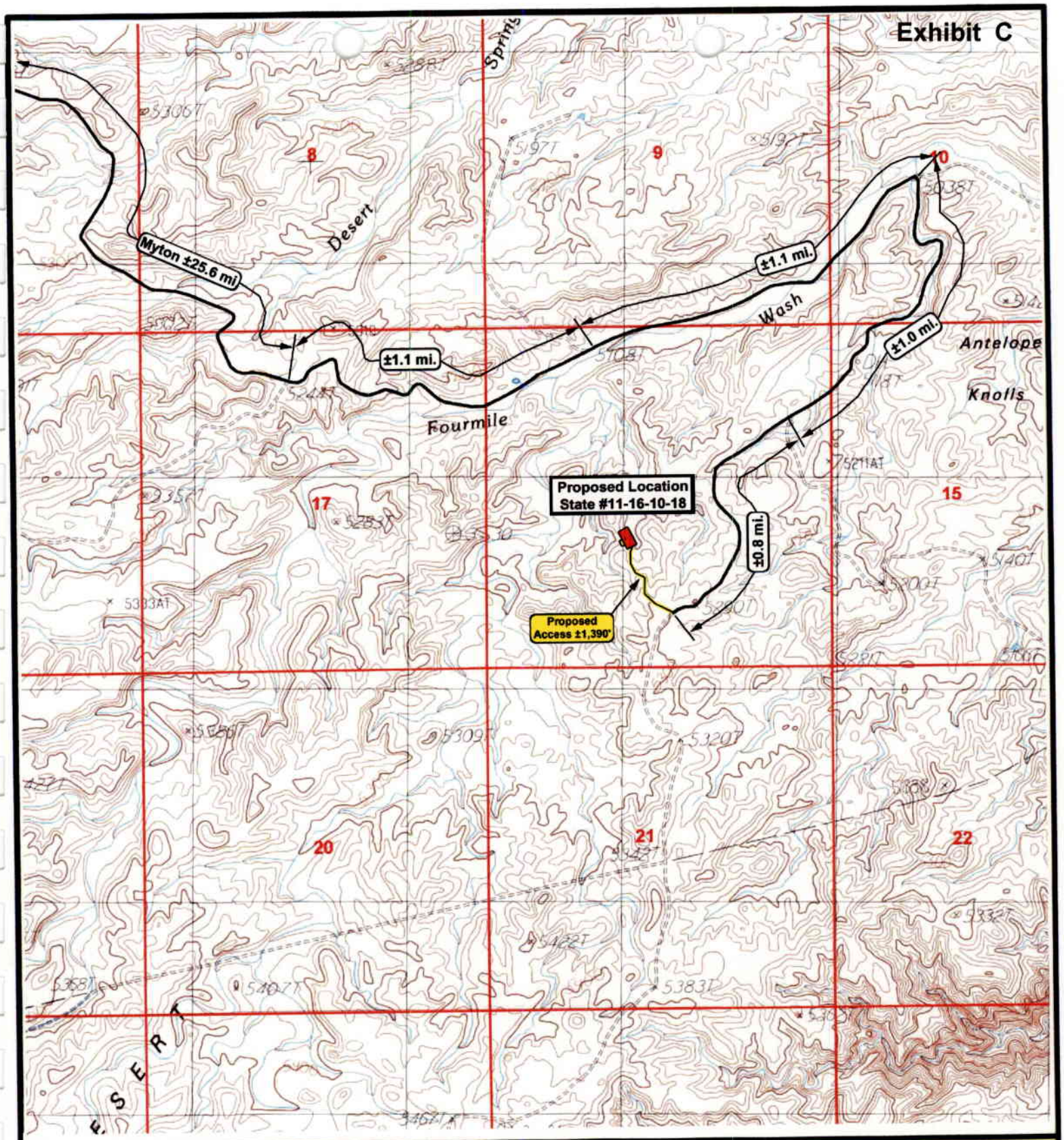


Exhibit L



PENDRAGON
ENERGY PARTNERS INC.

State #11-16-10-18
SEC. 16, T10S, R18E, S.L.B.&M.

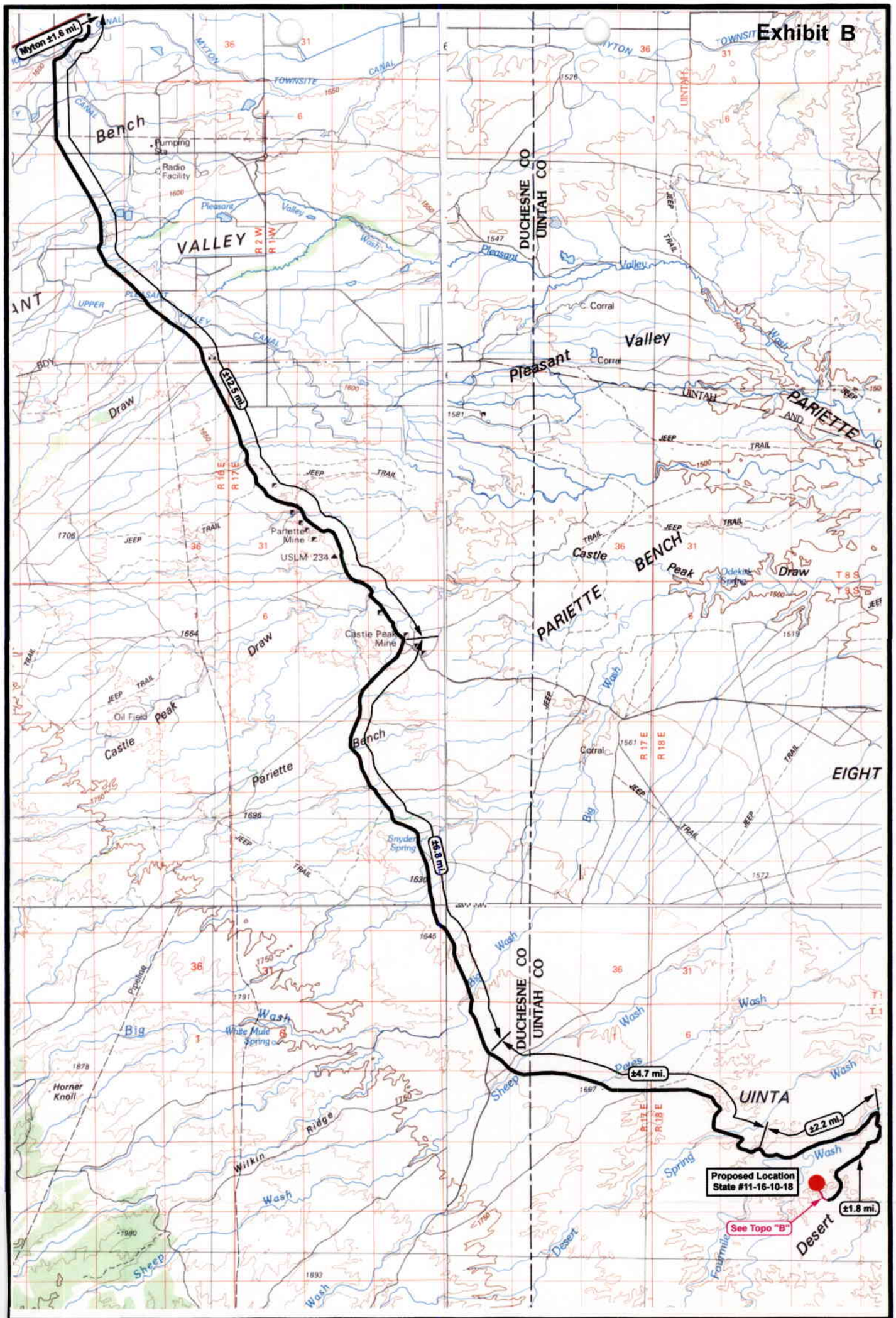
N

Tri-State Land Surveying Inc.
(435) 781-2501
180 North Vernal Ave. Vernal, Utah 84078

SCALE: 1" = 2,000'
DRAWN BY: R.A.B.
DATE: 10-08-2002

Legend
Existing Road
Proposed Access

TOPOGRAPHIC MAP
"B"



PENDRAGON

ENERGY PARTNERS INC.

State #11-16-10-18

SEC. 16, T10S, R18E, S.L.B.&M.

N

Tri-State Land Surveying Inc.
(435) 781-2501
180 North Vernal Ave. Vernal, Utah 84078

SCALE: 1 = 100,000
DRAWN BY: R.A.B.
DATE: 10-09-2002

Legend

Existing Road

Proposed Access

TOPOGRAPHIC MAP

"A"

003

WORKSHEET
APPLICATION FOR PERMIT TO DRILL

APD RECEIVED: 10/28/2002

API NO. ASSIGNED: 43-047-34767

WELL NAME: STATE 11-16-10-18
OPERATOR: PENDRAGON ENERGY PTNRS (N2965)
CONTACT: JOHN LUCHETTA

PHONE NUMBER: 303-278-3347

PROPOSED LOCATION:
NESW 16 100S 180E
SURFACE: 2022 FSL 2104 FWL
BOTTOM: 2022 FSL 2104 FWL
UINTAH
UTELAND BUTTE (695)

LEASE TYPE: 3 - State
LEASE NUMBER: ML 45175
SURFACE OWNER: 3 - State

PROPOSED FORMATION: GRRV

INSPECT LOCATN BY: / /

Tech Review	Initials	Date
Engineering	DRD	11/25/02
Geology		
Surface		

LATITUDE: 39.94224

LONGITUDE: 109.89987

RECEIVED AND/OR REVIEWED:

✓ Plat
✓ Bond: Fed[] Ind[] Sta[3] Fee[]
(No. RLB0002714)
N Potash (Y/N)
N Oil Shale 190-5 (B) or 190-3 or 190-13
✓ Water Permit
(No. 43-1721)
N RDCC Review (Y/N)
(Date:)
NA Fee Surf Agreement (Y/N)

LOCATION AND SITING:

____ R649-2-3.

Unit ____

✓ R649-3-2. General
Siting: 460 From Qtr/Qtr & 920' Between Wells

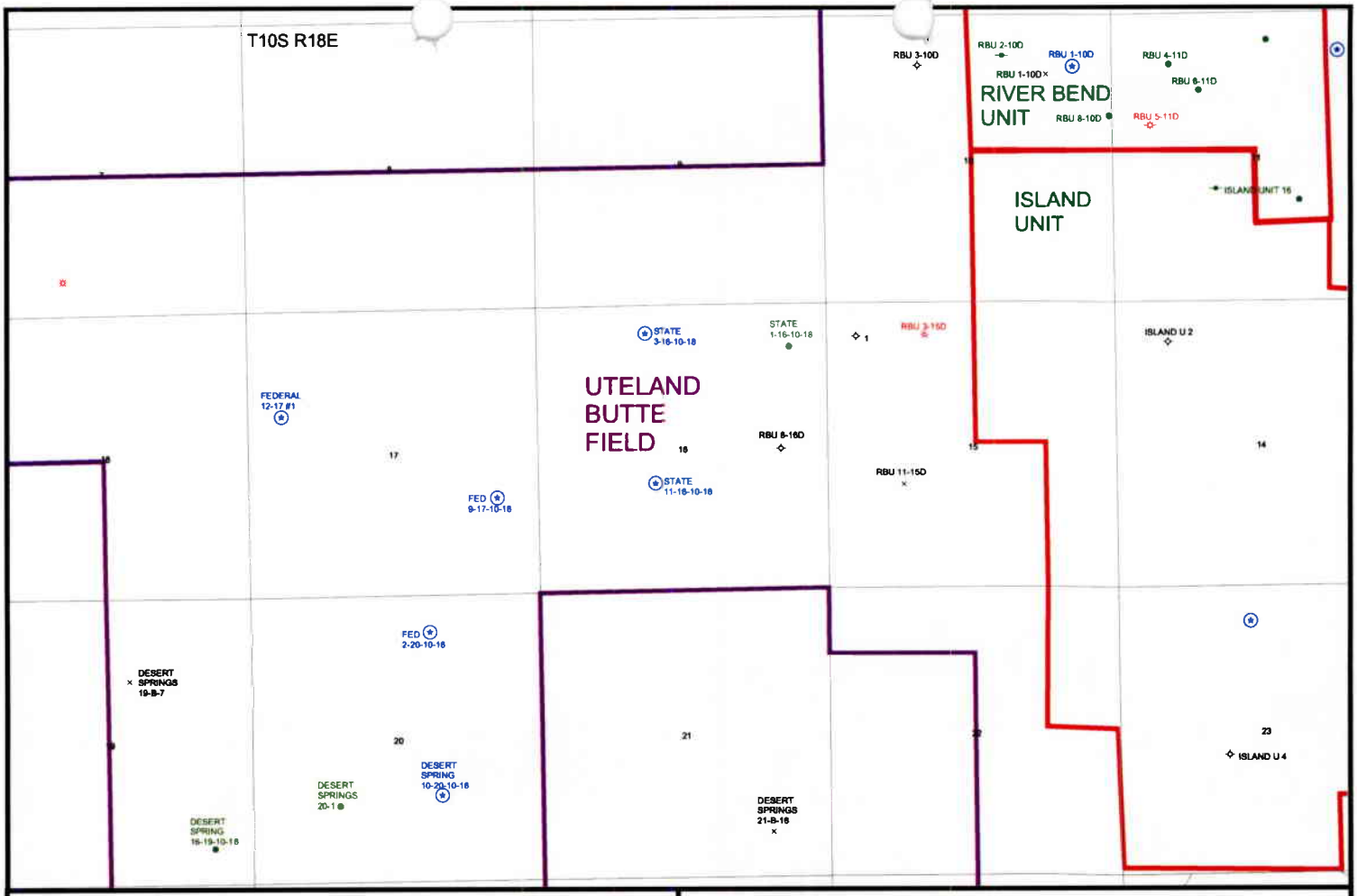
____ R649-3-3. Exception

____ Drilling Unit
Board Cause No: ____
Eff Date: ____
Siting: ____

____ R649-3-11. Directional Drill

COMMENTS: Need Presite (11-08-02)

STIPULATIONS: 1-Spacing Ship
2- Ensure Cement for the 5 1/2" Production Casing Covers the Base of the Moderately Saline Ground water @ ±3000'
3- STATEMENT OF BASIS



OPERATOR: PENDRAGON ENERGY (N2965)

SEC. 16 T10S R18E

FIELD: UTELAND BUTTE (695)

COUNTY: UNITAH

SPACING: R649-3-2 / GENERAL SITING

Utah Oil Gas and Mining

Well Status	Unit Status	Field Status
GAS INJECTION	EXPLORATORY	ABANDONED
GAS STORAGE	GAS STORAGE	ACTIVE
LOCATION ABANDONED	NF PP OIL	COMBINED
NEW LOCATION	NF SECONDARY	INACTIVE
PLUGGED & ABANDONED	PENDING	PROPOSED
PRODUCING GAS	PI OIL	STORAGE
PRODUCING OIL	PP GAS	TERMINATED
SHUT-IN GAS	PP GEOTHERML	
SHUT-IN OIL	PP OIL	Section Lines
TEMP. ABANDONED	SECONDARY	Township Lines
TEST WELL	TERMINATED	County Boundaries
WATER INJECTION		
WATER SUPPLY		
WATER DISPOSAL		

N
W E
S

PREPARED BY: DIANA MASON
DATE: 29-OCTOBER-2002

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

OPERATOR: PENDRAGON ENERGY PARTNERS, INC.
WELL NAME & NUMBER: STATE 11-16-10-18
API NUMBER: 43-047-34767
LEASE: ML-45175 **FIELD/UNIT:** UTELAND BUTTE
LOCATION: 1/4,1/4 NE/SW **Sec:** 16 **TWP:** 10S **RNG:** 18E 2104' FWL 2022' FSL
LEGAL WELL SITING: 460 from qtr/qtr 920 between wells.
GPS COORD (UTM): **4421714E 593990N** **SURFACE OWNER:** STATE OF UTAH

PARTICIPANTS

DAVID W. HACKFORD (DOGM), FLOYD BARTLETT (DWR), ED BONNER (SITLA), DEE SLAUGH, ROBIN BAILEY (TRI STATE LAND SURVEYING & CONSULTING).

REGIONAL/LOCAL SETTING & TOPOGRAPHY

SITE IS IN A SADDLE ON A LOW RIDGE WHICH RUNS NORTH TO SOUTH. FOUR MILE WASH IS 0.6 MILES TO THE NORTH. SHALLOW DRAWS TO THE EAST AND WEST OF SITE RUN TO THE NORTH TO FOUR MILE WASH.

SURFACE USE PLAN

CURRENT SURFACE USE: WILDLIFE AND LIVESTOCK GRAZING, HUNTING.

PROPOSED SURFACE DISTURBANCE: LOCATION WILL BE 205' BY 230'. ACCESS ROAD WILL BE 1390'.

LOCATION OF EXISTING WELLS WITHIN A 1 MILE RADIUS: SEE ATTACHED MAP FROM GIS DATABASE.

LOCATION OF PRODUCTION FACILITIES AND PIPELINES: ALL PRODUCTION FACALITIES WILL BE ON LOCATION AND ADDED AFTER DRILLING WELL. IF NECESSARY, A PIPELINE WILL BE PERMITTED LATER.

SOURCE OF CONSTRUCTION MATERIAL: ALL CONSTRUCTION MATERIAL WILL BE BORROWED FROM SITE DURING CONSTRUCTION OF LOCATION.

ANCILLARY FACILITIES: NONE WILL BE REQUIRED.

WASTE MANAGEMENT PLAN:

DRILLED CUTTINGS WILL BE SETTLED INTO RESERVE PIT. LIQUIDS FROM PIT WILL BE ALLOWED TO EVAPORATE. FORMATION WATER WILL BE CONFINED TO STORAGE TANKS. SEWAGE FACILITIES, STORAGE AND DISPOSAL WILL BE HANDLED BY COMMERCIAL CONTRACTOR. TRASH WILL BE CONTAINED IN TRASH BASKETS AND HAULED TO AN APPROVED LAND FILL

ENVIRONMENTAL PARAMETERS

AFFECTED FLOODPLAINS AND/OR WETLANDS: NONE

FLORA/FAUNA: SALTBRUSH, SHADSCALE, PRICKLEY PEAR, SPINY HOPSEDGE, GRASSES, EPHEDRA, GLOBE MALLOW: PRONGHORN, COYOTES, SONGBIRDS, RAPTORS, RODENTS, RABBITS.

SOIL TYPE AND CHARACTERISTICS: LIGHT BROWN SANDY CLAY.

EROSION/SEDIMENTATION/STABILITY: VERY LITTLE NATURAL EROSION. SEDIMENTATION AND STABILITY ARE NOT A PROBLEM AND LOCATION CONSTRUCTION SHOULDN'T CAUSE AN INCREASE IN STABILITY OR EROSION PROBLEMS.

PALEONTOLOGICAL POTENTIAL: NONE OBSERVED.

RESERVE PIT

CHARACTERISTICS: 60' BY 80' AND 8' DEEP.

LINER REQUIREMENTS (Site Ranking Form attached): A 12 MIL LINER AND A FELT SUBLINER WILL BE REQUIRED FOR RESERVE PIT.

SURFACE RESTORATION/RECLAMATION PLAN

AS PER SITLA.

SURFACE AGREEMENT: **AS PER SITLA.**

CULTURAL RESOURCES/ARCHAEOLOGY: SITE WAS INSPECTED BY MONTGOMERY ARCHAEOLOGICAL CONSULTANTS ON 10/16/02. A REPORT OF THIS INVESTIGATION WILL BE PLACED ON FILE.

OTHER OBSERVATIONS/COMMENTS

THIS PREDRILL INVESTIGATION WAS CONDUCTED ON A COOL, CLOUDY DAY.

ATTACHMENTS

PHOTOS OF THIS SITE WERE TAKEN AND PLACED ON FILE.

DAVID W. HACKFORD — 11/8/02. 10:45 AM
DOGM REPRESENTATIVE — DATE/TIME

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

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

Final Score 30 (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.

2002 11 8

2002 11 8

2002 11 8

2002 11 8

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

OPERATOR: PENDRAGON ENERGY PARTNERS, INC.
WELL NAME & NUMBER: STATE 11-16-10-18
API NUMBER: 43-047-34767
LOCATION: 1/4,1/4 NE/SW Sec:16 TWP:10S RNG:18E 2104 FWL 2022 FSL

Geology/Ground Water:

Pendragon proposes to set 250' of surface casing at this location. The depth to the base of the moderately saline water at this location is estimated to be at 2000 feet. A search of Division of Water Rights records shows no water wells within a 10,000 foot radius of the center of section 16. The surface formation at this site is the Uinta Formation. The Uinta Formation is made up of interbedded shales and sandstones. The sandstones are mostly lenticular and discontinuous and should not be a significant source of useable ground water. The proposed casing program should adequately protect any underground sources of useable water.

Reviewer: Brad Hill
Date: 11/13/2002

Surface:

The predrill investigation of the surface was performed on 11/8/02. Floyd Bartlett with DWR and Ed Bonner with SITLA were invited to this investigation on 10/30/02. Mr. Bartlett and Mr. Bonner were both present. Neither had any concerns regarding the construction of this location or the drilling of this well. This site is on State surface with State minerals. This site appears to be the best site for a location in the immediate area. There are numerous sandstone outcroppings in the area. Because of this, it will undoubtedly be necessary to drill and shoot while constructing reserve pit.

Reviewer: David W. Hackford
Date: 11/12/02

Conditions of Approval/Application for Permit to Drill:

1. A synthetic liner with a minimum thickness of 12 mils shall be properly installed, with a felt subliner, and maintained in the reserve pit.

11-02 Pendragon St 11-16-_-18

Casing Schematic

Surface

Uintah

8-5/8"
MW 9.
Frac 19.3

TOC @
0.
Surface
250. MD

w/ 34% washout
Previously Approved ?
Drilled In Area

680'
Green River

BOP

(0.052)(9)(5000) = 2340 psi
Anticipated = 2100 psi

Gas
(0.12)(5000) = 600 psi

MASP = 1740 psi

2M BOPE proposed
Adequate
DKD 11/25/02

TOC @
~~2698.~~
3227'

±3000' BMSGW

W/15% washout
+ Prod. casing Stop to ± 3000'

4200'
Birds nest ?
(±100' above nest top)

4800'
Wasatch/GR

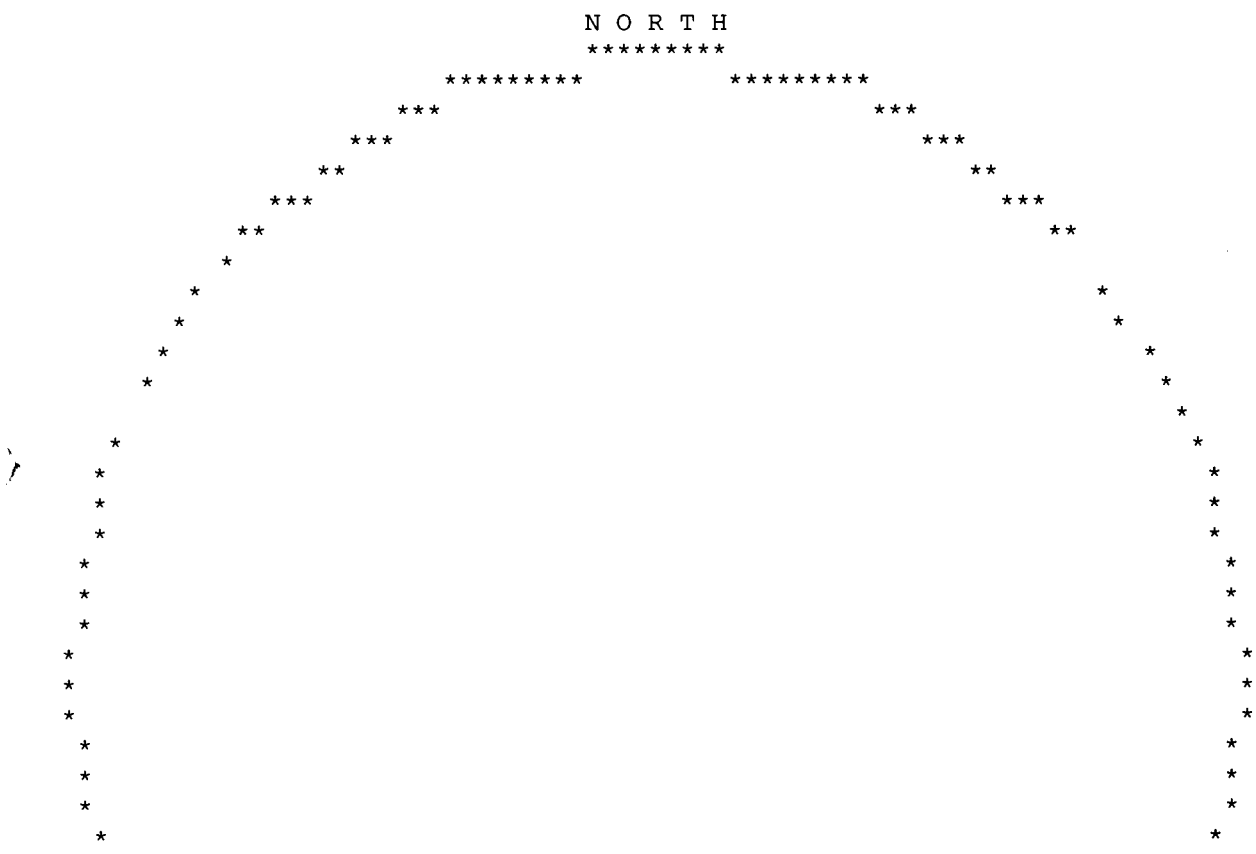
5-1/2"
MW 9.

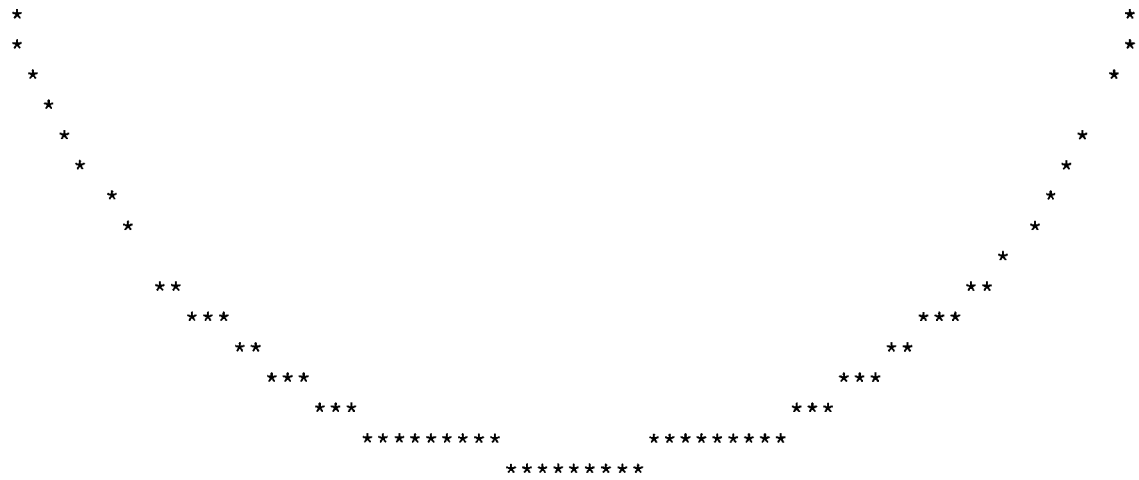
Production
5000. MD

UTAH DIVISION OF WATER RIGHTS
WATER RIGHT POINT OF DIVERSION PLOT CREATED WED, NOV 13, 2002, 12:16 PM
PLOT SHOWS LOCATION OF 0 POINTS OF DIVERSION

PLOT OF AN AREA WITH A RADIUS OF 10000 FEET FROM A POINT
FEET, FEET OF THE CT CORNER,
SECTION 16 TOWNSHIP 10S RANGE 18E SL BASE AND MERIDIAN

PLOT SCALE IS APPROXIMATELY 1 INCH = 4000 FEET





Well name:	**11-02 Pendragon St 11-16-10-18**
Operator:	**Pendragon Energy Partners, Inc.**
String type:	Surface
Project ID:	43-047-34767
Location:	Utah County

Design parameters:

Collapse

Mud weight: 9.000 ppg

Design is based on evacuated pipe.

Burst

Max anticipated surface pressure: 0 psi

Internal gradient: 0.468 psi/ft

Calculated BHP 117 psi

No backup mud specified.

Minimum design factors:

Collapse:

Design factor 1.125

Burst:

Design factor 1.00

Tension:

8 Round STC: 1.80 (J)

8 Round LTC: 1.80 (J)

Buttress: 1.60 (J)

Premium: 1.50 (J)

Body yield: 1.50 (B)

Tension is based on air weight.

Neutral point: 216 ft

Environment:

H2S considered? No

Surface temperature: 65 °F

Bottom hole temperature: 68 °F

Temperature gradient: 1.40 °F/100ft

Minimum section length: 200 ft

Cement top: Surface

Non-directional string.

Re subsequent strings:

Next setting depth: 5,000 ft

Next mud weight: 9.000 ppg

Next setting BHP: 2,338 psi

Fracture mud wt: 19.250 ppg

Fracture depth: 250 ft

Injection pressure 250 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 (ft^3)
1	250	8.625	24.00	J-55	ST&C	250	250	7.972	12

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	117	1370	11.72	117	2950	25.24	6	244	40.67 J

Prepared by: Dustin Doucet
Utah Dept. of Natural Resources

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

Date: November 25,2002
Salt Lake City, Utah

ENGINEERING STIPULATIONS: NONE

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

Collapse is based on a vertical depth of 250 ft, a mud weight of 9 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:	**11-02 Pendragon St 11-16-10-18**
Operator:	**Pendragon Energy Partners, Inc.**
String type:	Production
Project ID:	43-047-34767
Location:	Utah County

Design parameters:

Collapse

Mud weight: 9.000 ppg

Design is based on evacuated pipe.

Burst

Max anticipated surface pressure: 0 psi

Internal gradient: ~~0.468 psi/ft~~

Calculated BHP 2,338 psi

No backup mud specified.

Minimum design factors:

Collapse:

Design factor 1.125

Burst:

Design factor 1.00

Tension:

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

Tension is based on air weight.

Neutral point: 4,319 ft

Environment:

H2S considered?	No
Surface temperature:	65 °F
Bottom hole temperature:	135 °F
Temperature gradient:	1.40 °F/100ft
Minimum section length:	1,500 ft
Cement top:	~~2,098 ft~~ 3227 DRD

Non-directional string.

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Internal Capacity (ft³)
1	5000	5.5	15.50	J-55	ST&C	5000	5000	4.825	156.7

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	2338	4040	1.73	2338	4810	2.06	77	202	2.61 J

Prepared by: Dustin Doucet
Utah Dept. of Natural Resources

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

Date: November 25,2002
Salt Lake City, Utah

ENGINEERING STIPULATIONS: NONE

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

Collapse is based on a vertical depth of 5000 ft, a mud weight of 9 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.

001

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

FORM 3

AMENDED REPORT ☑
(Highlight changes)

APPLICATION FOR PERMIT TO DRILL

5. MINERAL LEASE NO: ML45175
6. SURFACE:
7. IF INDIAN, ALLOTTEE OR TRIBE NAME:
8. UNIT or CA AGREEMENT NAME: N/A

1A. TYPE OF WORK: DRILL ☒ REENTER ☐ DEEPEN ☐

B. TYPE OF WELL: OIL ☒ GAS ☐ OTHER ——— SINGLE ZONE ☒ MULTIPLE ZONE ☐

2. NAME OF OPERATOR: Pendragon Energy Partners, Inc.

9. WELL NAME AND NUMBER: State No. 11-16-10-18

3. ADDRESS OF OPERATOR: 621 17th (CITY) Denver (STATE) CO (ZIP) 80293 (PHONE NUMBER) 303-296-9402

10. FIELD AND POOL OR WILDCAT: Uteland Butte

4. LOCATION OF WELL(FOOTAGES)
AT SURFACE: 2,022' FSL, 2,104' FWL Sec 16
AT PROOSED PRODUCING ZONE: Same

11. QTR/QTR, SECTION, TOWNSHIP, RANGE MERIDIAN: NE-SW Sec 16 T10S, R18E, S.L.B. & M.

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE: 25.6 Miles from Myton, Utah

12. COUNTY: Uintah
13. STATE: UTAH

15. DISTANCE TO NEAREST PROPERTY OR LEASE LINE (FEET): 2,022' FSL Sec 16
16. NUMBER OF ACRES IN LEASE: 640
17. NUMBER ACRES ASSIGNED TO THIS WELL: 40

18. DISTANCE TO NEAREST WELL (DRILLING, COMPLETED, OR APPLIED FOR ON THIS LEASE (FEET): None
19. PROPOSED DEPTH: 5,000'
20. BOND DESCRIPTION: RLI Insurance Co. RLB0002714

21. ELEVATIONS(SHOW WHETHER DF, RT, GR, ETC.): 5,215.6' GR
22. ESTIMATED DURATION: 20-30 days to drill & complete

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"	~~5 1/2"~~ 8 5/8", 24# J-55, STC	250'	150 cf lite, 1.8 yield, 13 ppg, +100 cf 1.18 yield, 16 ppg
7 7/8"	~~8 5/8"~~ 5 1/2", 15.5# J-55, STC Dwg	5,000'	+/- 500 cf poz, 1.3 yield. Top of cement @ +/- 3,000'
			Note: Waste water disposal application to follow.

25. ATTACHMENTS

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

☒ WELL PLAT OR MAP PREPARED BY LICENSED SURVEYOR OR ENGINEER
☒ COMPLETE DRILLING PLAN
☒ EVIDENCE OF DIVISION OF WATER RIGHTS APPROVAL FOR USE OF WATER
☐ FORM 5 IF OPERATOR IS PERSON OR COMPANY OTHER THAN THE LEASE OWNER

B-Vicinity Map A
C-Vicinity Map B
D-Location Layout
E-Rig Layout
M-RNI Water Service Permit #16-1645
G-Surface Use Plan
H-Drilling Plan
J-Existing Well Map
L-BOP Diagram

NAME (PLEASE PRINT): John Luchetta
TITLE: Agent
SIGNATURE: JLuchetta
DATE: Nov 15, 2002

(This space for Federal or State office use)

API NUMBER ASSIGNED: 43-047-34767

APPROVAL: Approved by the Utah Division of Oil, Gas and Mining
Date: 11-26-02
By: [illegible]

*See Instructions On Reverse Side

004

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

1594 West North Temple, Suite 1210
PO Box 145801
Salt Lake City, Utah 84114-5801
(801) 538-5340 telephone
(801) 359-3940 fax
(801) 538-7223 TTY
www.nr.utah.gov

Michael O. Leavitt
Governor

Robert L. Morgan
Executive Director

Lowell P. Braxton
Division Director

November 26, 2002

Pendragon Energy Partners Inc.
621 17th, Suite 1750
Denver, CO 80293

Re: State 11-16-10-18 Well, 2022' FSL, 2104' FWL, NE SW, Sec. 16, T. 10 South, R. 18 East, Uintah County, Utah

Gentlemen:

Pursuant to the provisions and requirements of Utah Code Ann.§ 40-6-1 *et seq.*, Utah Administrative Code R649-3-1 *et seq.*, and the attached Conditions of Approval, approval to drill the referenced well is granted.

This approval shall expire one year from the above date unless substantial and continuous operation is underway, or a request for extension is made prior to the expiration date. The API identification number assigned to this well is 43-047-34767.

Sincerely,

for John R. Baza
Associate Director

pb
Enclosures
cc: Uintah County Assessor
SITLA

Operator: Pendragon Energy Partners Inc.

Well Name & Number State 11-16-10-18

API Number: 43-047-34767

Lease: ML-45175

Location: NE SW **Sec.** 16 **T.** 10 South **R.** 18 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 State of Utah Antiquities Act forbids disturbance of archeological, historical, or paleontological remains. Should archeological, historical or paleontological remains be encountered during your operations, you are required to immediately suspend all operations and immediately inform the Trust Lands Administration and the Division of State History of the discovery of such remains.

5. Compliance with the Conditions of Approval/Application for Permit to Drill outlined in the Statement of Basis. (Copy Attached)

6. This proposed well is located in an area for which drilling units (well spacing patterns) have not been established through an order of the Board of Oil, Gas and Mining (the "Board"). In order to avoid the possibility of waste or injury to correlative rights, the operator is requested, once the well has been drilled, completed, and has produced, to analyze geological and engineering data generated therefrom, as well as any similar data from surrounding areas if available. As soon as is practicable after completion of its analysis, and if the analysis suggests an area larger than the quarter-quarter section upon which the well is located is being drained, the operator is requested to seek an appropriate order from the Board establishing drilling and spacing units in conformance with such analysis by filing a Request for Agency Action with the Board.

7. Ensure cement for the 5-1/2" production casing covers the base of the moderately saline ground water at ±3,000'.

005

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 well or drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL forms for such proposals.

5. LEASE DESIGNATION AND SERIAL NUMBER: ML 45175
6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
7. UNIT OR CA AGREEMENT NAME: N/A
8. WELL NAME and NUMBER: 11-16-10-18 STATE
9. API NUMBER: 43-047-34267
10. FIELD AND POOL, OR WILDCAT: Uteland Butte

1. TYPE OF WELL: OIL WELL [X] GAS WELL [ ] OTHER ----------
2. Name of Operator: Pendragon Energy Partners, Inc.
3. Address of Operator: 621 17 Street CITY Denver STATE CO 80293 PHONE No. 303 278 9506
4. LOCATION OF WELL FOOTAGE AT SURFACE: 2,022' FSL/ 2,104' FWL COUNTY: Uintah
STATE: UTAH
QTR/QRT, SECTION, TOWNSHIP AND RANGE: NE SW Sec 16 - T10S - R18E

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

TYPE OF SUBMISSION	TYPE OF ACTION		
[ ] NOTICE OF INTENT (Submit in Duplicate)	[ ] ACIDIZE	[ ] DEEPEN	[ ] REPERFORATE CURRENT FORMATION
Approximate date work will start: Feb 25, 2003	[ ] ALTER CASING	[X] FRACTURE TREAT	[ ] SIDETRACK TO REPAIR WELL
	[ ] CASING REPAIR	[ ] NEW CONSTRUCTION	[ ] TEMPORARILY ABANDON
	[ ] CHANGE TO PREVIOUS PLANS	[ ] OPERATOR CHANGE	[ ] TUBING REPAIR
[X] SUBSEQUENT REPORT: (Submit Original Form Only	[ ] CHANGE TUBING	[ ] PLUG AND ABANDON	[ ] VENT OR FLARE
	[ ] CHANGE WELL NAME	[ ] PLUG BACK	[ ] WATER DISPOSAL
	[X] CHANGE WELL STATUS	[ ] PRODUCTION (START/RESUME)	[ ] WATER SHUT OFF
	[ ] COMMINGLE PRODUCING FORMATIONS	[ ] RECLAMATION OF WELL SITE	OTHER Completion
	[X] CONVERT WELL TYPE	[ ] RECOMPLETE DIFFERENT FORMATION	

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

Completed

Jan 15, 2003: Set and cement 8 5/8" surface casing.

Jan 17, 2003: MIRU drilling equipment. Commence drilling 7 7/8" hole.

Jan 27, 2003: Drill to TD (4899') and run logs

Jan 28, 2003: Run 5 1/2" casing and cement to 3000'.

Wait on completion.

Proposed

1. MI completion equipment
2. Run casing logs (GR-CBI).
3. Production test.
4. Stimulate.
5. Install production equipment.

RECEIVED
FEB 10 2003
DIV. OF OIL, GAS & MINING

NAME (PLEASE PRINT) John Luchetta TITLE Agent

SIGNATURE Luchetta DATE Feb 1, 2003

(This space for State use only)

006

FORM 6

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

ENTITY ACTION FORM

Operator: PENDRAGON ENERGY PARTNERS, INC.

Operator Account Number: N 2965

Address: 621 17th ST. #750
DENVER, CO. 80293

Phone Number: 303-296-9402

Well 1

API Number	Well Name		QQ	Sec	Twp	Rng	County
43-047-34766	STATE 3-16-10-18		NE/NW	16	10S	18E	UINTAH
Action Code	Current Entity Number	New Entity Number	Spud Date			Entity Assignment Effective Date	
A	99999	13733	12/30/02			2-26-03	

Comments:

Well 2

API Number	Well Name		QQ	Sec	Twp	Rng	County
43-047-34767	STATE 11-16-10-18		NE/SW	16	10S	18E	UINTAH
Action Code	Current Entity Number	New Entity Number	Spud Date			Entity Assignment Effective Date	
A	99999	13734	1/12/03			2-26-03	

Comments:

Well 3

API Number	Well Name		QQ	Sec	Twp	Rng	County
43-047-34134	FED. 2-20-10-18		NW/NE	20	10S	18E	UINTAH
Action Code	Current Entity Number	New Entity Number	Spud Date			Entity Assignment Effective Date	
A	99999	13735	1/29/03			2-26-03	

Comments:

ACTION CODES:
- A - Establish new entity for new well (single well only)
- B - Add new well to existing entity (group or unit well)
- C - Re-assign well from one existing entity to another existing entity
- D - Re-assign well from one existing entity to a new entity
- E - Other (Explain in 'comments' section)

ALAN B. NICOL
Name (Please Print)

Signature

PRESIDENT
Title

2/18/03
Date

(5/2000)

RECEIVED
FEB 20 2003
DIV. OF OIL, GAS & MINING

007

S TE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

AMENDED REPORT ☐ (highlight changes) FORM 8

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

5. LEASE DESIGNATION AND SERIAL NUMBER: ML 45175

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7. UNIT or CA AGREEMENT NAME: N/A

8. WELL NAME AND NUMBER: State 11-16-10-18

9. API NUMBER: 43-047-34767

10. FIELD AND POOL, OR WILDCAT: Uteland Butte

11. QTR/QTR, SECTION TOWNSHIP, RANGE MERIDIAN: Sec 16 T10S R18E S.L.B. &M

12. COUNTY: Uintah

13. STATE: UTAH

1a. TYPE OF WELL: OIL WELL ☒ GAS WELL ☐ DRY ☐ OTHER

b. TYPE OF WORK: NEW WELL ☒ HORIZ LATS ☐ DEEP EN ☐ RE-ENTRY ☐ DIFF. RESER/ ☐ OTHER Completion

2. NAME OF OPERATOR: Pendragon Energy Partners, Inc.

3. ADDRESS OF OPERATOR: 621 17th St, Suite 750 CITY Denver STATE Colorado ZIP 80293 PHONE NUMBER: 303 296 9402

4. LOCATION OF WELL (FOOTAGES)

AT SURFACE: 2,022' FSL; 2,104' FWL Sec 16 T10S-R18W (NE SW)

AT TOP PRODUCING INTERVAL REPORTED BELOW: Same

AT TOTAL DEPTH:

14. DATE SPUDDED: Jan 17, 03

15. DATE T.D. REACHED: Jan 28, 03

16. DATE COMPLETED: Feb 18, 2003 ABANDONED ☐ READY TO PRODUCE ☒

17. ELEVATIONS:(DF, RKB, RT, GL) 5,216' GL

15. TOTAL DEPTH MD 4,899 TVD

19. PLUG BACK T.D.: MD 4,839 TVD

20. MULTIPLE COMPLETIONS, HOW MANY?

21. DEPTH BRIDGE PLUG SET: MD TVD

22. TYPE ELECTRIC AND OTHER MECHANICAL LOGS RUN (Submit copy of each)

SDDSN, Induction, CBL- GR 5-1-03
Rec 4-3-03

23.
WAS WELL CORED? NO ☒ YES ☐ (Submit analysis)
WAS DST RUN? NO ☒ YES ☐ (Submit analysis)
DIRECTIONAL SURVEY? NO ☒ YES ☐ (Submit analysis)

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

HOLE SIZE	SIZE/GRADE	WEIGHT#/ft	TOP (MD)	BOTTOM (MD)	STAGE CEMENTER DEPTH	CEMENT TYPE & NO. OF SACKS	SLURRY VOLUME (BBL)	CEMENT TOP (ft)	AMOUNT PULLED
12 1/4	8 5/8"	24#	0	250		250 sxs	80	0	
7 7/8	5 1/2 J55	17#	0	4,893		165 G	34		
						370 Poz	118	300'	

25. TUBING RECORD

SIZE	DEPTH SET (MD)	PACKER SET (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)
2 7/8"	4520	4520 Anchr						

26. PRODUCING INTERVALS / 27. PERFORATION RECORD

	FORMATION NAME	TOP (MD)	BOTTOM (MD)	TOP (TVD)	BOTTOM (TVD)	INTERVAL ((Top/Bot-MD)	SIZE	NO. HOLES	PERFORATION STATUS
A.	A Sand	4,617	4,623			4,617-4,623	.5	6	Open ☒ Squeezed ☐
B.	C Shoal	4,743	4,747			4,743-4,747	.5	8	Open ☒ Squeezed ☐
C.									Open ☐ Squeezed ☐
D.									Open ☐ Squeezed ☐

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

DEPTH INTERVAL	AMOUNT AND TYPE OF MATERIAL
4,743-4,747	336 Bbls gelled water + 20-40 frac sand @ 1-6 ppg
4,717-4,623	334 Bbls gelled water + 20-40 frac sand @ 1-6 ppg

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MAR 14 2003
DIV. OF OIL, GAS & MINING

29. ENCLOSED ATTACHMENTS: Note: Logs were mailed under separate cover. Initial production = 72 bopd + 8 blwpd

☐ ELECTRICAL/MECHANICAL LOGS ☐ GEOLOGIC REPORT ☐ DST REPORT
☐ SUNDRY NOTICES FOR PLUGGING AND CEMENT VERIFICATION ☐ CORE ANALYSIS ☐ OTHER

30. WELL STATUS: Pumping

6/2000

(CONTINUED ON BACK)

31. INITIAL PRODUCTION — INTERVAL A (As shown in item 26)

DATE FIRST PRODUCED:	TEST DATE:	HOURS TESTED:	TEST PRODUCTION RATES: >	OIL-BBLS:	GAS-MCF:	WATER-BBLS:	PROD METHOD:
Feb 18 03	Same	24	72			8	Pumping

CHOKE SIZE:	TBG. PRESS:	CSG. PRESS:	API GRAVITY:	BTU-GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: >	OIL-BBLS:	GAS-MCF:	WATER-BBLS:	INTERVAL STATUS
			35	NA	250					

INITIAL PRODUCTION — INTERVAL B (As shown in item 26)

DATE FIRST PRODUCED:	TEST DATE:	HOURS TESTED:	TEST PRODUCTION RATES: >	OIL-BBLS:	GAS-MCF:	WATER-BBLS:	PROD METHOD:

CHOKE SIZE:	TBG. PRESS:	CSG. P	API GRAVITY:	BTU-GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: >	OIL-BBLS:	GAS-MCF:	WATER-BBLS:	INTERVAL STATUS

INITIAL PRODUCTION — INTERVAL C (As shown in item 26)

DATE FIRST PRODUCED:	TEST DATE:	HOURS TESTED:	TEST PRODUCTION RATES: >	OIL-BBLS:	GAS-MCF:	WATER-BBLS:	PROD METHOD:

CHOKE SIZE:	TBG. PRESS:	CSG. PRESS:	API GRAVITY:	BTU-GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES:>	OIL-BBLS:	GAS-MCF:	WATER-BBLS:	INTERVAL STATUS

INITIAL PRODUCTION — INTERVAL D (As shown in item 26)

DATE FIRST PRODUCED:	TEST DATE:	HOURS TESTED:	TEST PRODUCTION RATES: >	OIL-BBLS:	GAS-MCF:	WATER-BBLS:	PROD METHOD:

CHOKE SIZE:	TBG. PRESS:	CSG. PRESS:	API GRAVITY:	BTU-GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES:>	OIL-BBLS:	GAS-MCF:	WATER-BBLS:	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: Cored intervals and all drill-stem tests, including depth intervals tested, cushion used, time tool open, flowing and shut-in pressures and recoveries.

Formation	Top (MD)	Bottom (MD)	Description, Contents, etc.
Green River	670	4700	Shale
Wasatch A	4716	4623	Sand
C Shoal	4743	4747	Sand

34. FORMATION MARKERS:

Name	Top Measured Depth

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) John Luchetta TITLE Agent

SIGNATURE JLuchetta DATE 3-0- 03

This report must be submitted within 30 days of:

- completing or plugging a new wall
- drilling horizontal laterals from an existing well bore
- recompleting to a different producing formation
- reentering a previously plugged and abandoned well
- significantly deepening an existing well bore below the previous bottom-hole depth
- 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), temperture survey (TBS).

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

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B&A Buys & Associates, Inc.
Environmental Consultants

300 E. Mineral Ave., Suite 10
Littleton, Colorado 80122-2631
303/781-8211 303/781-1167 Fax

December 15, 2003

Mr. Dan Jackson
Groundwater Program
Groundwater Program, Mail Code 8P-W-GW
U.S. Environmental Protection Agency
999 18th Street, Suite 500
Denver, Colorado 80202-2466

RE: Pendragon Energy Partners
State 11-16-10-18, UIC Permit Application
2022' FNL & 2104' FWL, Sec. 16, T10S, R18E
Uintah County, Utah

Dear Mr. Jackson:

Attached is the permit application and supporting documents to convert the existing oil well to an injection well for enhanced recovery. This well is located in the Uteland Butte Field which falls within the Uncompahgre portion of the Uintah and Ouray Indian Reservation.

Geologically this area is very similar to the Greater Monument Butte Unit in which the EPA has permitted hundreds of injection wells. Please contract me with any questions you may have.

Sincerely,
BUYS & ASSOCIATES, INC.

Martin W. Buys
Agent for Pendragon Energy Partners

Accepted by the
Utah Division of
Oil, Gas and Mining
FOR RECORD ONLY

Form Approved. OMB No. 2040-0042. Expires 6-30-98

EPA

United States Environmental Protection Agency

Underground Injection Control Permit Application

(Collected under the authority of the Safe Drinking Water Act. Sections 1421, 1422, 40 CFR 144)

I. EPA ID Number			
		T/A	C
U			

Read Attached Instructions Before Starting

For Official Use Only

Application approved mo	day	year	Date received mo	day	year	Permit Number	Well ID	FINDS Number

II. Owner Name and Address

Owner Name: Pendragon Energy Partners

Street Address: 621 17th Street

Phone Number: 303-296-9402

City: Denver

State: Co.

ZIP CODE: 80202

III. Operator Name and Address

Operator Name:

Street Address:

Phone Number:

City:

State:

ZIP CODE:

IV. Commercial Facility

- [ ] Yes
- [X] No

V. Ownership

- [X] Private
- [ ] Federal
- [ ] Other

VI. Legal Contact

- [X] Owner
- [ ] Operator

VII. SIC Codes

VIII. Well Status *(Mark "x")*

- [ ] A. Operating — Date Started mo / day / year
- [X] B. Modification/Conversion
- [ ] C. Proposed

IX. Type of Permit Requested *(Mark "x" and specify if required)*

- [X] A. Individual
- [ ] B. Area

Number of Existing Wells	Number of Proposed Wells	Name(s) of field(s) or project(s)
		Uteland Butte

X. Class and Type of Well *(see reverse)*

A. Classes(es) (enter codes(s)	B. Type(s) (enter codes(s)	C. If class is "other" or type is code 'x,' explain	D. Number of wells per type (if area permit)
II	R	N/A	N/A

XI. Location of Well(s) or Approximate Center of Field or Project

Latitude Deg	Min	Sec	Longitude Deg	Min	Sec	Township and Range Sec	Twp	Range	1/4 Sec	Feet From	Line	Feet From	Line
						16	10 S	18 E	SW	2022	S	2104	W

XII. Indian Lands (Mark 'x')

- [X] Yes Uncompahgre
- [ ] No Ouray

XIII. Attachments

(Complete the following questions on a separate sheet(s) and number accordingly; see instructions)
For Classes I, II, III, (and other classes) complete and submit on a separate sheet(s) Attachments A--U (pp 2-6) as appropriate. Attach maps where required. List attachments by letter which are applicable and are included with your application.

XIV. Certification

I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. (Ref. 40 CFR 144.32)

A. Name and Title *(Type or Print)*	B. Phone No. *(Area Code and No.)*
Alan Nicol, President	303-296-9402
C. Signature	D. Date Signed
	Dec. 6, 2003

EPA Form 7520-6 (Rev. 8-91)

UNDERGROUND INJECTION CONTROL

PERMIT APPLICATION

State 11-16-10-18 WELL
2022' FSL & 2104' FWL
SEC. 16, T10, R18E
Uintah County, Utah
API # 43-047-34767

December 15, 2003

Prepared for:

Mr. Dan Jackson
Groundwater Program, Mail Code 8P-W-GW
U.S. Environmental Protection Agency
999 18th Street, Suite 500
Denver, Colorado 80202-2466

Prepared by:

BUYS & ASSOCIATES, INC.
300 E. Mineral Ave., Suite 10
Littleton, Colorado 80122
(303) 781-8211
FAX (303) 781-1167

State 11-16

LIST OF ATTACHMENTS

Attachment No. 1	Area Map
Attachment No. 2	Site Map, Site Map with1/4 mile radius
Attachment No. 3	Cross-Section, Structure Map,
Attachment No. 4	Summary Sheet of Casing and Cement Jobs
Attachment No. 5	Water Analysis
Attachment No.6	List of Producing Wells
Attachment No.7	Ownership Map & List of Owners, Affidavit Notification
Attachment No. 8	Fracture Gradient Review
Attachment No. 9	Cement Bond Log
Attachment No. 10	Open Hole Log
Attachment No. 11	Summary of Completion Data
Attachment No. 12	Injection Wellbore Diagram
Attachment No. 13	P&A Procedure
Attachment No. 14	MIT Procedure

SUMMARY DOCUMENT
UIC WELL APPLICATION
State 11-16-10-18
API # 43-047-34767

The following document contains information provided in support of the application for the conversion of the State 11-16-10-18 Well to a water injection well in the Green River Formation in the Uteland Butte Field, Uintah County, Utah.

The Uteland Butte field falls within the Uncompahgre portion of the Uintah and Ouray Indian reservation and is within Indian Country. Therefore, for facilities located in the Uncompahgre portion of the reservation, only EPA-issued UIC permits are necessary for compliance with SDWA UIC regulations.

(1) Pendragon Energy Partners (Pendragon) is the operator and major working interest owner of wells located in the Uteland Butte Field, Uintah County, Utah. Pengragon's business address is provided below:

Pendragon Energy Partners
621 17th Street
Denver, CO 80293
303.296.9402

(2) Enclosed as Attachment No. 1 (Area Map), is a plat of the southern portion of the Uteland Butte Field, identifying all wells located in this area. The legal location for the State 11-16-10-18 Well is 2022' FSL & 2104' FWL, SEC.16, T10, R18E.

(3) Attachment No. 2 is a plat of the well. Shown on the plat is a circle of one-quarter mile radius centered on the State 11-16 Well. The 1/4 mile radius encompasses the area of the review, within which Pendragon is required to investigate all wells for mechanical integrity. The 1/4 mile radius also identifies those lands, the owners there of, who must be provided notice of this application. There are no other wells in this 1/4 mile radius.

(4) Pendragon proposes to utilize the State 11-16 as an injection well for enhanced recovery in the Uteland Butte Field.

(5) Structure - The Uteland Butte field is near the center of the broad, gently northward-dipping south flank of the Uintah Basin. The beds dip about 200 ft./mile. There are no folds or faults in the beds at the surface.

Stratigraphy - Lower part of the Uintah Formation (Eocene)

The lower 600-800 feet of the Uintah Formation forms the surface in the Uteland Butte field.

It consists of brown, lenticular fluvial sandstones, 5 to 20 feet thick, interbedded with varicolored shales, some of which are limey. The alluvial deposits of the Uintah are intertongued with the upper beds of the Green River Formation.

Green River Formation (Eocene)

The Green River Formation is approximately 3700 feet thick in the Uteland Butte field. It consists of lacustrine shales and marginal lacustrine sandstones and limestones. These beds were deposited on the broad, level floor of Lake Uintah as the lake expanded and contracted many times across the nearly level, broad margins of the lake basin.

Some of the marker beds in the Green River Formation in the Uteland Butte field are:

Horse Bench sandstone, occurs at a depth of about 1200 feet.
Mahogany Oil Shale Bed, occurs at a depth of about 1650 feet.
H Marker, occurs at a depth of about 2650 feet.
X Marker, occurs at a depth of about 3200 feet.
Top of the Douglas Creek member and the Black Shale member occurs at a depth of about 3900 feet. It contains numerous beds of limestone, shale and some sandstone.
Top of the Uteland Butte limestone occurs at a depth of about 4500 feet and it is about 180 feet thick.
The "A Sand," into which it is proposed to inject water, occurs 40-50 feet below the top of the Uteland Butte limestone as shown on Cross Sections A-B and C-D. However, the "A sand" is replaced bu shale in well #7-19 (log on Cross Section A-B) and water will not be injected into it in that well.
The "C shoal" limestone, into which it is proposed to inject water, occurs at the base of the Uteland Butte limestone in the Uteland Butte field as shown on Cross Sections A-B.

Pendragon cut the core through the "C shoal" limestone in well #14-17 (SE/SW Sec. 17, T.10 S., R. 18 E.) as shown on Cross Section C-D. The core is 30 feet long and started at 4675ft. The description by Roger Hively is summarizes as follows:

1.4 ft. black Shale
2.1 ft. limestone, ostracodal
0.5 ft. coal, alginate
4.9 ft. sandstone, tight with calcareous
4.3 ft. shale, black
4.7 ft. standstone, tight
1.2 ft. shale, black
1.6 ft. limestone, ostracodal
0.4 ft. shale, brown with ostracodes
"C shoal" 4.1 ft. limestone, ostracodal
0.8 ft. sandstone, tight
0.5 ft. silstone

The contact between Green River Formation and the Wasatch Formation is an intertonguing of red shales and lacustrine shales and limestones. The "C shoal" limestone is the basal unit of the Green River formation in the Uteland Butte field.

Wasatch Formation (Eocene and Paleocene)
The Wasatch Formation is approximately 2400 feet thick in Uteland Butte and consists of red alluvial shales and siltstones with scattered lenticular fluvial sandstones usually 10-50 feet thick.

The Wasatch is underlain in gradational contact by the North Horn Formation which overlies the Mesaverde Group, about 3000 feet thick, and the Mancos Shale, about 5000 feet thick.

(6) Confining Zones - Cross Sections A-B and C-D show the logs of the proposed water injection wells and the oil wells southwest and northeast of them. The water will be injected into the A sand and the C shoal. These beds are in the lower part of the Green River Formation which is about 3700 feet thick in the field and consists of shales, sandstones and limestones that were deposited in lake Uintah and on its shores. These beds cover the entire modern Uintah Basin as the lake repeatedly expanded and contracted across the board, nearly flat southern flank of the basin.

The marginal lacustrine sandstones were deposited as streams meandered across the margins and flowed into the deeper part of the basin, north of Uteland Butte. Theses sands are lenticular as exemplified by the A sand. On the Cross Sections the interval can be correlated, but the sand is absent in wells #7-19 and #2-20 on Cross Section A-B. The sands are enclosed by shales which confine the oil within them. The beds beginning about 20 feet above A sand are predominantly black shale with thin interbedded tight sandstones. These impervious beds are continuous across the entire field and fall beyond. They provide confining zones for water that will be injected into the A sand.

The 110-120 foot interval between the A sand and the C shoal contains 2 to 3 porous sandstones enclosed by black shale. These sandstones do not contact the A sand or the C shoal, they are confined within the shales which also form confining zones for the A sand and the C shoal. The A sand and the C shoal stay in their respective stratigraphic positions and do not cut across bedding to contact other possibly permeable beds. Similar sedimentary environment existed in the Greater Monument Butte field north of Uteland Butte in T 8-9 S. There numerous water injection projects have shown that the injected water stays in the sandstones and does not escape because of the confining lacustrine shales.

Below the C shoal the beds are predominantly shales and siltstones of the Wasatch Formation. These impervious beds provide an excellent confining zone below the C shoal.

The shales and limestones are made up of very fine particles of clay and precipitates that formed continuous beds over very large areas on the nearly flat lake bottom and provide excellent permeability barriers, in aggregate confining zones.

(7) The injection intervals in the State 11-16 will be from 4617-4623' (A sand) and from 4743-4747' (C shoal). These two areas are the oil and gas productive zones in this well bore. The perforations are at a rate of 4 shots per foot.

Attachment No. 4 is a summary sheet for the casing and cement jobs for this well.

(8) USDW - There are no sources of underground drinking water near the State 11-16 Well. The Green River is about 5 miles southeast of the State 11-16.

Enclosed as Attachment No. 5 are standard analyses of produced water from currently producing wells in this field. The analysis of the Green River formation water from the state 1-16 is 29,530 mg/L of total dissolved solids and from the Federal 3-29 is 37,511 mg/L of the total dissolved solids. This is above the 10,000 ppm value utilized as the upper threshold for "fresh water."

Gwynn2 reports analyses of waters from five drill stem tests in the Green River Formation from well in NW/NW Sec. 14, T. 10 S., R 18 E., two miles ENE of the wells on Cross Section C-D (see index Map on Cross Section). In this well the top of Green River Formation is at 470 feet and the Mahogany Bed is at 1900 feet. The top of Wasatch is at 4865 feet.

The DSTs were at depths of 3676-3681 ft., 3681-3746 ft., 3877-3915 ft, 4045-4080 ft., and 4275-4287 ft. The Total Dissolved Solids in the waters from those tests ranged from 62,784 to 76,590 ppm. The waters contained about 50% chloride, 30% sodium and 5% sulfate. These waters are typical of waters from Green River Formation throughout the Uintah Basin, and these test intervals are about the same depth in the Uteland Butte field.

(9) A summary of completion data from the State 11-16 Well is included in Attachment No. 11.

(10) The Cement bond log is included in Attachment No. 9. The CBL log shows 80%-90% or better bond from 3600' to 4784'.

(11) The open hole log for the State 11-16 is included in Attachment No. 10

(12) The summary for the completion of the State 11-16 are included in Attachment No. 11.

(13) Initially, the source of water for injection will come from a water well to be drilled within

1 Howells, L, M.S. Longson and G.L. Hunt, 1987, U.S. Geological Survey Open File Report 87-394 and State of Utah Department of Natural Resources Plication No. 92, 59 p., 2 pls.
2Gwynn, J.W., 1995, Resistivities and Chemical Analyses of Selected Oil and Gas Field, water well and spring waters, Utah; Utah Geological Survey Circular 87, 142p.

the field. The well will be drilled to about 4000' into the Green River Formation. This part of the formation yields water that is about 10,000-80,000 ppm TDS.

Once the water flood is underway, the volume of produced water will increase in the producing wells. This increased produced water will also be used in the flood injection operations.

Once the water source well is drilled and completed, compatibility testing will be conducted between the formation water and source water.

(14) A list of wells that may use the State 11-16 Well for disposal is included in Attachment No.6.

(15) Enclosed as Attachment No. 7 is a list of all the owners, operators, and surface interest owners located within 1/4 mile radius of the State 11-16.

Also included is a signed affidavit certifying that Pendragon has notified all of the operators, and surface interest owners located within 1/4 mile radius of the State 11-16 Well.

(16) A fracture gradient review is contained in Attachment No. 8. Pendragon proposes to inject water, to enhance oil production, into subsurface beds in the Federal 5-20 Well. The water will be injected into the "A sand " (where present) and the "C shoal" limestone. The table in the discussion summarizes the depths of these beds and the "fracture gradient" as determined by Halliburton from hydraulic fracturing conducted to improve the permeability of the beds.

The average fracture gradient is 0.89 to 0.90 psi/ft. Pendragon is requesting an injection pressure of 1300 psi and an injection rate of 400 BWPD per zone.

(17) An injection wellbore diagram is contained in Attachment No. 12.

(18) The P&A procedure for this well is contained in Attachment No. 13.

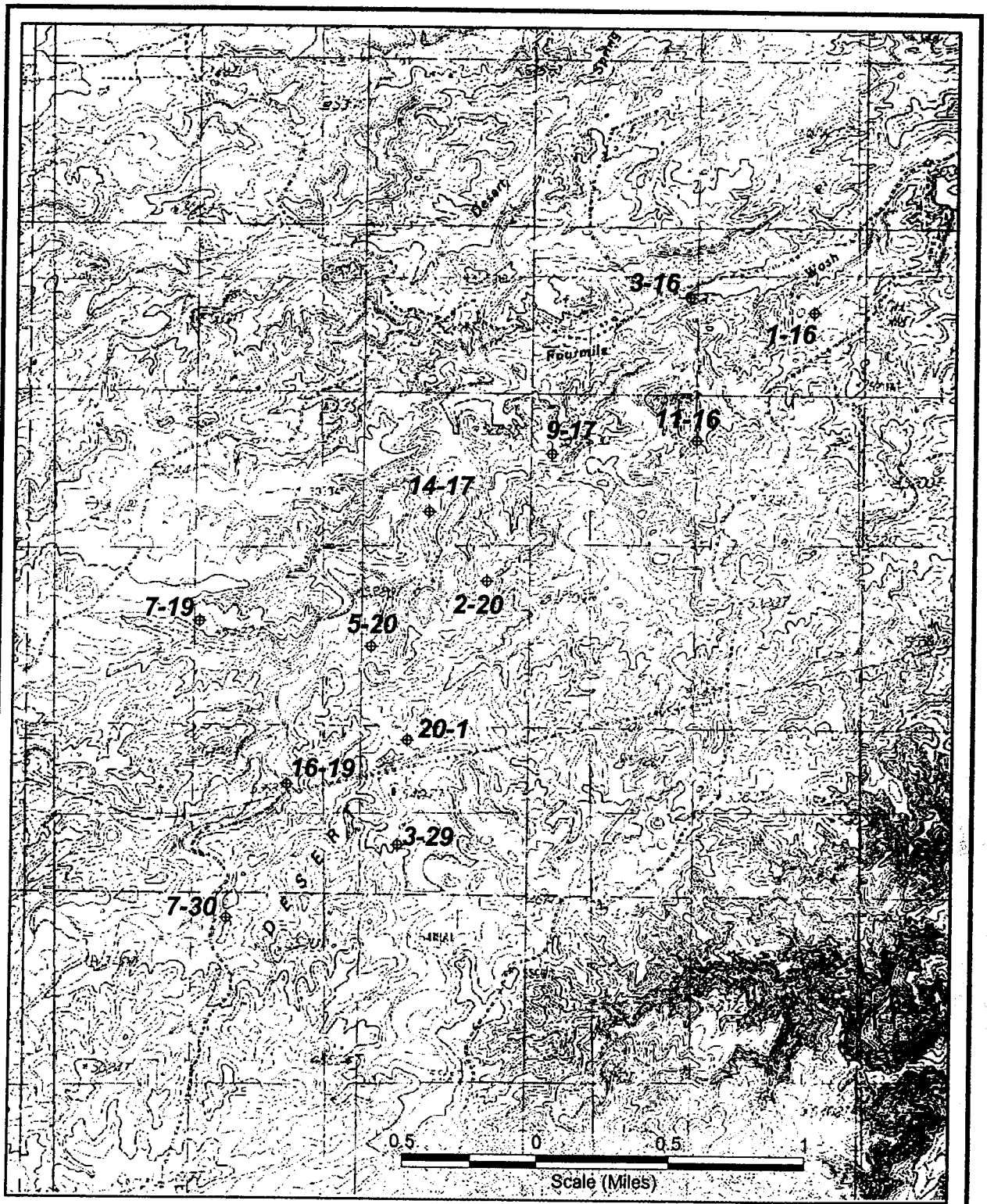
(19) Once the draft permit is issued, Pendragon will conduct an MIT test and a static bottom-hole pressure test. The conversion work will be completed and submitted on EPA Form 7520-12. A wellbore schematic will be included with this form.

(20) Pendragon will post a surety bond to demonstrate financial responsibility. The amount of the bond will be provided by the EPA once the permit is approved.

(21) Pendragon will install various gauges on the well so that the injection pressure and the tubing casing annulus pressures can be measured The well will be equipped with a flow meter with a cumulative volume recorder.

ATTACHMENT NO. 1

AREA MAP



Uteland Butte Field

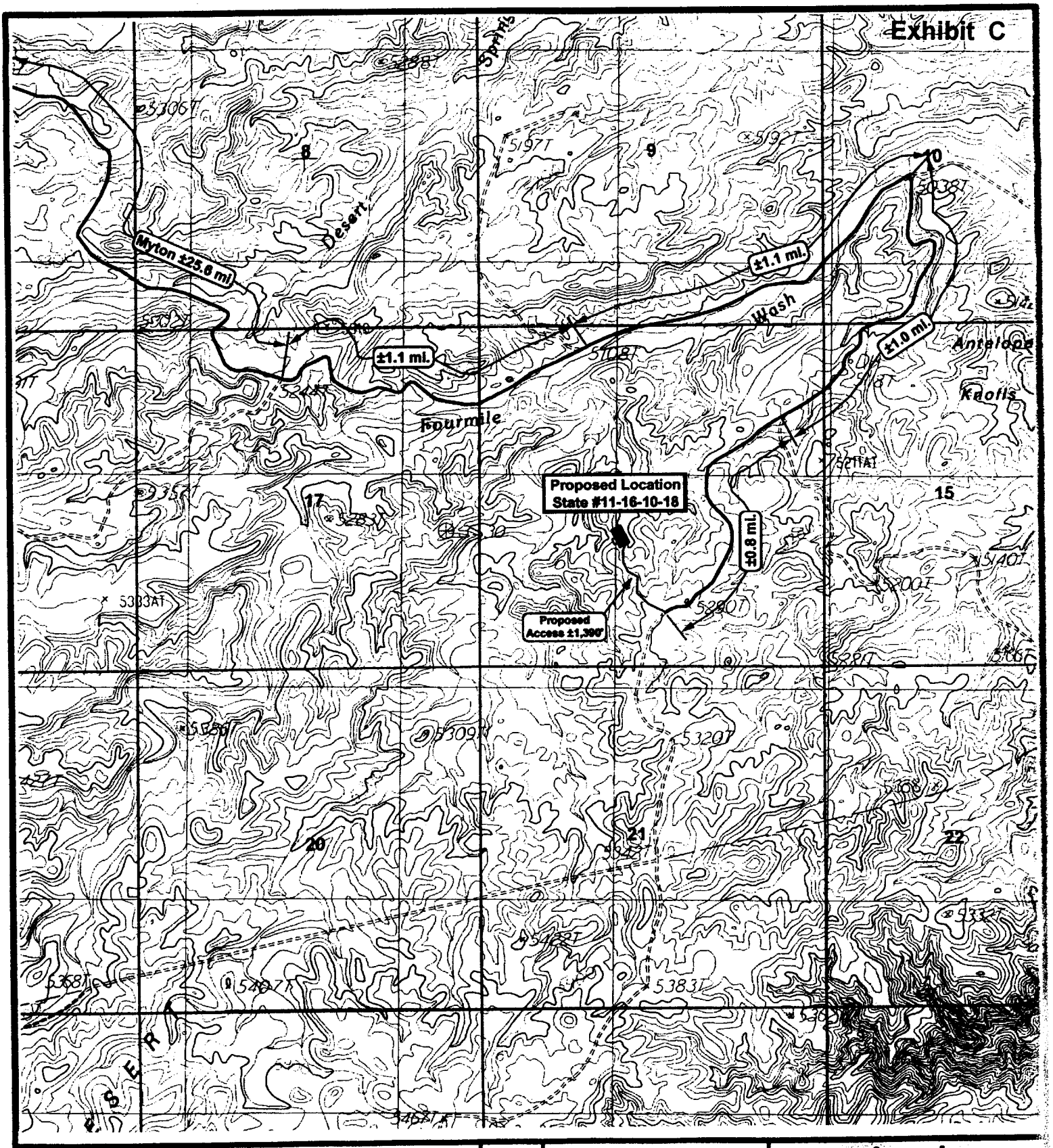
Sec. 16, 17, 19, 20, 29, 30 T10S R18E

Uintah County, Utah

ATTACHMENT NO. 2

SITE DIAGRAM

RADIUS MAP OF ADJACENT WELLS



PENDRAGON

ENERGY PARTNERS INC.

State #11-16-10-18

SEC. 16, T10S, R18E, S.L.B.&M.

N

Tri-State Land Surveying Inc.
(435) 781-2501
180 North Vernal Ave. Vernal, Utah 84078

SCALE: 1" = 2.000'
DRAWN BY: R.A.B.
DATE: 10-08-2002

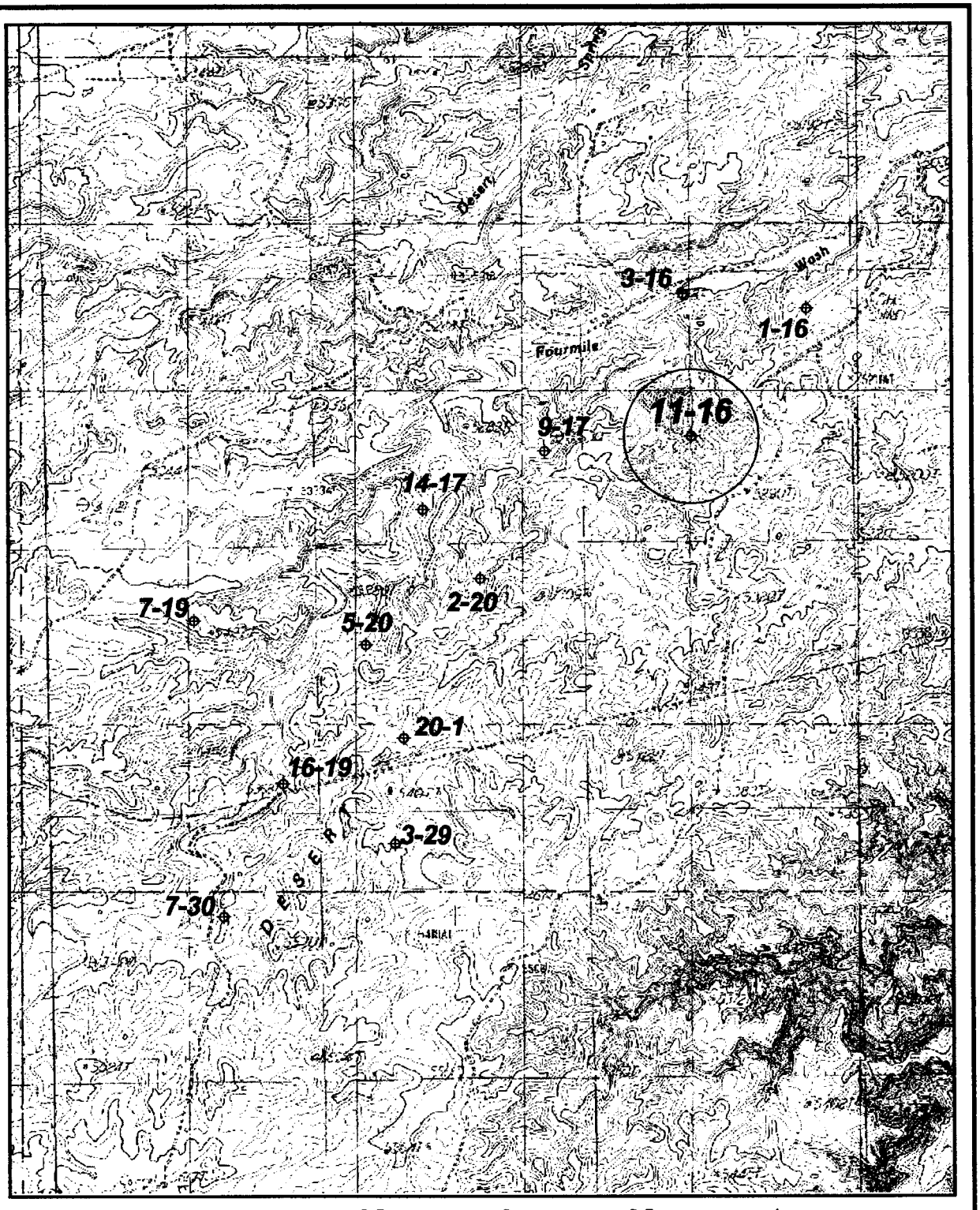
Legend

Existing Road

Proposed Access

TOPOGRAPHIC MAP

"B"



Well, with 1/4 Mile Radius Buffer

0.5 0 0.5 1

Scale (Miles)

N W E S

State 11-16-10-18 NE/SW Sec. 16 T10S R18E

ATTACHMENT NO. 3

CROSS-SECTION, STRUCTURE MAP

THE CROSS SECTION MAPS ARE THE SAME
FOR ALL FOUR WELLS

ATTACHMENT NO. 4

SUMMARY SHEET OF CASING AND CEMENT JOBS

	SURFACE CASING				PRODUCTION CASING			
WELL	SIZE	DEPTH	CEMENT AMOUNT	CEMENT TOP	SIZE	DEPTH	CEMENT AMOUNT	ESTIMATED CEMENT TOP
STATE 11-16	8 5/8, 24#	0-285'	150 CF Lite 100CF premium	SURFACE	5 ½, 15.5#	0-4808'	165 sx Type G, 370 sx Pozmix, 535 sx total	334'

)

WELL	A SAND PERFORATIONS	C SHOAL PERFORATIONS	CBL	LOGGED INTERVAL	CEMENT BOND
STATE 11-16	4617-4623'	4743-4746'	YES	100-4808'	90%-3600-3940, 80%-3940-3950, 90%-3950-4000, 80%-4000-4214, 90%-4595-4754

)

ATTACHMENT NO. 5

WATER ANALYSIS

Analytical Laboratory Report for:

Pendragon

BJ Unichem Chemical Services

UNICHEM Representative: S.L. Hoopes

Production Water Analysis

Listed below please find water analysis report from: ~~91-1~~ 1-16, WH

This is the 1-16 well. It was read upside down when it was done originally.

Lab Test No:	2003402623	Sample Date:	09/21/2003
Specific Gravity:	1.020		
TDS:	29530		
pH:	7.80		

Cations:	mg/L	as:
Calcium	320	(Ca^{++})
Magnesium	97.00	(Mg^{++})
Sodium	12443	(Na^{+})
Iron	3.60	(Fe^{++})
Manganese	0.40	(Mn^{++})
Anions:	**mg/L**	**as:**
Bicarbonate	366	(HCO_3^-)
Sulfate	0	($SO_4^=$)
Chloride	16300	(Cl^-)
Gases:		
Carbon Dioxide		(CO_2)
Hydrogen Sulfide	0	(H_2S)

Pendragon Lab Test No: 2003402623

BJ Unichem Chemical Services

DownHole SAT™ Scale Prediction @ 160 deg. F

Mineral Scale	Saturation Index	Momentary Excess (lbs/1000 bbls)
Calcite (CaCO3)	10.15	2.04
Aragonite (CaCO3)	8.29	1.99
Witherite (BaCO3)	0	-15.35
Strontianite (SrCO3)	0	-7
Magnesite (MgCO3)	5.15	-1.53
Anhydrite (CaSO4)	0	-603.49
Gypsum (CaSO4*2H2O)	0	-880.99
Barite (BaSO4)	0	-12.06
Celestite (SrSO4)	0	-216.88
Silica (SiO2)	0	-108.84
Brucite (Mg(OH)2)	.0202	-1.27
Magnesium silicate	0	-157.43
Siderite (FeCO3)	239.89	1.92
Halite (NaCl)	.00266	-204136
Thenardite (Na2SO4)	0	-64972
Iron sulfide (FeS)	0	-.00927

Interpretation of DHSat Results:

The Saturation Index is calculated for each mineral species independently and is a measure of the degree of supersaturation (driving force for precipitation) under the conditions modeled. This value ranges from 0 to infinity with 1.0 representing a condition of equilibrium where scale will neither dissolve nor precipitate. Values less than 1.0 are undersaturated and values greater than 1.0 are supersaturated. The scale is logarithmic, i.e. a Saturation Index of 3 is 10 times more saturated than a value of 2.

The Momentary excess is a measure of how much scale would have to precipitate to bring the system back to a non-scaling condition. This value ranges from negative (dissolving) infinity to positive (precipitating) infinity. The Momentary Excess represents the amount of scale possible while the Saturation Level represents the probability that scale will form.

Analytical Laboratory Report for:

Pendragon

BJ Unichem Chemical Services

UNICHEM Representative: S.L. Hoopes

Production Water Analysis

Listed below please find water analysis report from: 3-29, WH

Lab Test No: 2003402822 Sample Date: 09/21/2003

Specific Gravity: 1.025

TDS: 37511

pH: 6.30

Cations:	mg/L	as:
Calcium	480	(Ca^{++})
Magnesium	146	(Mg^{++})
Sodium	13961	(Na^{+})
Iron	1.40	(Fe^{++})
Manganese	0.20	(Mn^{++})
Anions:	**mg/L**	**as:**
Bicarbonate	122	(HCO_3^{-})
Sulfate	100	($SO_4^{=}$)
Chloride	22700	(Cl^{-})
Gases:		
Carbon Dioxide		(CO_2)
Hydrogen Sulfide	0	(H_2S)

OCT-01-2003 10:02AM FROM-BJ UNICHEM RSVLI 01 435 722 5727 T-449 P.004/005 F-081

Pendragon

Lab Test No: 2003402622

BJ Unichem Chemical Services

DownHole SAT™ Scale Prediction @ 160 deg. F

Mineral Scale	Saturation Index	Momentary Excess (lbs/1000 bbls)
Calcite ($CaCO_3$)	.19	-.124
Aragonite ($CaCO_3$)	.155	-.158
Witherite ($BaCO_3$)	0	-18.26
Strontianite ($SrCO_3$)	0	-8.9
Magnesite ($MgCO_3$)	.0986	-.223
Anhydrite ($CaSO_4$)	.0285	-538.83
Gypsum ($CaSO_4 \cdot 2H_2O$)	.0179	-811.03
Barite ($BaSO_4$)	0	-2.8
Celestite ($SrSO_4$)	0	-208.25
Silica (SiO_2)	0	-107.73
Brucite ($Mg(OH)_2$)	< 0.001	-1.2
Magnesium silicate	0	-158.87
Siderite ($FeCO_3$)	1.44	.0101
Halite (NaCl)	.0034	-203609
Thenardite (Na_2SO_4)	< 0.001	-66816
Iron sulfide (FeS)	0	-.398

Interpretation of DHSat Results:

The Saturation Index is calculated for each mineral species independently and is a measure of the degree of supersaturation (driving force for precipitation) under the conditions modeled. This value ranges from 0 to infinity with 1.0 representing a condition of equilibrium where scale will neither dissolve nor precipitate. Values less than 1.0 are undersaturated and values greater than 1.0 are supersaturated. The scale is logarithmic, i.e, a Saturation Index of 3 is 10 times more saturated than a value of 2.

The Momentary excess is a measure of how much scale would have to precipitate to bring the system back to a non-scaling condition. This value ranges from negative (dissolving) infinity to positive (precipitating) infinity. The Momentary Excess represents the amount of scale possible while the Saturation Level represents the probability that scale will form.

ATTACHMENT NO. 6

LIST OF PRODUCING WELLS

PROPOSED DESERT SPRING UNIT
List of Existing Wells (All are oil wells with associated gas)
All in Uintah County, Utah

Well Name	Qtr/Qtr	Section	T&R
Pendragon State 1-16-10-18	NE/NE	16	10S-18E
Pendragon State 3-16-10-18	NE/NW	16	10S-18E
Pendragon State 11-16-10-18	NE/SW	16	10S-18E
Pendragon Federal 9-17-10-18	NE/SE	17	10S-18E
Pendragon Federal 14-17-10-18	SE/SW	17	10S-18E
Pendragon Federal 7-19-10-18	SW/NE	19	10S-18E
Pendragon Federal 16-19-10-18	SE/SE	19	10S-18E
Pendragon Federal 2-20-10-18	NW/NE	20	10S-18E
Pendragon Federal 5-20-10-18	SW/NW	20	10S-18E
Pendragon Federal 20-1	NE/SW	20	10S-18E
Pendragon Federal 3-29-10-18	NE/NW	29	10S-18E
Pendragon Federal 7-30-10-18	SW/NE	30	10S-18E

ATTACHMENT NO. 7

OWNERSHIP MAP &
LIST OF OWNERS,
AFFIDAVIT NOTIFICATION

AFFIDAVIT OF MAILING

I, Martin W. Buys, President, Buys & Associates, Inc., being first duly sworn, depose and state as follows; On December 15, 2003, I caused to be mailed by certified mail, postage prepaid, return receipt requested, a copy of the Application to convert the Federal 11-16-10-18 well to water injection for enhanced recovery. It was sent to all parties who have an interest within 1/4 mile from this well. The attached list contains the names of all parties who were notified.

Dated this 15th day of December, 2003

Martin W. Buys
President
Buys & Associates, Inc.

The forgoing affidavit was subscribed and sworn to before me by Martin W. Buys.
This 15 day of December, 2003

Carolyn S. Vickles
_____, Notary Public

My Commission expires: 30 day of October, 2006

CAROLYN S. VICKLES
NOTARY
PUBLIC
STATE OF COLORADO

December 6, 2003

CERTIFIED MAIL NO.

Mineral, Surface and Working Interest Owners

RE: Notification of Water Injection
Federal 11-16-10-18
2022'FSL, 2104' FWL, Section 16, T10S, R18E
Uintah County, Utah

To Whom it May Concern;

On December 6, 2003, Pendragon Energy Partners submitted to the Environmental Protection Agency an application requesting approval to convert the above mentioned well to a water injection well in an enhanced recovery program.

Anyone who would be directly and adversely affected by the authorization of the underground disposal into the Green River (4589'-4724') may file a written request for a public hearing before the EPA. Logs and additional information on the subject well are on file with the EPA, Groundwater Program, Mail Code 8P-W-GW, 999 18th Street, Suite 500, Denver, Colorado 80202-2466.

Please contact Marty Buys at 303.781.8211 if you have any questions.

Sincerely,

Martin W. Buys
Agent for Pendragon Energy Partners

Enclosure

DIVISION OF INTERESTS
Pendragon 5-20-10-18 Well
Section 20-T10S-R18E
Uintah County, Utah
REVISED
As of 10/1/03
SHOWING QUESTAR JOINDER

OWNER	W.I.BPO	N.R.I.BPO	W.I. APO	N.R.I. APO	TYPE
Pendragon Energy Partners, Inc. 621 17th Street, Suite 750 Denver, Co. 80293 84-1419088	.05000	.04250	0.05000	0.04250	W.I.
Questar Exploration & Production Company 1050 17th Street #500 Denver, Co. 80265 84-1310390 (Billing address)	0.21875	0.1815625	0.21875	0.1815625	W.I.
III Exploration Company P.O. Box 7608 Boise, Idaho 83707	0.28125	0.2334375	0.28125	0.2334375	W.I.
Patriot Exploration Co., Inc. 45 Rockefeller Plaza, Suite 2090 New York, New York 10111	0.36750	0 .312375	0.36750	0.312375	W.I.
Robert Bomar 2821 W. Shandon Midland, Texas 79705 457-78-8837	0.0125	0.010625	0.01250	0.010625	W.I.
Joseph Deitch 12 Claridge Drive Weston Mass. 02493 027-38-6672	0.028125	0.02390625	0.028125	0.02390625	W.I.
O. Alan & Molly W. Jared 58009 Morton Marathon, Florida 33050 417-54-2570	0.006875	0.00584375	0.006875	0.00584375	W.I.
Steven Rooney & Gail Queeney 930 Emerald Row Gulfstream, Florida 33483 173-46-5715	0.02125	0.0180625	0.02125	0.0180625	W.I.
Peter T. Wheeler 111 Rolling Lane Weston, Mass. 02193 – 2474 014-36-3557	0.01375	0.0116875	0.01375	0.0116875	W.I.
Minerals Management Service		0.125		0.125	ROY

Royalty Management Program P.O. Box 5810 T.A. Denver, Colorado 80217			
Patina Oil & Gas Corporation 1625 Broadway, Suite 2000 Denver, Co. 80202 75-2629477	0.025	0.025	ORRI
Roger Hively 6745 W. 3rd Place Lakewood, Co. 80226 275-52-5969	0.005	0.005	ORRI
Patricia McDonald Chandler P.O. Box 5005 Rancho Mirage, Calif. 92270 519-34-4711	0.005	0.005	ORRI

ATTACHMENT NO. 8

FRACTURE GRADIENT REVIEW

FRACTURE GRADIENT

Pendragon proposes to inject water, to enhance oil production, into subsurface beds in the following four wells in the Uteland Butte field, T10S, R18E:

1. #5-20
2. #11-16
3. #9-17
4. #7-19

The water will be injected into the "A sand" (where present) and the "C shoal" limestone. The following table summarizes the depths of these beds and the "fracture gradient" as determined by Halliburton from hydraulic fracturing conducted to improve the permeability of the beds.

Well	**"A sand"** Depth Perforated	Fracture Gradient psi/ft	**"C shoal"** Depth Perforated	Fracture Gradient psi/ft
1. #5-20	4588-4596	0.90	4718-4724	0.90
2. #11-16	4617-4623	0.89	4743-4747	0.89
3. #9-17	4670-4677	0.64	4800-4803	sanded out
4. #7-19	not present		4788-4792	sanded out

The "A sand" and the "C shoal" were hydraulically fractured in four wells, in the Uteland Butte field, into which water will not be injected. The fracture gradient as determined by Halliburton from those procedures are given in the table below.

5. #7-30	not present		4623-4628	0.91
6. #2-20	not present		4779-4782	0.88
7. #3-16	not present		4800-4808	sanded out
8. #14-17	4564-4575	0.91	4694-4698	0.84

Assuming a frac gradient of 0.90 psi/ft and depths of 4588 ft. to 4803 ft. for the points of injection, pressures of 4129 psi to 4323 psi would fracture the A sand and the C shoal in the four injection wells. Water columns to those depths will place pressures of 1973 psi to 2065 psi on the injection formations. Injection pressures up to 1956 psi into the A sand and 2058 psi into the C shoal will place pressures on the injected beds of 200 psi less than the pressure that would fracture the beds.

ATTACHMENT NO. 9

CEMENT BOND LOG

CEMENT BOND LOGS CAN BE FOUND AT

PENDRAGON ENERGY PARTNERS
621 17TH STREET, SUITE 750
DENVER, CO. 80202

AND

U.S. ENVIRONMENTAL PROTECTION AGENCY
999 18TH STREET, SUITE 500
DENVER, CO. 80202

ATTACHMENT NO. 10

OPEN HOLE LOG

OPEN HOLE LOGS CAN BE FOUND AT

PENDRAGON ENERGY PARTNERS
621 17TH STREET, SUITE 750
DENVER, CO. 80202

AND

U.S. ENVIRONMENTAL PROTECTION AGENCY
999 18TH STREET, SUITE 500
DENVER, CO. 80202

ATTACHMENT NO. 11

COMPLETION DATA

Pendragon Energy Partners Daily Completion/Workover Report

Well: State 11-16 **Date: 2/20/03 Activ.**

Section: 16	Township: 10	Range: 18	County: Uintah	State: Utah

TD:4899	PBTD:4839	KB:5221	GL:	Casing Size: 5.5	Wt Range - #/Ft. 17#

TOC: 200ft	Perfs/Open Hole: 4617-23 & 4743-47 @ 4spf	Depth:

Present Operation:

Transferred rem. KCL wtr. To #2-20. Released frac tank. Made 63 bbls total fluid 1st 14 hrs. pumping. Add 30 bbls tbg volume for 93 bbls @ 14 hrs. Cut percentages not yet known, tank heaters running on propane until gas volume builds.

Operations Supervisor: Lueck

Pendragon Energy Partners Daily Completion/Workover Report

Well: State 11-16 **Date: 2/19/03 Activ.**

Section: 16	Township: 10	Range: 18	County: Uintah	State: Utah

TD:4899	PBTD:4839	KB:5221	GL:	Casing Size: 5.5	Wt Range - #/Ft. 17#

TOC: 200ft	Perfs/Open Hole: 4617-23 & 4743-47 @ 4spf	Depth:

Present Operation:

Rig down Key Energy Completion Unit and move off location.

Operations Supervisor: Lueck

Pendragon Energy Partners Daily Completion/Workover Report

Well: State 11-16 **Date: 2/18/03 Activ.**

Section: 16	Township: 10	Range: 18	County: Uintah	State: Utah	
TD:4899	PBTD:4839	KB:5221	GL:	Casing Size: 5.5	Wt Range - #/Ft. 17#
TOC: 200ft	Perfs/Open Hole: 4617-23 & 4743-47 @ 4spf			Depth:	

Present Operation:

Tbg press 20 psi, csg press 75 psi. Blew down & ND BOPs and 5000 psi tubing head. NU 2000 psi permanent tubing head. Set tbg anchor @ 4520' with 15000# tension. SN @ 4740'. Bottom of tbg with notched collar @ 4773'. PU RHAC 2-1/2" x 1-1/2" top hold down pump, PU & ran 187 3/4"x25', 1 3/4"x8', 16 3/4"x6', 1 3/4"x2' rods & pups & 1-1/2" x 22' polished rod. Sroked pump with pulling unit - had good pump action. Hung string on horsehead. RD pulling unit, will move in AM. Hot oiled work tank & moved oil to stock tank. Rec'd 120 BO. Note: Rig broke dowm during move-out on 2/19, parked at 3-16 loc. for repairs.

Operations Supervisor: Lueck

Pendragon Energy Partners Daily Completion/Workover Report

Well: State 11-16 **Date: 2/17/03 Activ.**

Section: 16	Township: 10	Range: 18	County: Uintah	State: Utah	
TD:4899	PBTD:4839	KB:5221	GL:	Casing Size: 5.5	Wt Range - #/Ft. 17#
TOC: 200ft	Perfs/Open Hole: 4617-23 & 4743-47 @ 4spf			Depth:	

Present Operation:

Tbg. Press. 0, csg. Press. 155#. FL @ 2100'. 700' oil on top. From 8:00am to 11:00am swbd 91 bbls. Oil cut @ 11:00 est. 25%. FL @ 11:00am 3200'. From 11:00am to 2:30pm swbd 60 bbls, oil cut @ 2:30 est >30%. FL stayed @ 3200' until 2:00pm then backside blew around & FL dropped to 3800' & stayed there for last 3 swb. runs. RIH & tagged PBTD @ 4839' - no fill. Layed down 2 jts tbg. SION. Prep to POP on 2/18. Remaining load to recover 362.5bbls.

Operations Supervisor: Lueck

Pendragon Energy Partners Daily Completion/Workover Report

Well: State 11-16 Date: 2/15/02 Activ.

Section: 16	Township: 10	Range: 18	County: Uintah	State: Utah

TD:4899	PBTD:4839	KB:5221	GL:	Casing Size: 5.5	Wt Range - #/Ft. 17#

TOC: 200ft	Perfs/Open Hole: 4617-23 & 4743-47 4 SPF	Depth:

Present Operation:

At 7:00am tubing dead, casing on slight vac. RU to swab. Fluid level @ 800 ft. Swbd +/- 30 BBLS and started making oil cut. At 10:00 am FL @ 2700', making est. 10% oil cut. Oil cut decr. To est. 5% by 11:00 am and stayed in that range through 1:00 pm. FL @ 1:00 pm 2900' (swbg from 4700'). At 1:00 had swbd 100 BBLS. At 2:00 pm oil cut incr. to est. 15%, FL now 3200'. From 2:00 to 3:30 pm FL stayed at 3200' and oil cut stayed at est. 15%. Rec'd 47.5 BBLS for total today of 147.5 BBLS rec'd. 512.5 BBLS left to rec. SD for WK End.

Operations Supervisor: Lueck

Pendragon Energy Partners Daily Completion/Workover Report

Well: State 11-16 Date: 2/14/02 Activ.

Section: 16	Township: 10	Range: 18	County: Uintah	State: Utah	
TD:4899	PBTD:4839	KB:5221	GL:	Casing Size: 5.5	Wt Range - #/Ft. 17#
TOC: 200ft	Perfs/Open Hole: 4617-23, 4743-47 @ 4 spf			Depth:	

Present Operation:

Csg. Press. 400 psi. Bled off in 1 min. no fluid recovery. Stripped in hole w/ 4 3/4" bit and tubing. Tagged sand @ 4645'. RU power swivel & pump. Cleaned out sand to top of plug @ 4702' (57' sand = +/- 800 #). First 5 BBL fluid was heavy unbroken gel. Had one small show oil while circ. sand. Drilled on plug for 15 min. Plug fell to 4800'. Drld. rem. of plug & c/o sand (40' = +/- 570#) to 4839' PBTD. Circ. hole clean. No other shows, hole did not take fluid. COOH w/tubing & bit. RIH w/tubing & BH assembly as follows: KB 12' , 145 jts 2 7/8" 6.5# J-55 tbg.(4557.88'), 2 7/8"x5 1/2" tbg anchor (2.77'), 7 jts 2 7/8"tbg. (217.42'), seating nipple (1.10') 1 jt tbg. (31.12'), notched collar (0.45'). Bottom of assembly = 4772.74'. SDON. Prep. to swab on 2/15.

Operations Supervisor: Lueck

Pendragon Energy Partners Daily Completion/Workover Report

Well: State 11-16					Date: 2/13/02 Activ.	
Section: 16		Township: 10		Range: 18	County: Uintah	State: Utah
TD:4899	PBTD:4839	KB:5221	GL:	Casing Size: 5.5	Wt Range - #/Ft. 17#	
TOC: 200ft	Perfs/Open Hole:				Depth:	

Present Operation:

RU HOWCO Stimulation Services. Attempted to pressure test csg., tbg.,and BOP. Tubinghead had slight leak @ 3000 psi. Tightened head. Retested & held 4600 psi for 5 min. Released press. RU HOWCO Wireline, RIH & perf'd C Shoal @ 4743-4747 w/4 spf using 4" csg. gun. HU HOWCO Stimulation & frac'd C Shoal. Fm. broke @ 3570 psi. Estab. rate of 19.5 BPM @ 3450 psi. Frac's per HOWCO procedure. Avg. press. 2400 psi @ 19.5 BPM. ISIP 1991, 15 min 1964. Total load 336 BBL RU HOWCO Wireline & set frac plug @ 4702. Perf'd A Sand @ 4617-4623. RU HOWCO Stimulation & frac'd A Sand. Broke @ 2570 psi. Estab. rate of 19.7 BPM @ 3100 psi. Pumped per HOWCO procedure. When 4 PPG sand load hit perfs, pressure spiked to 4700 psi. Shut down, press. dropped to 1200 psi. Resumed pumping and formation began taking fluid and sand. Gradually incr. rate to 15.9 BPM & finished job. Avg. press. 1600 psi. ISIP 2110, 5 min 1813, 10 min 1670, 15 min 1607. Total load 334 BBL. Total to recover 670 BBL frac load plus csg. vol. of 110 BBL 2% KCL wtr. = 780 BBLS. RD HOWCO & started flowback @ 2:00 pm. Had 1550 psi csg press. at start. Flowed @ est rate of 3/4 BPM. Rec'd 120 BBLS by 4:20 pm at which time well died (gel not fully broken). SDON.

Operations Supervisor: Lueck

Pendragon Energy Partners Daily Completion/Workover Report

Well: State 11-16 Date: 2/12/02 Activ.

Section: 16	Township: 10	Range: 18	County: Uintah	State: Utah	
TD:4899	PBTD:4839	KB:5221	GL:	Casing Size: 5.5	Wt Range - #/Ft. 17#
TOC: 200ft	Perfs/Open Hole:			Depth:	

Present Operation:

POOH with tubing, bit & Scraper. Removed rig floor & nippled up flow-back assembly. SION. Plan to perf & frac 7:00 am 2/13/03.

Operations Supervisor: Lueck

Pendragon Energy Partners Daily Completion/Workover Report

Well: State 11-16 Date: 2/11/03

Section: 16	Township: 10	Range: 18	County: Uintah	State: Utah

TD:	PBTD:	KB:	GL:	Casing Size:	Wt Range - #/Ft.

TOC:	Perfs/Open Hole:	Depth:

Present Operation:

Details: Trucked tubing to location. Rigged up completion unit. Installed 5000 psi tubing head. Nippled up 5000 psi BOP. Picked up 4 3/4" bit and casing scraper. Picked up and went in hole with tubing, bit and scraper. Ran 155 jts of 6.5 # J-55 tubing and circulated to PBTD at 4839.34 Tested BOP and casing to 3800 psi.

Operations Supervisor:

Pendragon Energy Partners Daily Completion/Workover Report

Well: State 11-16 Date: 2/10/03

Section: 16	Township: 10	Range: 18	County: Uintah	State: Utah

TD:	PBTD:	KB:	GL:	Casing Size:	Wt Range - #/Ft.

TOC:	Perfs/Open Hole:	Depth:

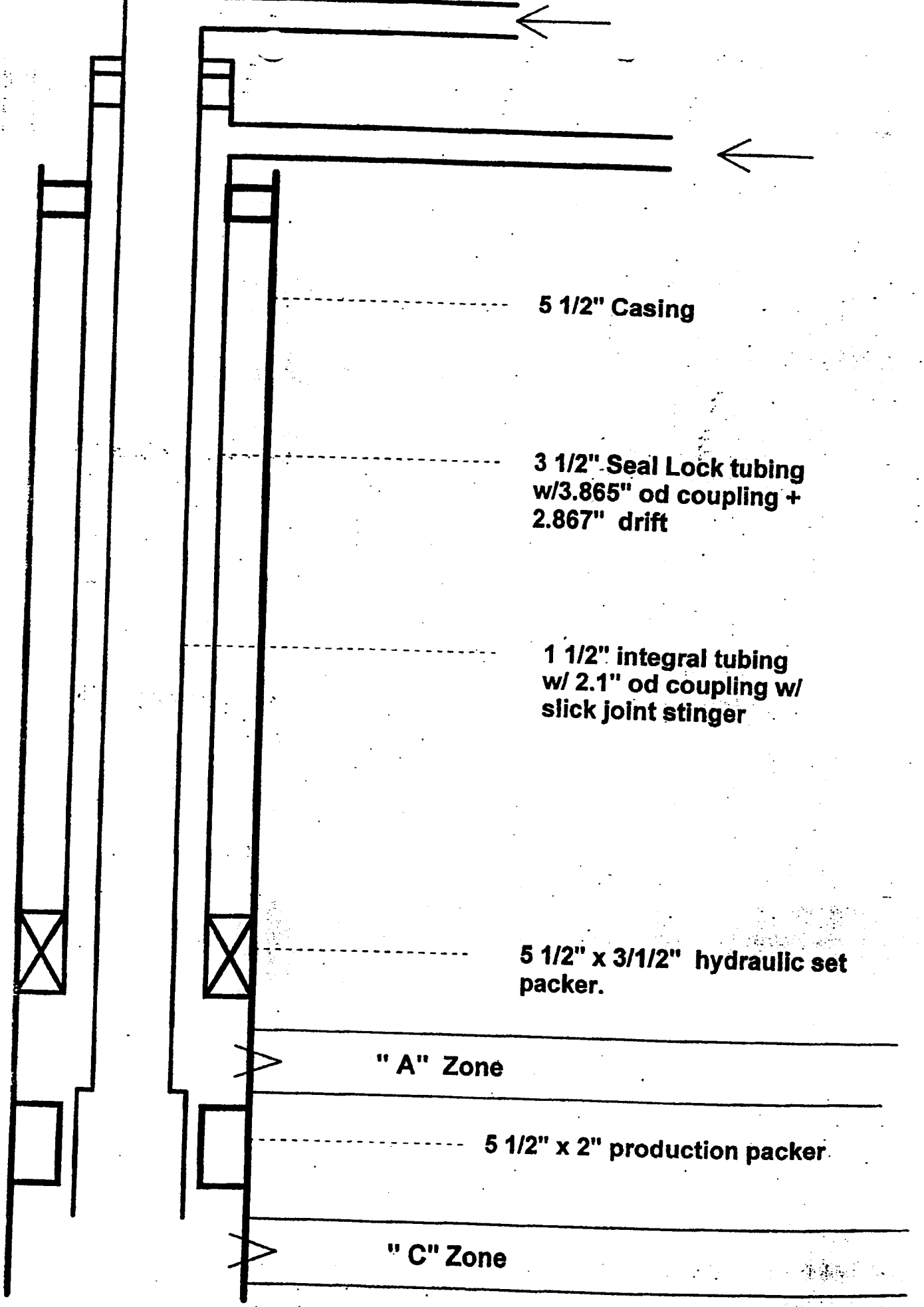
Present Operation:

Details: Moved in and spotted Key Energy Service completion rig. Shut in overnight.

Operations Supervisor:

ATTACHMENT NO. 12

INJECTION WELLBORE DIAGRAM


5 1/2" Casing
3 1/2" Seal Lock tubing w/3.865" od coupling + 2.867" drift
1 1/2" integral tubing w/ 2.1" od coupling w/ slick joint stinger
5 1/2" x 3/1/2" hydraulic set packer.
" A" Zone
5 1/2" x 2" production packer
" C" Zone

ATTACHMENT # 13

P&A PROCEDURE

P & A PROCEDURE

PENDRAGON ENERGY PARTNERS
STATE 11-16-10-18
2022' FSL & 2104' FWL
SECTION 16, T10S - R18E
UINTAH COUNTY, UTAH
TD - 4,784'

Surface Casing:	8 5/8", 24#, 0-315'
Casing :	51/2", 15.5# 0' - 250'
Perforations:	4617-4623' A Sand 4743-4746' C Shoal

PLUG AND ABANDONMENT PROCEDURE

1. Obtain authorization from regulatory agencies for P&A procedures.

2. Rig up pulling unit. Install BOP. Release packers. Trip out of hole with both strings of tubing.

3. Trip in hole with 2-7/8" tubing and set at 4550'. Establish pump rate, pump and squeeze with 30 sxs Class G cement at 15.8#/gal. This will come to 100' above the top perforations.

4. Raise the tubing to 2000' and pump 12 sx of Class G cement.

5. Set a retainer 20' below surface casing shoe and perforate 10 feet below that shoe. Squeeze 12 sx of Class G cement into the perforations and bring cement back to the surface.

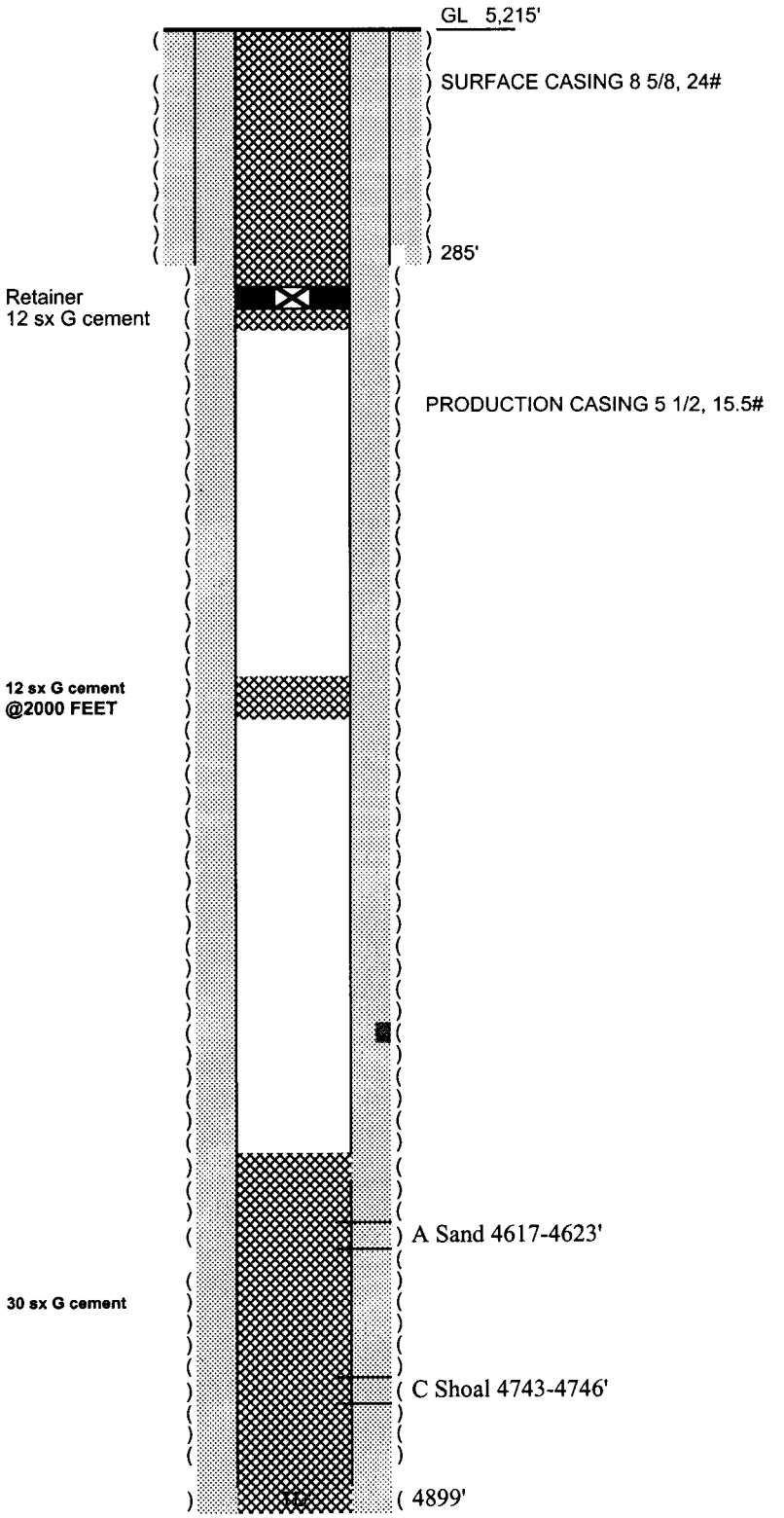
6. Cut off wellhead and install plate and identification P&A post marker. Weld to casing.

7. File reports with the agencies and reclaim surface location.

WELLBORE DIAGRAM

Company: PENDRAGON
Well name: State 11-16-10-18
Lease Number: ML 45175
Location: SESW, Sec.16 T10S
County: Uintah
Date: 12/6/2003

P&A DIAGRAM



ATTACHMENT # 14

MIT PROCEDURE

MECHANICAL INTEGRITY TEST PROCEDURE

The proposed concentric tubing arrangement for water injection is, for the purpose of mechanical integrity testing, identical to a single-zone injector. The Baker Model R packer (or equivalent) set just above the A-Sand provides the isolation of the tubing-casing annulus. Below that packer, there is no isolation required, just as there would not be if the two sets of perforations were being injected into with no separation between them. Integrity of the 3-1/2 inch tubing and casing integrity above the upper packer are the two parameters of importance, and the integrity of the 1-1/2 inch tubing, while of importance to the operator, has no bearing on these parameters.

Integrity testing can be accomplished by pressuring up the annulus between the casing and the 3-1/2 inch tubing. The pressure and duration of test will be as required by the EPA.

Should repair of the 3-1/2 inch tubing be necessary, it can readily be pulled simply be first pulling the 1-1/2 inch tubing and then stinging out of the upper packer with the 3-1/2 inch tubing and coming out just as if it were the only tubing string in the hole.

Should a casing repair be necessary, once the 3-1/2 inch tubing is out of the hole, repairs such as cement squeezing can be accomplished normally after setting a plug in the upper packer and protecting it with 2-3 sacks of sand. The casing can then be re-tested prior to circulating the hole clean and re-running the tubing and/or after it is run, as directed by the EPA.

Test Procedure Details:

1) MIRU Service Unit.

2) Bleed off pressure, if any, on 1-1/2 inch tubing and 3-1/2 inch tubing.

3) ND wellhead & NU BOP.

4) Pressure up casing – 3-1/2 inch tubing annulus to 1500 psi for 15 minutes (or per EPA instructions).

5) If pressure holds, ND BOP & NU wellhead. Resume injection.

6) If pressure does not hold, bleed off pressure & sting out and POOH with 1-1/2 inch tubing.

7) Set standing valve in bottom of 3-1/2 inch tubing.

8) Pressure up 3-1/2 inch tubing to 1500 psi for 15 minutes (or per EPA instructions).

9) If tubing pressure does not hold, retrieve plug and round trip 3-1/2 inch tubing hydrotesting to 4000 psi on each stand.

10) Re-run 1-1/2 inch tubing and return well to injection.

009

FORM 9

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

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.

5. LEASE DESIGNATION AND SERIAL NUMBER: M L 45175
6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
7. UNIT or CA AGREEMENT NAME: UTELAND BUTTE (LGR) UNIT
8. WELL NAME and NUMBER: STATE 11-16-10-18
9. API NUMBER: 43-047-34767
10. FIELD AND POOL, OR WILDCAT: UTELAND BUTTE

1. TYPE OF WELL: OIL WELL ☐ GAS WELL ☐ OTHER _____

2. NAME OF OPERATOR: PENDRAGON ENERGY PARTNERS, INC.

3. ADDRESS OF OPERATOR: 621 17TH STREET, #750 CITY DENVER STATE CO ZIP 80293 PHONE NUMBER: (303) 296-9402

4. LOCATION OF WELL
FOOTAGES AT SURFACE: SEE ATTACHED SURVEY COUNTY: UINTAH
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: 16 10S 18E NESW S STATE: UTAH

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

TYPE OF SUBMISSION	TYPE OF ACTION		
☑ NOTICE OF INTENT (Submit in Duplicate)	☐ ACIDIZE	☐ DEEPEN	☐ REPERFORATE CURRENT FORMATION
Approximate date work will start:	☐ ALTER CASING	☐ FRACTURE TREAT	☐ SIDETRACK TO REPAIR WELL
10/1/2004	☐ CASING REPAIR	☑ NEW CONSTRUCTION	☐ TEMPORARILY ABANDON
	☐ CHANGE TO PREVIOUS PLANS	☐ OPERATOR CHANGE	☐ TUBING REPAIR
	☐ CHANGE TUBING	☐ PLUG AND ABANDON	☐ VENT OR FLARE
☐ SUBSEQUENT REPORT (Submit Original Form Only)	☐ CHANGE WELL NAME	☐ PLUG BACK	☐ WATER DISPOSAL
Date of work completion:	☐ CHANGE WELL STATUS	☐ PRODUCTION (START/RESUME)	☐ WATER SHUT-OFF
	☐ COMMINGLE PRODUCING FORMATIONS	☐ RECLAMATION OF WELL SITE	☐ OTHER: _____
	☐ CONVERT WELL TYPE	☐ RECOMPLETE - DIFFERENT FORMATION	

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

LAY BURIED 2" WRAPPED STEEL WATER INJECTION LINE FROM THE WEST EDGE OF LEASE NO. ML 45175 EASTWARD TO THE PENDRAGON STATE #11-16-10-18 WELL. THIS WILL REQUIRE NEW SURFACE DISTURBANCE. AN ARCHAEOLOGICAL STUDY IS ATTACHED. THE ROUTE IS STAKED AND MARKED IN THE FIELD.

RECEIVED
SEP 02 2004
DIV. OF OIL, GAS & MINING

NAME (PLEASE PRINT) ALAN B. NICOL TITLE PRESIDENT

SIGNATURE _____ DATE 8/25/2004

(This space for State use only)

COPY SENT TO OPERATOR
Date: 9-2-04
Initials: CHD

Accepted by the Utah Division of Oil, Gas and Mining
Date: 9/3/04
By: _____
*Approval should be attained from appropriate land management agency

(5/2000) (See Instructions on Reverse Side)

CULTURAL RESOURCE INVENTORY OF PENDRAGON ENERGY PARTNERS PROPOSED PIPELINE CORRIDOR FOR STATE #11-16-10-18 WELL LOCATION, UINTAH COUNTY, UTAH

By

Mark C. Bond

CULTURAL RESOURCE INVENTORY OF PENDRAGON ENERGY PARTNERS PROPOSED PIPELINE CORRIDOR FOR STATE #11-16-10-18 WELL LOCATION, UINTAH COUNTY, UTAH

By:

Mark C. Bond

Prepared For:

Bureau of Land Management
Vernal Field Office
and
State of Utah
School and Institutional
Trust Lands Administration

Prepared Under Contract With:

Pendragon Energy Partners, Inc.
621 17th Street, Suite 750
Wells Fargo Building
Denver, CO 80293

Prepared By:

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

August 11, 2004

MOAC Report No. 04-199

United States Department of Interior (FLPMA)
Permit No. 04-UT-60122

State of Utah Antiquities Project (Survey)
Permit No. U-04-MQ-0767b,s

INTRODUCTION

In August 2004, a cultural resource inventory was conducted by Montgomery Archaeological Consultants (MOAC) for Pendragon Energy Partner's proposed pipeline for the State #11-16-10-18 well location. The project area is situated south of Roosevelt, Uintah County, Utah. The survey was implemented at the request of Mr. Stacy Stewart, Tri-State Land Surveying, Inc, Vernal, Utah. The project area occurs on land administered by the Bureau of Land Management (Vernal Field Office) and State of Utah School and Institutional Trust Lands Administration (SITLA) land.

The objective of the inventory was to locate, document and evaluate any cultural resources within the project area in accord with Section 106 of 36 CFR 800, the National Historic Preservation Act of 1966 (as amended). Also, the inventory was implemented to attain compliance with a number of federal and state mandates, including the National Environmental and Historic Preservation Act of 1969, the Archaeological and Historic Conservation Act of 1972, the Archaeological Resources Protection Act of 1979 and the American Indian Religious Freedom Act of 1978.

The fieldwork was performed by Mark C. Bond (Project Archaeologist) on August 5, 2004 under the auspices of U.S.D.I. (FLPMA) Permit No. 04-UT-60122 and State of Utah Antiquities Project (Survey) No. U-04-MQ-0767bs.

A file search for previous projects and documented cultural resources was conducted by the author at the BLM Vernal Field Office on August 5, 2004. This consultation indicated that an inventory for the State #11-16-10-18 well location was performed by MOAC in 2002 resulting in no cultural resources (Montgomery 2002). Two additonal surveys have been completed in the area. In 2000, An Independent Archaeologist inspected Dominion Explorations' River Bend Unit #11-100 location; no cultural resources were located (Truesdale 2000). Archeological-Environmental Research Corporation (AERC) completed a cultural resource evaluation of six proposed well locations for Dominion Exploration in 2000, locating no new cultural resources (Hauck 2000). In 2001, MOAC completed an Inventory for one Pendragon Energy well location finding one isolated find, a match stick filler milk can (Kinnear-Ferris 2001). In summary, no archaeological sites have been documented in the immediate project area.

DESCRIPTION OF PROJECT AREA

The inventory area is located just south of Fourmile Wash in the Little Desert area of the Uinta Basin. The pipeline corridor extends from the State #11-16-10-18 well location to the west where it will connect to an existing pipeline. The legal description is Township 10S, Range 18E, Sections16 (SITLA) and 17 (BLM) (Figure 1).

Environmental Setting

The project area lies between Eightmile Flat and Little Desert areas within the Uinta Basin section of the Colorado Plateau. Topographically, this area consists of highly dissected ridges and rocky knolls. The Uinta Formation is characterized by eroded outcrops formed by fluvial deposited stream laid interbedded sandstone and mudstone. This formation is known for its fossil vertebrates, including turtles, crocodilians, fish, and mammals. The elevation averages 5280 feet a.s.l. Named washes in the area include Fourmile Wash and Desert Spring Wash. The project area lies within the Upper Sonoran life zone, dominated by a shadscale community intermixed with saltbrush, ephedra, cacti, and grasses. Modern disturbances to the landscape include well locations, access roads, pipelines, modern trash, and livestock grazing.

SURVEY METHODOLOGY

An intensive pedestrian survey was performed for this project which is considered 100% coverage. A 100 ft wide corridor was examined along the pipeline route by the archaeologist walking parallel transects spaced no more than 10 m (30 ft) apart. Ground visibility was considered good. A total of 9.6 acres was inventoried of which 4.2 is situated on BLM (Vernal Field Office) land and 5.4 acres occurs on SITLA property.

MANAGEMENT RECOMMENDATIONS

The inventory of Pendragon Energy Partner's proposed pipeline for the State #11-16-10-18 well location resulted in the documentation of no cultural resources. Based on the findings, a determination of "no historic properties affected" is recommended for this project pursuant to Section 106, CFR 800.

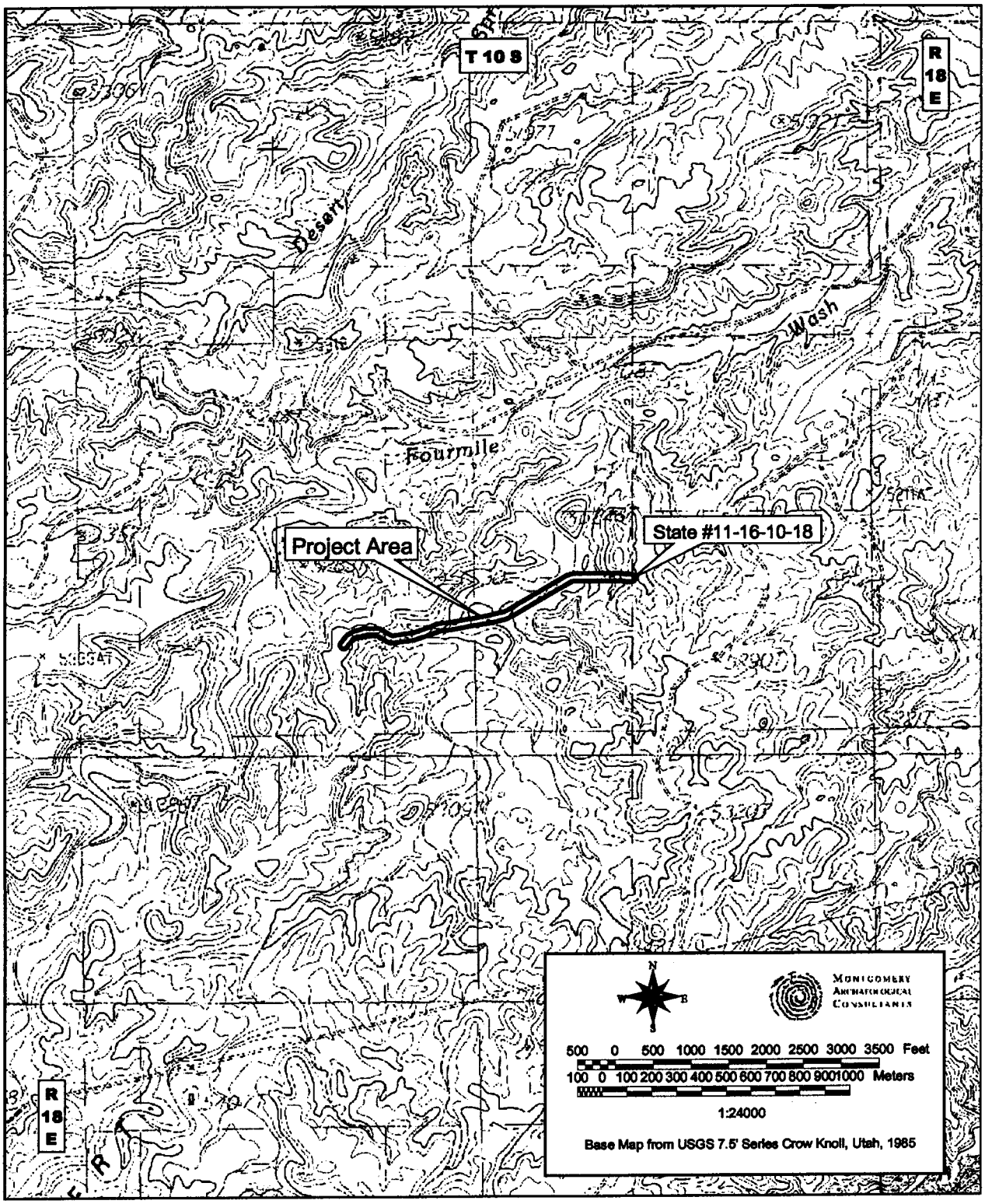


Figure 1. Inventory Area of Pendragon Energy Partners Proposed Pipeline for the State #11-16-10-18 Well Location. USGS 7.5' Crow Knoll, UT 1985.

REFERENCES CITED

Hauck, F.R
2000 Cultural Resource Evaluations of Six Proposed Well Locations in the Antelope Knolls (RBU #1-1D, RBU #3-15D, Federal #16-26A, and State #13-36A) and the Willow Creek (HCU #2-30F, and HCU #3-30F) Localities of Uintah County, Utah. Archaeological-Environmental Resource Corporation, Bountiful, Utah. Report No. U-00-AF-307b. On file at the BLM Vernal Field Office, Vernal, Utah.

Kinnear-Ferris, Sharyl
2001 Cultural Resource Inventory of Pendragon Energy Partners State Well Location #1-16-10-18 in Uintah County, Utah. Montgomery Archaeological Consultants, Moab, Utah. Report No. U-01-MQ-0047s.

Montgomery, K.
2002 Cultural Resource Inventory of Pendragon Energy Partners State Well Locations #3-16-10-18 and #11-16-10-18 in Uintah County, Utah. Montgomery Archaeological Consultants, Moab, Utah. Report No. U-02-MQ-0657s.

Stokes, W.L.
1986 *Geology of Utah*. Utah Museum of Natural History, University of Utah, Salt Lake City.

Truesdale, J.A.
2000 Dominion Exploration and Production: River Bend Unit #11-10D. A Cultural Resource Inventory for a well pad, its access and flowline, Uintah County, Utah. An Independent Archaeologist, Report No. U-00-AY-0730b. On file at the BLM Vernal Field Office, Vernal, Utah.

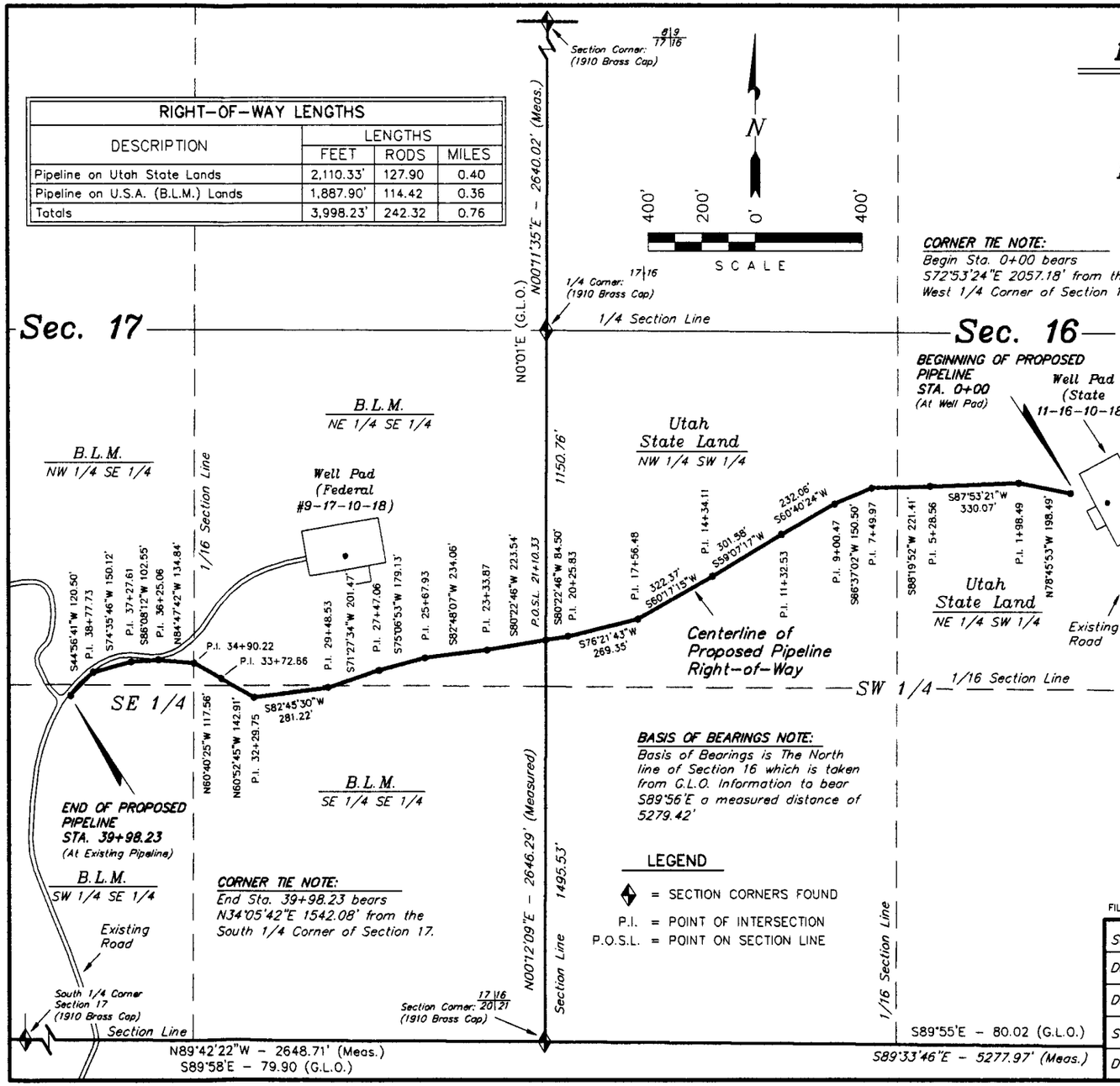
PENDRAGON ENERGY PARTNERS, INC.

PROPOSED PIPELINE RIGHT-OF-WAY

For the State #11-16-10-18 Well Pad

Located In
Sections 16 & 17, T10S, R18E, S.L.B.&M.
Uintah County, Utah

RIGHT-OF-WAY LENGTHS			
DESCRIPTION	LENGTHS		
	FEET	RODS	MILES
Pipeline on Utah State Lands	2,110.33'	127.90	0.40
Pipeline on U.S.A. (B.L.M.) Lands	1,887.90'	114.42	0.36
Totals	3,998.23'	242.32	0.76



PIPELINE RIGHT-OF-WAY DESCRIPTION

A PIPELINE RIGHT-OF-WAY LOCATED IN THE SW 1/4 OF SECTION 16. ALSO IN THE SE 1/4 OF SECTION 17. BOTH IN T10S, R18E, S.L.B.&M. UINTAH COUNTY, UTAH. THE CENTERLINE OF SAID RIGHT-OF-WAY BEING MORE PARTICULARY DESCRIBED AS FOLLOWS:

BEGINNING AT A POINT IN THE NE 1/4 SW 1/4 OF SECTION 16, T10S, R18E, S.L.B.&M. WHICH BEARS S72°53'24"E 2057.18' FROM THE WEST 1/4 CORNER OF SAID SECTION 16 (BEING A 1910 BRASS CAP), THENCE N78°45'53"W 198.49'; THENCE S87°53'21"W 330.07'; THENCE S88°19'52"W 221.41'; THENCE S66°37'02"W 150.50'; THENCE S60°40'24"W 232.06'; THENCE S59°07'17"W 301.58'; THENCE S60°17'15"W 322.37'; THENCE S76°21'43"W 269.35'; THENCE S80°22'46"W 84.50' TO A POINT ON THE EAST LINE OF THE SE 1/4 OF SECTION 17, T10S, R18E, S.L.B.&M. WHICH BEARS S00°12'09"W 1150.76' FROM THE EAST 1/4 CORNER OF SAID SECTION 17; THENCE S80°22'46"W 223.54'; THENCE S82°48'07"W 234.06'; THENCE S75°06'53"W 179.13'; THENCE S71°27'34"W 201.47'; THENCE S82°45'30"W 281.22'; THENCE N60°52'45"W 142.91'; THENCE N60°40'25"W 117.56'; THENCE N84°47'42"W 134.84'; THENCE S86°08'12"W 102.55'; THENCE S74°35'46"W 150.12'; THENCE S44°56'41"W 120.50' TO A POINT IN THE SW 1/4 SE 1/4 OF SAID SECTION 17 WHICH BEARS N34°05'42"E 1542.08' FROM THE SOUTH 1/4 CORNER OF SAID SECTION 17 (BEING A 1910 BRASS CAP). BASIS OF BEARINGS IS THE NORTH LINE OF SECTION 16 WHICH IS TAKEN FROM G.L.O. INFORMATION TO BEAR S89°56'E A MEASURED DISTANCE OF 5279.42' (THE NORTHWEST CORNER AND THE NORTHEAST CORNER OF SAID SECTION 16 BEING 1910 BRASS CAPS).

CERTIFICATE

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

REGISTERED LAND SURVEYOR
REGISTRATION NO. 189377
STATE OF UTAH

REGISTERED LAND SURVEYOR No.189377 STACY W. STEWART STATE OF UTAH

FILE: \\Server\Drawings\Drawings\PENDRAGON\PIPE 11-16\dwg\PIPE.dwg

SURVEYED BY: D.J.S.	
DRAWN BY: F.T.M.	
DATE: 8-6-04	
SCALE: 1" = 400'	
DWG # 04-0193	

Tri State Land Surveying, Inc.
(435) 781-2501
180 NORTH VERNAL AVE. VERNAL, UTAH 84078

United States Department of the Interior

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

TAKE PRIDE IN AMERICA

IN REPLY REFER TO
3180
UT-922

August 31, 2004

Pendragon Energy Partners, Inc.
Attn: Alan B. Nicol
621 Seventeenth Street, Suite 750
Denver, Colorado 80293

Gentlemen:

The Uteland Butte (Lower Green River) Unit Agreement, Uintah County, Utah, was approved August 31, 2004. This agreement has been designated No. UTU81306X, and is effective September 1, 2004. The unit area embraces 1,920.00 acres, more or less.

Pursuant to regulations issued and effective June 17, 1988, all operations within the Uteland Butte (Lower Green River) Unit will be covered by your Utah statewide oil and gas bond No. 1167.

The following leases embrace lands included within the unit area:

UTU018260A* UTU74407* UTU74408* UTU74836*

* Indicates lease to be considered for segregation by the Bureau of Land Management pursuant to Section 18 (g) of the unit agreement and Public Law 86-705.

All lands and interests by State of Utah, Cause No. 255-01 are fully committed.

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.

We are of the opinion that the agreement is necessary and advisable in the public interest and for the purpose of more properly conserving natural resources. Enclosed is one copy of the approved unit agreement for your records. We request that you furnish the State of Utah and all other interested principals with appropriate evidence of this approval.

RECEIVED
SEP 02 2004
DIV. OF OIL, GAS & MINING

Sincerely,

Terry Catlin
Acting Chief, Branch of Fluid Minerals

Enclosure

CERTIFICATION-DETERMINATION

Pursuant to the authority vested in the Secretary of the Interior, under the Act approved February 25, 1920, 41 Stat. 437, as amended, 30 U.S.C. sec 181, et seq., and delegated to the Authorized Officer of the Bureau of Land Management, by Executive Order of the Secretary of the Interior, I do hereby:

A. Approve the attached agreement effective September 1, 2004, for the development and operation of the Uteland Butte (Lower Green River) Unit Area, Uintah County, Utah.

B. Certify and determine that the unit plan of development and operation contemplated in the attached agreement is necessary and advisable in the public interest for the purpose of more properly conserving the natural resources.

C. Certify and determine that the drilling, producing, rental, minimum royalty and royalty requirements of all Federal leases committed to said Agreement are hereby established, altered, changed or revoked to conform with the terms and conditions of this agreement.

Dated: August 31, 2004

Terry Catlin

Terry Catlin
Acting Chief, Branch of Fluid Minerals
Bureau of Land Management

Contract No: UTU81306X

011

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 8
999 18th STREET - SUITE 300
DENVER, CO 80202-2466
http://www.epa.gov/region08

OCT 25 2004

Ref: 8P-W-GW

RECEIVED
NOV 02 2004
DIV. OF OIL, GAS & MINING

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Martin W. Buys
Buys & Associates, Inc.
300 East Mineral Ave., Suite 10
Littleton, CO 80122-2631

PENDRAGON ENERGY

Re: Underground Injection Control Program
Final Permit for the State 11-16 10-18
Uintah County, UT
EPA Permit No. UT20964-06346

Dear Mr. Buys

Enclosed is your copy of the FINAL Underground Injection Control (UIC) Permit for the proposed State 11-16 10-18, in Uintah County, Utah. A Statement of Basis, which discusses development of the conditions and requirements of the Permit, also is included.

The Public Comment period ended on OCT 06 2004. There were no comments on the Draft Permit received during the Public Notice period, and therefore the Final Permit becomes effective on the date of issuance. All conditions set forth herein refer to Title 40 Parts 124, 144, 146, and 147 of the Code of Federal Regulations (CFR) and are regulations that are in effect on the date that this Permit becomes effective.

Please note that under the terms of the Final Permit, you are authorized only to construct the proposed injection well, and must fulfill the "Prior to Commencing Injection" requirements of the Permit, Part II Section C Subpart 1 and obtain written Authorization to Inject prior to commencing injection. It is your responsibility to be familiar with and to comply with all provisions of the Final Permit.

The Permit and the authorization to inject are issued for the operating life of the well unless terminated (Part III, Section B). The EPA will review this Permit at least every five (5) years to determine whether action under 40 CFR § 144.36(a) is warranted.

Printed on Recycled Paper

If you have any questions on the enclosed Final Permit or Statement of Basis, please call Chuck Williams of my staff at (303) 312-6625, or toll-free at 800-227-8917 ext. 6625.

Sincerely,

Paul L. Campbell for

Stephen S. Tuber
Assistant Regional Administrator
Office of Partnerships and Regulatory Assistance

enclosure: Final Permit
Final Statement of Basis

cc: Maxine Natchees, Chairperson
Uintah & Ouray Business Committee
P.O. Box 190
Fort Duchesne, UT

Elaine Willie, Environmental Coordinator
Ute Indian Tribe
P.O. Box 460
Fort Duschene, UT 84026

Mr. William Stringer
BLM - Manager - Vernal
170 South 500 East
Vernal, UT 84078

Mr. Gilbert Hunt
Technical Services Director
Utah Division of Oil, Gas & Mining
1594 West North Temple, Suite 1210
P.O. Box 145801
Salt Lake City, UT 84114

Nathan Wiser
Technical Enforcement Program - UIC
USEPA - 8ENF-UFO

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STATEMENT OF BASIS

PENDRAGON ENERGY PARTNERS
STATE 11-16 10-18
UINTAH COUNTY, UT

EPA PERMIT NO. UT20964-06346

CONTACT: Chuck Williams
U. S. Environmental Protection Agency
Ground Water Program, 8P-W-GW
999 18th Street, Suite 300
Denver, Colorado 80202-2466
Telephone: 1-800-227-8917 ext. 6625

This STATEMENT OF BASIS gives the derivation of site-specific UIC Permit conditions and reasons for them. Referenced sections and conditions correspond to sections and conditions in the Permit.

UIC Permits specify the conditions and requirements for construction, operation, monitoring and reporting, and plugging of injection wells to prevent the movement of fluids into underground sources of drinking water (USDWs). Under 40 CFR 144 Subpart D, certain conditions apply to all UIC Permits and may be incorporated either expressly or by reference. General Permit conditions for which content is mandatory and not subject to site-specific differences (40 CFR Parts 144, 146 and 147) are not discussed in this document.

Upon the Effective Date when issued, the Permit authorizes the construction and operation of a "new" injection well or wells governed by the conditions specified in the Permit. The Permit is issued for the operating life of the injection well or project unless terminated for reasonable cause under 40 CFR 144.39, 144.40 and 144.41. The Permit is subject to EPA review at least once every five (5) years to determine if action is required under 40 CFR 144.36(a).

PART I. General Information and Description of Facility

Pendragon Energy Partners 621 17th Street, Suite 750 Denver, CO 80293

on

December 18, 2003

submitted an application for an Underground Injection Control (UIC) Program Permit for the following injection well or wells:

State 11-16 10-18 2022 FSL, 2104 FWL, NESW S16, T10S, R18E Uintah County, UT

Regulations specific to Uintah-Ouray Indian Reservation injection wells are found at 40 CFR 147 Subpart TT.

This application is for the conversion of the State 11-16 10-18 Green River Formation to an enhanced recovery water injection well. The proposed State 11-16 10-18 enhanced oil recovery injection well currently is an inactive Green River "A sand" and "C shoal" oil well. Conversion of this well will support an ongoing water flood enhanced oil recovery project by Pendragon Energy within the Uteland Butte Field using water from an in-field water source well and produced brine. This well will be completed as a dual-injector to enable enhanced recovery pressure maintenance of the A sand and C Shoal separately using nested injection tubing and packers.

The proposed injection zone contains two oil productive sands within the Uteland Butte limestone. The approved injection zone shall be the A Sand and the C Shoal, which occur at depths between approximately 4570' to 4748'. Oil production perforations that will be used for injection in these sands in this well presently exist in the A sand interval and the C Shoal interval. These lenticular sands are encased in impervious black shale and are limited in extent. Production water analyses show the total dissolved solids (TDS) of the water in the proposed injection interval ranges from 29,530 mg/l to 37,511 mg/l TDS. These analyses indicate that in this area, the proposed injection zone is not a USDW.

The well presently is constructed with 8-5/8" surface casing cemented to surface from the casing base at 285' with production casing of 5-1/2" set from TD at 48-86' and cemented up to 250' below ground surface. The well will be completed for injection purposes with 3-1/2" injection tubing (A sand) set with a packer at approximately 4538', and inside the 3-1/2" tubing will be set an inner (C shoal) 1-1/2" injection tubing. The outer injection tubing packer provides for isolation of the tubing-casing annulus at or below the confining zone and will effectively provide for demonstration of the internal mechanical integrity of the well. The integrity of the inner injection tubing does not need to be tested for EPA purposes. Evaluation of the cement bond log indicates the top of cement occurs at approximately 250' below ground surface' and that intervals of 80% or greater bond index occur through the proposed injection zones and the uppermost confining zone.

The Permit application, including the required information and data necessary to issue a UIC Permit in accordance with 40 CFR Parts 144, 146 and 147, was reviewed by EPA and determined

to be complete.

The Permit will expire upon delegation of primary enforcement responsibility (primacy) for applicable portions of the UIC Program to the Ute Indian Tribe or the State of Utah unless the delegated agency has the authority and chooses to adopt and enforce this Permit as a Tribal or State Permit.

TABLE 1.1 shows the status of the well or wells as "New", "Existing", or "Conversion" and for Existing shows the original date of injection operation. Well authorization "by rule" under 40 CFR Part 144 Subpart C expires automatically on the Effective Date of an issued UIC Permit.

TABLE 1.1

WELL STATUS / DATE OF OPERATION

CONVERSION WELLS		
Well Name	**Well Status**	**Date of Operation**
State 11-16 10-18	Conversion	N/A

Hydrogeologic Setting

Geologic Setting (TABLE 2.1)

The well is located in the Uteland Butte field near the center of the broad, gently northward dipping south flank of the Uinta Basin. The beds dip at about 200'/mile, and there are no known surface folds or faults in the field. The lower 600' to 800'of the Uinta Formation, generally consisting of 5' to 20' thick brown lenticular fluvial sandstone and interbedded varicolored shales, outcrops at the surface in this area. The Uinta is underlain by the Green River Formation which consists of lake (lacustrine) margin sandstones, limestone and shale beds that were deposited along the edges and on the broad level floor of Lake Uintah as it expanded and contracted through time. Several distinct geologic sub-units within the Green River Formation are identified, including the Mahogany Oil Shale, the Douglas Creek, and the Uteland Butte limestone which contains the two proposed injection intervals, the A Sand, and the C Shoal limestone. The C Shoal limestone is the basal unit of the Green River Formation in the Uteland Butte Field. Underlying the Green River Formation is the Wasatch Formation, which is approximately 2400' thick in this area and consists of red alluvial shales and siltstone with scattered lenticular sandstones usually 10' to 50' thick.

TABLE 2.1
GEOLOGIC SETTING
State 11-16 10-18

Formation Name	Top (ft)	Base (ft)	TDS (mg/l)	Lithology
Uinta Formation	0.00	1,710.00	< 10,000.00 37,511.00	lenticular fluvial sandstone and interbedded varicolored shale
Horse Bench Sand	1,294.00	1,310.00		sandstone
Green River Formation	1,710.00	4,748.00	29,530.00 - 37,511.00	lacustrine shales and marginal lacustrine sand and ostracodal limestone
Mahogany Bench (Green River)	1,804.00	1,840.00		oil shale
Douglas Creek Member (Green River)	3,272.00	3,410.00		Sandstone
Uteland Butte Member (Green River)	4,570.00	4,748.00	29,530.00 - 37,511.00	limestone and lenticular sandstone with interbedded mudstone and shale

Proposed Injection Zone(s) (TABLE 2.2)

An injection zone is a geological formation, group of formations, or part of a formation that receives fluids through a well. The proposed injection zones are listed in TABLE 2.2.

Injection will occur into an injection zone that is separated from USDWs by the confining zone which is free of known open faults or fractures within the Area of Review.

The proposed injection zone contains two oil productive sands within the Uteland Butte limestone. The approved injection zone shall be the A Sand and the C Shoal, which occur at depths between approximately 4570' to 4748'. The interval between the A sand and the C Shoal is approximately 110' to 120'. Oil production perforations in these sands in this well presently exist in the A sand interval between 4617' to 4623' and in the C Shoal interval between 4743' to 4747'. These sands were deposited as streams meandered across lake margins and flowed northward into the deeper part of the basin. These lenticular sands are encased in impervious black shale, and are limited in extent as evidenced by absence of the A sand in the #7-19 and #2-20 wells.

TABLE 2.2
INJECTION ZONES
State 11-16 10-18

Formation Name	Top (ft)	Base (ft)	TDS (mg/l)	Fracture Gradient (psi/ft)	Porosity	Exempted?*
A sand	4,617.00	4,622.00	29,530.00 - 37,577.00	0.890		N/A
C shoal	4,743.00	4,747.00	29,530.00 - 37,511.00	0.890		N/A

* **C - Currently Exempted**
E - Previously Exempted
P - Proposed Exemption
N/A - Not Applicable

Confining Zone(s) (TABLE 2.3)

A confining zone is a geological formation, part of a formation, or a group of formations that limits fluid movement above the injection zone. The confining zone or zones are listed in TABLE 2.3.

Impervious layers, predominantly black shales of the lower Green River Formation, begin approximately 50' above the top of the A sand perforations, the uppermost injection interval. These shales are continuous across the entire field and beyond, and will provide effective confining zones for the proposed injection activity.

TABLE 2.3
CONFINING ZONES
State 11-16 10-18

Formation Name	Formation Lithology	Top (ft)	Base (ft)
Lower Green River	impervious black shale with thin interbedded tight silty sand	4,496.00	4,570.00

Underground Sources of Drinking Water (USDWs) (TABLE 2.4)

Aquifers or the portions thereof which contain less than 10,000 mg/l total dissolved solids (TDS) and are being or could in the future be used as a source of drinking water are considered to be USDWs. The USDWs in the area of this facility are identified in TABLE 2.4.

According to the application, there are no drinking water wells near the proposed injection well. Production water analyses show the total dissolved solids (TDS) of the water in the proposed injection interval ranges from 29,530 mg/l to 37,511 mg/l TDS. These analyses indicate that in this area, the proposed injection zone is not a USDW. Additional analyses from drill stem tests of two wells within approximately two miles of the proposed well tested water from the Green River Formation at depths between 3676' to 4287' and the total dissolved solids (TDS) ranged from 62,784 to 76,950 mg/l TDS.

TABLE 2.4
UNDERGROUND SOURCES OF DRINKING WATER (USDW)
State 11-16 10-18

Formation Name	Formation Lithology	Top (ft)	Base (ft)	TDS (mg/l)
Uinta Formation	interbedded lenticular fluvial sandstone and shale	0.00	1,710.00	< 10,000.00

PART III. Well Construction (40 CFR 146.22)

This well will be completed as a dual-injector to enable enhanced recovery pressure maintenance of the A sand and C Shoal separately using nested injection tubing and packers. The well presently is constructed with 8-5/8" surface casing cemented to surface from the casing base at 285'. Production casing of 5-1/2" is set from TD at 4808' and cemented up to 250'. The well will be completed with 3-1/2" injection tubing (A-Sand) set with a packer at approximately 4538', and inside the 3-1/2" tubing is set an inner (C Shoal) 1-1/2" injection tubing set in the production packer set at 4668'.

Evaluation of the cement bond log indicates the top of cement occurs at approximately 250', and that adequate intervals of 80% or greater bond index occur through the intervals from 4118' to 4543' and from 4550' to 4578'.

TABLE 3.1
WELL CONSTRUCTION REQUIREMENTS
State 11-16 10-18

Casing Type	Hole Size (in)	Casing Size (in)	Cased Interval (ft)	Cemented Interval (ft)
Longstring	7.88	5.50	0.00 - 4,808.00	250.00 - 4,808.00
Surface	9.63	8.63	0.00 - 285.00	0.00 - 285.00

The approved well completion plan will be incorporated into the Permit as APPENDIX A and will be binding on the Permittee. Modification of the approved plan is allowed under 40 CFR 144.52(a)(1) provided written approval is obtained from the Director prior to actual modification.

Casing and Cementing (TABLE 3.1)
The well construction plan was evaluated and determined to be in conformance with standard practices and guidelines that ensure well injection does not result in the movement of fluids into USDWs. Well construction details for this "new" injection well is shown in TABLE 3.1.

Remedial cementing may be required if the casing cement is shown to be inadequate by cement bond log or other demonstration of Part II (External) mechanical integrity.

Tubing and Packer
Injection tubing is required to be installed from a packer up to the surface inside the well casing.

The packer will be set above the uppermost perforation. The tubing and packer are designed to prevent injection fluid from coming into contact with the outermost casing.

Tubing-Casing Annulus (TCA)

The TCA allows the casing, tubing and packer to be pressure-tested periodically for mechanical integrity, and will allow for detection of leaks. The TCA will be filled with fresh water treated with a corrosion inhibitor or other fluid approved by the Director.

The tubing/casing annulus must be kept closed at all times so that it can be monitored as required under the conditions of the Permit.

Monitoring Devices

The permittee will be required to install and maintain wellhead equipment allowing for monitoring pressures and providing access for sampling the injected fluid. This equipment includes: 1) shut-off valves located at the wellhead on the injection tubing and on the TCA; 2) a flow meter that measures the cumulative volume of injected fluid; 3) pressure gauges attached to the injection tubing and the TCA to monitor the injection and TCA pressure; and 4) a tap on the injection line, isolated by shut-off valves, for sampling the injected fluid.

All sampling and measurement taken for monitoring must be representative of the monitored activity.

PART IV. Area of Review, Corrective Action Plan (40 CFR 144.55)

TABLE 4.1 lists the wells in the Area of Review ("AOR") and shows the well type, operating status, depth, top of casing cement ("TOC") and whether a Corrective Action Plan ("CAP") is required for the well.

Area Of Review

Applicants for Class I, II (other than "existing" wells) or III injection well Permits are required to identify the location of all known wells within the injection well's Area of Review (AOR) which penetrate the injection zone, or in the case of Class II wells operating over the fracture pressure of the formation, all known wells within the area of review that penetrate formations which may be affected by increased pressure. Under 40 CFR 146.6 the AOR may be a fixed radius of not less than one quarter (1/4) mile or a calculated zone of endangering influence. For Area Permits, a fixed width of not less than one quarter (1/4) mile for the circumscribing area may be used.

Corrective Action Plan

For wells in the AOR which are improperly sealed, completed, or abandoned, the applicant shall develop a Corrective Action Plan (CAP) consisting of the steps or modifications that are necessary to prevent movement of fluid into USDWs.

The CAP will be incorporated into the Permit as APPENDIX F and become binding on the permittee.

PART V. Well Operation Requirements (40 CFR 146.23)

TABLE 5.1
INJECTION ZONE PRESSURES
State 11-16 10-18

Formation Name	Depth Used to Calculate MAIP (ft)	Fracture Gradient (psi/ft)	Initial MAIP (psi)
A sand	4,617.00	0.890	2,060
C shoal	4,743.00	0.890	2,115

Approved Injection Fluid

The approved injection fluid is limited to fluids which meet requirements pursuant to 40 CFR § 144.6(b). For disposal wells injecting water brought to the surface in connection with natural gas storage operations, or conventional oil or natural gas production, the fluid may be commingled and the well used to inject other Class II wastes such as drilling fluids and spent well completion, treatment and stimulation fluid. Non-exempt wastes, including unused fracturing fluids or acids, gas plant cooling tower cleaning wastes, service wastes and vacuum truck wastes, are not approved.

Injection Pressure Limitation

Injection pressure, measured at the wellhead, shall not exceed a maximum calculated to assure that the pressure used during injection does not initiate new fractures or propagate existing fractures in the confining zones adjacent to the USDWs.

The applicant submitted injection fluid density and injection zone data which was used to calculate a formation fracture pressure and to determine the maximum allowable injection pressure (MAIP), as measured at the surface, for this Permit,

TABLE 5.1 lists the fracture gradient for the injection zone and the approved MAIP, determined according to the following formula:

$$FP = [fg - (0.433 * sg)] * d$$

FP = formation fracture pressure (measured at surface)
fg = fracture gradient (from submitted data or tests)
sg = specific gravity (of injected fluid)
d = depth to top of injection zone (or top perforation)

Injection Volume Limitation

Cumulative injected fluid volume limits are set to assure that injected fluids remain within the boundary of the exempted area. Cumulative injected fluid volume is limited when injection occurs into an aquifer that has been exempted from protection as a USDW.

Because the injection zone (4570 feet – 4748 feet) has a Total Dissolved Solids (TDS) in excess of 10,000 mg/l it is not considered an Underground Source of Drinking Water (USDW). For that reason there is no limitation on the amount of authorized fluid that can be injected. There is also no limit on the injection rate as long as the Maximum Allowable Injection Pressure (MAIP) is not

exceeded.

Mechanical Integrity (40 CFR 146.8)
An injection well has mechanical integrity if:

The concentric, nested, arrangement of the injection tubing allows for standard Part I (Internal) Mechanical Integrity testing procedures to be used. The 3-1/2" (outer) A Sand injection tubing packer provides for isolation of the tubing-casing annulus at or below the confining zone and will effectively provide for demonstration of the internal mechanical integrity of the well. The integrity of the inner injection tubing does not need to be tested for EPA purposes.

Part I MI - Internal MI will be demonstrated prior to beginning injection. A successful mechanical integrity test (MIT) will be required at least once every five (5) years. A demonstration of Part I MI is also required prior to resuming injection following any workover operation that affects the casing, tubing, or packer. Part I MI may be demonstrated by a standard tubing-casing annulus pressure test using the maximum permitted injection pressure or 1000 psi, whichever is less, with ten percent or less pressure loss over thirty minutes.

Part II MI - Cement records for this well show that adequate cement was placed in the well. The CBL confirms that this cement meets or exceeds minimum requirements needed to demonstrate zone isolation through the confining zone. The cement bond log for this well shows adequate 80% or greater bond through the intervals from 4118' to 4543' and from 4550' to 4578'. Therefore, further testing for Part II MI will not be required.

1. there is no significant leak in the casing, tubing, or packer (Part I); and
2. there is no significant fluid movement into a USDW through vertical channels adjacent to the injection well bore (Part II).

The Permit prohibits injection into a well which lacks mechanical integrity.

The Permit requires that the well demonstrate mechanical integrity prior to injection and periodically thereafter. A demonstration of mechanical integrity includes both internal (Part I) and external (Part II). The methods and frequency for demonstrating Part I and Part II mechanical integrity are dependant upon well-specific conditions as explained below:

PART VI. Monitoring, Recordkeeping and Reporting Requirements

Injection Well Monitoring Program
At least once a year the permittee must analyze a sample of the injected fluid for total dissolved solids (TDS), specific conductivity, pH, and specific gravity. This analysis shall be reported to EPA annually as part of the Annual Report to the Director. Any time a new source of injected fluid is added, a fluid analysis shall be made of the new source.

Instantaneous injection pressure, injection flow rate, cumulative fluid volume and TCA pressures must be observed on a weekly basis. A recording, at least once every thirty (30) days, must be made of the injection pressure, injection flow rate and cumulative fluid volume, and the maximum and average value for each must be determined for each month. This information is required to be reported annually as part of the Annual Report to the Director.

PART VII. Plugging and Abandonment Requirements (40 CFR 146.10)

Plugging and Abandonment Plan

Prior to abandonment, the well or wells must be plugged with cement in a manner which will not allow the movement of fluids either into or between USDWs. The plugging and abandonment plan is described in Appendix E of the Permit.

PART VIII. Financial Responsibility (40 CFR 144.52)

Demonstration of Financial Responsibility

The permittee is required to maintain financial responsibility and resources to close, plug, and abandon the underground injection operation in a manner prescribed by the Director. The permittee shall show evidence of such financial responsibility to the Director by the submission of a surety bond, or other adequate assurance such as financial statements or other materials acceptable to the Director. The Regional Administrator may, on a periodic basis, require the holder of a lifetime permit to submit a revised estimate of the resources needed to plug and abandon the well to reflect inflation of such costs, and a revised demonstration of financial responsibility if necessary. Initially, the operator has chosen to demonstrate financial responsibility with:

Trust Fund, received July 7, 2004

Evidence of continuing financial responsibility is required to be submitted to the Director annually.

EPA

UNDERGROUND INJECTION CONTROL PROGRAM

PERMIT

PREPARED: October 2004

Permit No. UT20964-06346

Class II Enhanced Oil Recovery Injection Well

State 11-16 10-18
Uintah County, UT

Issued To

Pendragon Energy Partners
621 17th Street, Suite 750
Denver, CO 80293

Part I. AUTHORIZATION TO CONSTRUCT AND OPERATE

Under the authority of the Safe Drinking Water Act and Underground Injection Control (UIC) Program regulations of the U. S. Environmental Protection Agency (EPA) codified at Title 40 of the Code of Federal Regulations (40 CFR) Parts 2, 124, 144, 146, and 147, and according to the terms of this Permit,

Pendragon Energy Partners 621 17th Street, Suite 750 Denver, CO 80293

is authorized to construct and to operate the following Class II injection well or wells:

State 11-16 10-18 2022 FSL, 2104 FWL, NESW S16, T10S, R18E Uintah County, UT

Permit requirements herein are based on regulations found in 40 CFR Parts 124, 144, 146, and 147 which are in effect on the Effective Date of this Permit.

This Permit is based on representations made by the applicant and on other information contained in the Administrative Record. Misrepresentation of information or failure to fully disclose all relevant information may be cause for termination, revocation and reissuance, or modification of this Permit and/or formal enforcement action. This Permit will be reviewed periodically to determine whether action under 40 CFR 144.36(a) is required.

This Permit is issued for the life of the well or wells unless modified, revoked and reissued, or terminated under 40 CFR 144.39 or 144.40. This Permit may be adopted, modified, revoked and reissued, or terminated if primary enforcement authority for this program is delegated to an Indian Tribe or a State. Upon the effective date of delegation, all reports, notifications, questions and other compliance actions shall be directed to the Indian tribe or State Program Director or designee.

Issue Date: OCT 25 2004

Effective Date OCT 25 2004

Carol L. Campbell

Stephen S. Tuber
Assistant Regional Administrator*
Office of Partnerships and Regulatory Assistance

*NOTE: The person holding this title is referred to as the "Director" throughout this Permit.

PART II. SPECIFIC PERMIT CONDITIONS

Section A. WELL CONSTRUCTION REQUIREMENTS

These requirements represent the approved minimum construction standards for well casing and cement, injection tubing, and packer.

Details of the approved well construction plan are incorporated into this Permit as APPENDIX A. Changes to the approved plan that may occur during construction must be approved by the Director prior to being physically incorporated.

1. Casing and Cement.

The well or wells shall be cased and cemented to prevent the movement of fluids into or between underground sources of drinking water. The well casing and cement shall be designed for the life expectancy of the well and of the grade and size shown in APPENDIX A. Remedial cementing may be required if shown to be inadequate by cement bond log or other attempted demonstration of Part II (External) mechanical integrity.

2. Injection Tubing and Packer.

Injection tubing is required, and shall be run and set with a packer at or below the depth indicated in APPENDIX A. The packer setting depth may be changed provided it remains below the depth indicated in APPENDIX A and the Permittee provides notice and obtains the Director's approval for the change.

3. Sampling and Monitoring Devices.

The Permittee shall install and maintain in good operating condition:

(a) a "tap" at a conveniently accessible location on the injection flow line between the pump house or storage tanks and the injection well, isolated by shut-off valves, for collection of representative samples of the injected fluid; and

(b) one-half (1/2) inch female iron pipe fitting, isolated by shut-off valves and located at the wellhead at a conveniently accessible location, for the attachment of a pressure gauge capable of monitoring pressures ranging from normal operating pressures up to the Maximum Allowable Injection Pressure specified in APPENDIX C:

  (i) on the injection tubing; and

  (ii) on the tubing-casing annulus (TCA); and

(c) a pressure actuated shut-off device attached to the injection flow line set to shut-off the injection pump when or before the Maximum Allowable Injection Pressure specified in APPENDIX C is reached at the wellhead; and

(d) a non-resettable cumulative volume recorder attached to the injection line.

4. Well Logging and Testing

Well logging and testing requirements are found in APPENDIX B. The Permittee shall ensure the log and test requirements are performed within the time frames specified in APPENDIX B. Well logs and tests shall be performed according to current EPA-approved procedures. Well log and test results shall be submitted to the Director within sixty (60) days of completion of the logging or testing activity, and shall include a report describing the methods used during logging or testing and an interpretation of the test or log results.

5. Postponement of Construction or Conversion

The Permittee shall complete well construction within one year of the Effective Date of the Permit, or in the case of an Area Permit within one year of authorization of the additional well. Authorization to construct and operate shall expire if the well has not been constructed within one year of the Effective Date of the Permit or authorization and the Permit may be terminated under 40 CFR 144.40, unless the Permittee has notified the Director and requested an extension prior to expiration. Notification shall be in writing, and shall state the reasons for the delay and provide an estimated completion date. Once Authorization has expired under this part, the complete permit process including opportunity for public comment may be required before Authorization to construct and operate can be reissued.

6. Workovers and Alterations

Workovers and alterations shall meet all conditions of the Permit. Prior to beginning any addition or physical alteration to an injection well that may significantly affect the tubing, packer or casing, the Permittee shall give advance notice to the Director and obtain the Director's approval. The Permittee shall record all changes to well construction on a Well Rework Record (EPA Form 7520-12), and shall provide this and any other record of well workover, logging, or test data to EPA within sixty (60) days of completion of the activity.

A successful demonstration of Part I MI is required following the completion of any well workover or alteration which affects the casing, tubing, or packer. Injection operations shall not be resumed until the well has successfully demonstrated mechanical integrity and the Director has provided written approval to resume injection.

Section B. MECHANICAL INTEGRITY

The Permittee is required to ensure each injection well maintains mechanical integrity at all times. The Director, by written notice, may require the Permittee to comply with a schedule describing when mechanical integrity demonstrations shall be made.

An injection well has mechanical integrity if:

(a) There is no significant leak in the casing, tubing, or packer (Part I); and

(b) There is no significant fluid movement into an underground source of drinking water throught vertical channels adjacent to the injection well bore (Part II).

1. Demonstration of Mechanical Integrity (MI).

The operator shall demonstrate MI prior to commencing injection and periodically thereafter. Well-specific conditions dictate the methods and the frequency for demonstrating MI and are discussed in the Statement of Basis. The logs and tests are designed to demonstrate both internal (Part I) and external (Part II) MI as described above. The conditions present at this well site warrant the methods and frequency required in Appendix B of this Permit.

In addition to these regularly scheduled demonstrations of MI, the operator shall demonstrate internal (Part I) MI after any workover which affects the tubing, packer or casing.

The Director may require additional or alternative tests if the results presented by the operator are not satisfactory to the Director to demonstrate there is no movement of fluid into or between USDWs resulting from injection activity. Results of MI tests shall be submitted to the Director as soon as possible but no later than sixty (60) days after the test is complete.

2. Mechanical Integrity Test Methods and Criteria

EPA-approved methods shall be used to demonstrate mechanical integrity. A current copy of Ground Water Section Guidance No. 34 "Cement Bond Logging Techniques and Interpretation", Ground Water Section Guidance No. 37, "Demonstrating Part II (External) Mechanical Integrity for a Class II injection well permit", and Ground Water Section Guidance No. 39, "Pressure Testing Injection Wells for Part I (Internal) Mechanical Integrity" are provided at issuance of this Permit.

The Director may stipulate specific test methods and criteria best suited for a specific well construction and injection operation.

3. Notification Prior to Testing.

The Permittee shall notify the Director at least 30 days prior to any scheduled mechanical integrity test. The Director may allow a shorter notification period if it would be sufficient to enable EPA to witness the mechanical integrity test. Notification may be in the form of a yearly or quarterly schedule of planned mechanical integrity tests, or it may be on an individual basis.

4. Loss of Mechanical Integrity.

If the well fails to demonstrate mechanical integrity during a test, or a loss of mechanical integrity becomes evident during operation (such as presence of pressure in the TCA, water flowing at the surface, etc.), the Permittee shall notify the Director within 24 hours (see Part III Section E Paragraph 11(e) of this Permit), and the well shall be shut-in within 48 hours unless the Director requires immediate shut-in.

Within five days, the Permittee shall submit a follow-up written report that documents test results, repairs undertaken or a proposed remedial action plan.

Injection operations shall not be resumed until after the well has successfully been repaired and demonstrated mechanical integrity, and the Director has provided approval to resume injection.

Section C. WELL OPERATION

INJECTION BETWEEN THE OUTERMOST CASING PROTECTING UNDERGROUND SOURCES OF DRINKING WATER AND THE WELL BORE IS PROHIBITED.

Injection is approved under the following conditions:

1. Requirements Prior to Commencing Injection.

Injection operation may commence only after all construction and pre-injection requirements herein have been met and approved. Except for new wells authorized by an Area Permit under 40 CFR 144.33 (c), the Permittee may not commence injection until construction is complete, and

(a) The Permittee has submitted to the Director a notice of completion of construction and a completed EPA Form 7520-12; all applicable logging and testing requirements of this Permit (see APPENDIX B) have been fulfilled and the records submitted to the Director; mechanical integrity pursuant to 40 CFR 146.8 and Part II Section B of this Permit has been demonstrated; and

(i) The Director has inspected or otherwise reviewed the new injection well and finds it is in compliance with the conditions of the Permit; or

(ii) The Permittee has not received notice from the Director of his or her intent to inspect or otherwise review the new injection well within 13 days of the date of the notice in Paragraph 1a, in which case prior inspection or review is waived and the Permittee may commence injection.

2. Injection Interval.

Injection is permitted only within the approved injection interval, listed in APPENDIX C. Additional individual injection perforations may be added provided that they remain within the approved injection interval and the Permittee provides notice to the Director in accordance with Part II, Section A, Paragraph 6.

3. Injection Pressure Limitation

(a) The permitted Maximum Allowable Injection Pressure (MAIP), measured at the wellhead, is found in APPENDIX C. Injection pressure shall not exceed the amount the Director determines is appropriate to ensure that injection does not initiate new fractures or propagate existing fractures in the confining zone adjacent to USDWs. In no case shall injection pressure cause the movement of injected or formation fluids into a USDW.

(b) The Permittee may request a change of the MAIP, or the MAIP may be increased or decreased by the Director in order to ensure that the requirements in Paragraph (a) above are fulfilled. The Permitee may be required to conduct a step rate injection test or other suitable test to provide information for determining the fracture pressure of the injection zone. Change of the permitted MAIP by the Director shall be by modification of this Permit and APPENDIX C.

4. Injection Volume Limitation.

Injection volume is limited to the total volume specified in APPENDIX C.

5. Injection Fluid Limitation.

Injected fluids are limited to those identified in 40 CFR 144.6(b)(2) as fluids used for enhanced recovery of oil or natural gas, including those which are brought to the surface in connection with conventional oil or natural gas production that may be commingled with waste waters from gas plants which are an integral part of production operations unless those waters are classified as a hazardous waste at the time of injection, pursuant to 40 CFR 144.6(b). Non-exempt wastes, including unused fracturing fluids or acids, gas plant cooling tower cleaning wastes, service wastes and vacuum truck wastes, are NOT approved for injection. This well is NOT approved for commercial brine injection, industrial waste fluid disposal or injection of hazardous waste as defined by CFR 40 Part 261. The Permittee shall provide a listing of the sources of injected fluids in accordance with the reporting requirements in Part II Section D Paragraph 4 and APPENDIX D of this Permit.

6. Tubing-Casing Annulus (TCA)

The tubing-casing annulus (TCA) shall be filled with water treated with a corrosion inhibitor, or other fluid approved by the Director. The TCA valve shall remain closed during normal operating conditions and the TCA pressure shall be maintained at zero (0) psi.

If TCA pressure cannot be maintained at zero (0) psi, the Permittee shall follow the procedures in Ground Water Section Guidance No. 35 "Procedures to follow when excessive annular pressure is observed on a well."

Section D. MONITORING, RECORDKEEPING, AND REPORTING OF RESULTS

1. Monitoring Parameters, Frequency, Records and Reports.

Monitoring parameters are specified in APPENDIX D. Pressure monitoring recordings shall be taken at the wellhead. The listed parameters are to be monitored, recorded and reported at the frequency indicated in APPENDIX D even during periods when the well is not operating.

Monitoring records must include:

(a) the date, time, exact place and the results of the observation, sampling, measurement, or analysis, and;

(b) the name of the individual(s) who performed the observation, sampling, measurement, or analysis, and;

(c) the analytical techniques or methods used for analysis.

2. Monitoring Methods.

(a) Monitoring observations, measurements, samples, etc. taken for the purpose of complying with these requirements shall be representative of the activity or condition being monitored.

(b) Methods used to monitor the nature of the injected fluids must comply with analytical methods cited and described in Table 1 of 40 CFR 136.3 or Appendix III of 40 CFR 261, or by other methods that have been approved in writing by the Director.

(c) Injection pressure, annulus pressure, injection rate, and cumulative injected volumes shall be observed and recorded at the wellhead under normal operating conditions, and all parameters shall be observed simultaneously to provide a clear depiction of well operation.

(d) Pressures are to be measured in pounds per square inch (psi).

(e) Fluid volumes are to be measured in standard oil field barrels (bbl).

(f) Fluid rates are to be measured in barrels per day (bbl/day).

3. Records Retention.

(a) Records of calibration and maintenance, and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit shall be retained for a period of AT LEAST THREE (3) YEARS from the date of the sample, measurement, report, or application. This period may be extended anytime prior to its expiration by request of the Director.

(b) Records of the nature and composition of all injected fluids must be retained until three (3) years after the completion of any plugging and abandonment (P&A) procedures specified under 40 CFR 144.52(a)(6) or under Part 146 Subpart G, as appropriate. The Director may require the Permittee to deliver the records to the Director at the conclusion of the retention period. The Permittee shall continue to retain the records after the three (3) year retention period unless the Permittee delivers the records to the Director or obtains written approval from the Director to discard the records.

(c) The Permittee shall retain records at the location designated in APPENDIX D.

4. Annual Reports.

Whether the well is operating or not, the Permittee shall submit an Annual Report to the Director that summarizes the results of the monitoring required by Part II Section D and APPENDIX D.

The first Annual Report shall cover the period from the effective date of the Permit through December 31 of that year. Subsequent Annual Reports shall cover the period from January 1 through December 31 of the reporting year. Annual Reports shall be submitted by February 15 of the year following data collection. EPA Form 7520-11 may be copied and shall be used to submit the Annual Report, however, the monitoring requirements specified in this Permit are mandatory even if EPA Form 7520-11 indicates otherwise.

Section E. PLUGGING AND ABANDONMENT

1. Notification of Well Abandonment, Conversion or Closure.

The Permittee shall notify the Director in writing at least forty-five (45) days prior to: 1) plugging and abandoning an injection well, 2) converting to a non-injection well, and 3) in the case of an Area Permit, before closure of the project.

2. Well Plugging Requirements

Prior to abandonment, the injection well shall be plugged with cement in a manner which prevents the movement of fluids into or between underground sources of drinking water. Prior to placement of the cement plug(s) the well shall be in a state of static equilibrium with the mud weight equalized top to bottom, either by circulating the mud in the well at least once or by a comparable method prescribed by the Director. The well shall be plugged in accordance with the approved plugging and abandonment plan and with 40 CFR 146.10.

3. Approved Plugging and Abandonment Plan.

The approved plugging and abandonment plan is incorporated into this Permit as APPENDIX E. Changes to the approved plugging and abandonment plan must be approved by the Director prior to beginning plugging operations. The Director also may require revision of the approved plugging and abandonment plan at any time prior to plugging the well.

4. Forty Five (45) Day Notice of Plugging and Abandonment.

The Permittee shall notify the Director at least forty-five (45) days prior to plugging and abandoning a well and provide notice of any anticipated change to the approved plugging and abanonment plan.

5. Plugging and Abandonment Report.

Within sixty (60) days after plugging a well, the Permittee shall submit a report (EPA Form 7520-13) to the Director. The plugging report shall be certified as accurate by the person who performed the plugging operation. Such report shall consist of either:

(a) A statement that the well was plugged in accordance with the approved plugging and abandonment plan; or

(b) Where actual plugging differed from the approved plugging and abandonment plan, an updated version of the plan, on the form supplied by the Director, specifying the differences.

6. Inactive Wells.

After any period of two years during which there is no injection the Permittee shall plug and abandon the well in accordance with Part II Section E Paragraph 2 of this Permit unless the Permittee:

(a) Provides written notice to the Director;

(b) Describes the actions or procedures the Permittee will take to ensure that the well will not endanger USDWs during the period of inactivity. These actions and procedures shall include compliance with mechanical integrity demonstration, Financial Responsibility and all other permit requirements designed to protect USDWs; and

(c) Receives written notice by the Director temporarily waiving plugging and abandonment requirements.

PART III. CONDITIONS APPLICABLE TO ALL PERMITS

Section A. EFFECT OF PERMIT

The Permittee is allowed to engage in underground injection in accordance with the conditions of this Permit. The Permittee shall not construct, operate, maintain, convert, plug, abandon, or conduct any other activity in a manner that allows the movement of fluid containing any contaminant into underground sources of drinking water, if the presence of that contaminant may cause a violation of any primary drinking water regulation under 40 CFR 142 or may otherwise adversely affect the health of persons. Any underground injection activity not authorized by this Permit or by rule is prohibited. Issuance of this Permit does not convey property rights of any sort or any exclusive privilege; nor does it authorize any injury to persons or property, any invasion of other private rights, or any infringement of State or local law or regulations. Compliance with the terms of this Permit does not constitute a defense to any enforcement action brought under the provisions of Section 1431 of the Safe Drinking Water Act (SDWA) or any other law governing protection of public health or the environment, for any imminent and substantial endangerment to human health or the environment, nor does it serve as a shield to the Permittee's independent obligation to comply with all UIC regulations. Nothing in this Permit relieves the Permittee of any duties under applicable regulations.

Section B. CHANGES TO PERMIT CONDITIONS

1. Modification, Reissuance, or Termination.

The Director may, for cause or upon a request from the Permittee, modify, revoke and reissue, or terminate this Permit in accordance with 40 CFR 124.5, 144.12, 144.39, and 144.40. Also, this Permit is subject to minor modification for causes as specified in 40 CFR 144.41. The filing of a request for modification, revocation and reissuance, termination, or the notification of planned changes or anticipated noncompliance on the part of the Permittee does not stay the applicability or enforceability of any condition of this Permit.

2. Conversions.

The Director may, for cause or upon a written request from the Permittee, allow conversion of the well from a Class II injection well to a non-Class II well. Conversion may not proceed until the Permittee receives written approval from the Director. Conditions of such conversion may include but are not limited to, approval of the proposed well rework, follow up demonstration of mechanical integrity, well-specific monitoring and reporting following the conversion, and demonstration of practical use of the converted configuration.

3. Transfer of Permit.

Under 40 CFR 144.38, this Permit is transferable provided the current Permittee notifies the Director at least thirty (30) days in advance of the proposed transfer date (EPA Form 7520-7) and provides a written agreement between the existing and new Permittees containing a specific date for transfer of Permit responsibility, coverage and liability between them. The notice shall adequately demonstrate that the financial responsibility requirements of 40 CFR 144.52(a)(7) will be met by the new Permittee. The Director may require modification or revocation and reissuance of the Permit to change the name of the Permittee and incorporate such other requirements as may be necessary under the Safe Drinking Water Act; in some cases, modification or revocation and reissuance is mandatory.

4. Permittee Change of Address.

Upon the Permittee's change of address, or whenever the operator changes the address where monitoring records are kept, the Permittee must provide written notice to the Director within 30 days.

5. Construction Changes, Workovers, Logging and Testing Data

The Permittee shall give advance notice to the Director, and shall obtain the Director's written approval prior to any physical alterations or additions to the permitted facility. Alterations or workovers shall meet all conditions as set forth in this permit. The Permittee shall record any changes to the well construction on a Well Rework Record (EPA Form 7520-12), and shall provide this and any other record of well workovers, logging , or test data to EPA within sixty (60) days of completion of the activity.

Following the completion of any well workovers or alterations which affect the casing, tubing, or packer, a successful demonstration of mechanical integrity (Part III, Section F of this permit) shall be made, and written authorization from the Director received, prior to resuming injection activities.

Section C. SEVERABILITY

The Provisions of this Permit are severable, and if any provision of this Permit or the application of any provision of this Permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this Permit shall not be affected thereby.

Section D. CONFIDENTIALITY

In accordance with 40 CFR Part 2 and 40 CFR 144.5, information submitted to EPA pursuant to this Permit may be claimed as confidential by the submitter. Any such claim must be asserted at the time of submission by stamping the words "confidential business information" on each page containing such information. If no claim is made at the time of submission, EPA may make the information available to the public without further notice. If a claim is asserted, the validity of the claim will be assessed in accordance with the procedures in 40 CFR Part 2 (Public Information). Claims of confidentiality for the following information will be denied:

- The name and address of the Permittee, and
- information which deals with the existence, absence or level of contaminants in drinking water.

Section E. GENERAL PERMIT REQUIREMENTS

1. Duty to Comply.

The Permittee must comply with all conditions of this Permit. Any noncompliance constitutes a violation of the Safe Drinking Water Act (SDWA) and is grounds for enforcement action; for Permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application; except that the Permittee need not comply with the provisions of this Permit to the extent and for the duration such noncompliance is authorized in an emergency permit under 40 CFR 144.34. All violations of the SDWA may subject the Permittee to penalties and/or criminal prosecution as specified in Section 1423 of the SDWA.

2. Duty to Reapply.

If the Permittee wishes to continue an activity regulated by this Permit after the expiration date of this Permit, under 40 CFR 144.37 the Permittee must apply for a new permit prior to the expiration date.

3. Need to Halt or Reduce Activity Not a Defense.

It shall not be a defense for a Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this Permit.

4. Duty to Mitigate.

The Permittee shall take all reasonable steps to minimize or correct any adverse impact on the environment resulting from noncompliance with this Permit.

5. Proper Operation and Maintenance.

The Permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Permittee to achieve compliance with the conditions of this Permit. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of this Permit.

6. Permit Actions.

This Permit may be modified, revoked and reissued or teminated for cause. The filing of a request by the Permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.

7. Property Rights.

This Permit does not convey any property rights of any sort, or any exclusive privilege.

8. Duty to Provide Information.

The Permittee shall furnish to the Director, within a time specified, any information which the Director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The Permittee shall also furnish to the Director, upon request, copies of records required to be kept by this Permit. The Permittee is required to submit any information required by this Permit or by the Director to the mailing address designated in writing by the Director.

9. Inspection and Entry.

The Permittee shall allow the Director, or an authorized representative, upon the presentation of credentials and other documents as may be required by law, to:

(a) Enter upon the Permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this Permit;

(b) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Permit;

(c) Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Permit; and,

(d) Sample or monitor at reasonable times, for the purpose of assuring permit compliance or as otherwise authorized by the SDWA, any substances or parameters at any location.

10. Signatory Requirements.

All applications, reports or other information submitted to the Director shall be signed and certified according to 40 CFR 144.32. This section explains the requirements for persons duly authorized to sign documents, and provides wording for required certification.

11. Reporting Requirements.

(a) Planned changes. The Permittee shall give notice to the Director as soon as possible of any planned changes, physical alterations or additions to the permitted facility, and prior to commencing such changes.

(b) Anticipated noncompliance. The Permittee shall give advance notice to the Director of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.

(c) Monitoring Reports. Monitoring results shall be reported at the intervals specified in this Permit.

(d) Compliance schedules. Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this Permit shall be submitted no later than 30 days following each schedule date.

(e) Twenty-four hour reporting. The Permittee shall report to the Director any noncompliance which may endanger human health or the environment, including:

(i) Any monitoring or other information which indicates that any contaminant may cause endangerment to a USDW; or

(ii) Any noncompliance with a permit condition or malfunction of the injection system which may cause fluid migration into or between USDWs.

Information shall be provided, either directly or by leaving a message, within twenty-four (24) hours from the time the permittee becomes aware of the circumstances by telephoning (800) 227-8917 and requesting EPA Region VIII UIC Program Compliance and Technical Enforcement Director, or by contacting the EPA Region VIII Emergency Operations Center at (303) 293-1788.

In addition, a follow up written report shall be provided to the Director within five (5) days of the time the Permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause, the period of noncompliance including exact dates and times, and if the noncompliance has not been corrected the anticipated time it is expected to continue; and the steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance.

(f) Oil Spill and Chemical Release Reporting: The Permittee shall comply with all reporting requirements related to the occurence of oil spills and chemical releases by contacting the National Response Center (NRC) at (800) 424-8802, (202) 267-2675, or through the NRC website http://www.nrc.uscg.mil/index.htm.

(g) Other Noncompliance. The Permittee shall report all instances of noncompliance not reported under paragraphs Part III, Section E Paragraph 11(b) or Section E, Paragraph 11(e) at the time the monitoring reports are submitted. The reports shall contain the information listed in Paragraph 11(e) of this Section.

(h) Other information. Where the Permittee becomes aware that it failed to submit any relevant facts in the permit application, or submitted incorrect information in a permit application or in any report to the Director, the Permittee shall promptly submit such facts or information to the Director.

Section F. FINANCIAL RESPONSIBILITY

1. Method of Providing Financial Responsibility.

The Permittee shall maintain continuous compliance with the requirement to maintain financial responsibility and resources to close, plug, and abandon the underground injection well(s). No substitution of a demonstration of financial responsibility shall become effective until the Permittee receives written notification from the Director that the alternative demonstration of financial responsibility is acceptable. The Director may, on a periodic basis, require the holder of a permit to revise the estimate of the resources needed to plug and abandon the well to reflect changes in such costs and may require the Permittee to provide a revised demonstration of financial responsibility.

2. Insolvency.

In the event of:

(a) the bankruptcy of the trustee or issuing institution of the financial mechanism; or

(b) suspension or revocation of the authority of the trustee institution to act as trustee; or

(c) the institution issuing the financial mechanism losing its authority to issue such an instrument

the Permittee must notify the Director in writing, within ten (10) business days, and the Permittee must establish other financial assurance or liability coverage acceptable to the Director within sixty (60) days after any event specified in (a), (b), or (c) above.

The Permittee must also notify the Director by certified mail of the commencement of voluntary or involuntary proceedings under Title 11 (Bankruptcy), U.S. Code naming the owner or operator as debtor, within ten (10) business days after the commencement of the proceeding. A guarantor, if named as debtor of a corporate guarantee, must make such a notification as required under the terms of the guarantee.

APPENDIX A

WELL CONSTRUCTION REQUIREMENTS

The well presently is constructed with 8-5/8" surface casing cemented to surface from the casing base at 285'. Production casing of 5-1/2" is set from TD at 4808' and cemented up to 250'.

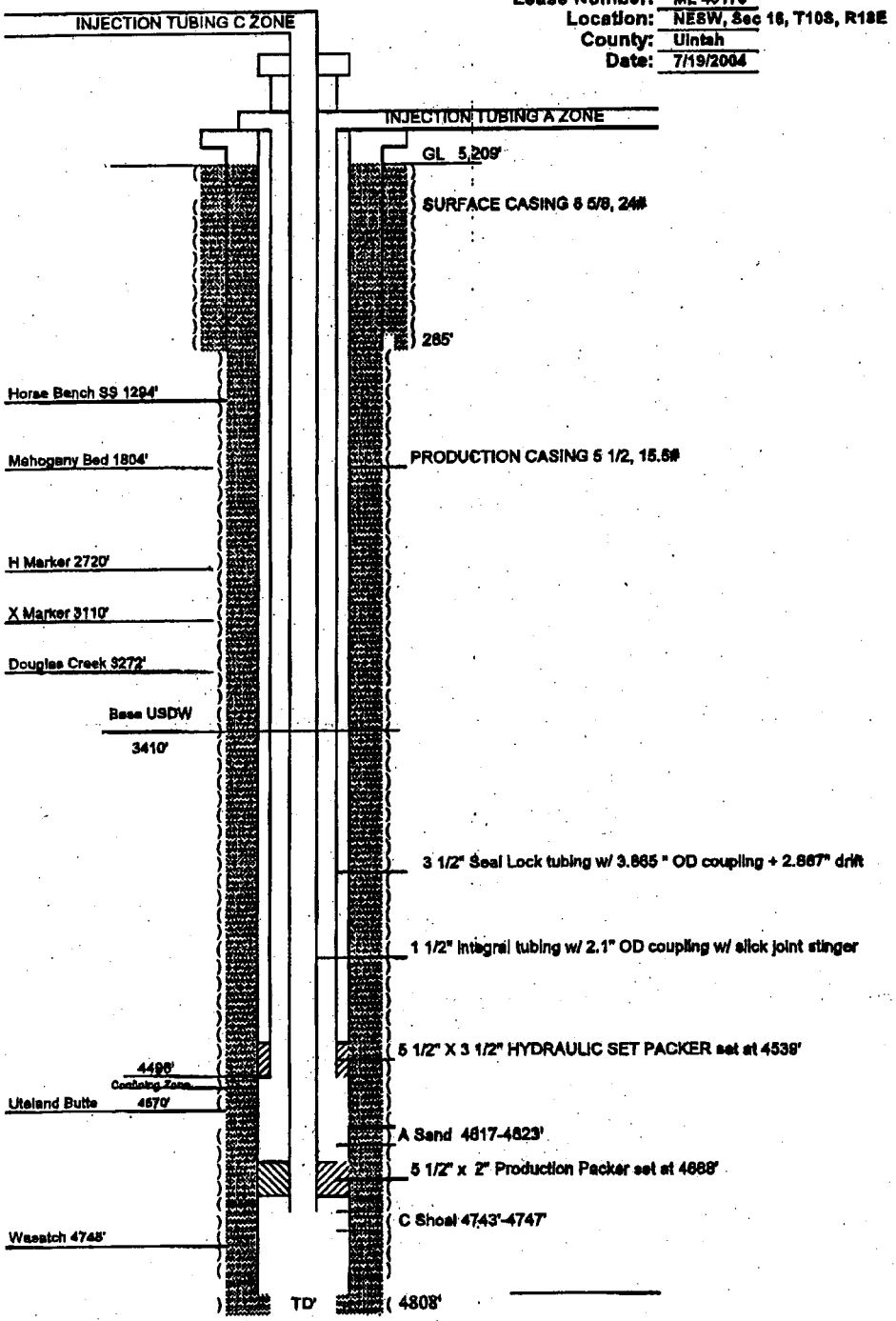
The well will be completed with 3-1/2" injection tubing (A-Sand) set with a packer at approximately 4538', and inside the 3-1/2" tubing is set an inner (C Shoal) 1-1/2" injection tubing set in the production packer set at 4668'.

Evaluation of the cement bond log indicates the top of cement occurs at approximately 250', and that adequate intervals of 80% or greater bond index occur through the intervals from 4118' to 4543' and from 4550' to 4578'.

WELLBORE DIAGRAM

INJECTION WELLBORE DIAGRAM

Company: PENDRAGON
Well name: State 11-16-10-18
Lease Number: ML 45178
Location: NESW, Sec 16, T10S, R18E
County: Uintah
Date: 7/19/2004



UT20964-06346

UT20964 State 11-16 constr.bmp

APPENDIX B

LOGGING AND TESTING REQUIREMENTS

Logs.
Logs will be conducted according to current UIC guidance. It is the responsibility of the permittee to obtain and use guidance prior to conducting any well logging required as a condition of this permit.

NO LOGGING REQUIREMENTS

Tests.
Tests will be conducted according to current UIC guidance. It is the responsibility of the permittee to obtain and use guidance prior to conducting any well test required as a condition of this permit.

WELL NAME: State 11-16 10-18

TYPE OF TEST	DATE DUE
Pore Pressure	prior to injection
Standard Annulus Pressure	at least once every five years
Standard Annulus Pressure	prior to injection

APPENDIX C

OPERATING REQUIREMENTS

MAXIMUM ALLOWABLE INJECTION PRESSURE:

Maximum Allowable Injection Pressure (MAIP) as measured at the surface shall not exceed the pressure(s) listed below.

	MAXIMUM ALLOWED INJECTION PRESSURE (psi)	
WELL NAME	ZONE 1 (Upper)	ZONE 2 (Lower)
State 11-16 10-18	2,070	2,115

INJECTION INTERVAL(S):

Injection is permitted only within the approved injection interval listed below. Injection perforations may be altered provided they remain within the approved injection interval and the Permittee provides notice to the Director in accordance with Part II, Section A, Paragraph 6. Specific injection perforations can be found in Appendix A.

WELL NAME: State 11-16 10-18

	APPROVED INJECTION INTERVAL (KB, ft)		FRACTURE GRADIENT
FORMATION NAME	TOP	BOTTOM	(psi/ft)
A sand	4,617.00	4,622.00	0.890
C shoal	4,743.00	4,747.00	0.890

ANNULUS PRESSURE:

The annulus pressure shall be maintained at zero (0) psi as measured at the wellhead. If this pressure cannot be maintained, the Permittee shall follow the procedures listed under Part II, Section C. 6. of this permit.

MAXIMUM INJECTION VOLUME:

There is no limitation on the number of barrels per day (bbls/day) of water that shall be injected into this well, provided further that in no case shall injection pressure exceed that limit shown in Appendix C.

APPENDIX D

MONITORING AND REPORTING PARAMETERS

This is a listing of the parameters required to be observed, recorded, and reported. Refer to the permit Part II, Section D, for detailed requirements for observing, recording, and reporting these parameters.

OBSERVE MONTHLY AND RECORD AT LEAST ONCE EVERY THIRTY DAYS	
OBSERVE AND RECORD	Injection pressure (psig)
	Annulus pressure(s) (psig)
	Injection rate (bbl/day)
	Fluid volume injected since the well began injecting (bbls)

ANNUALLY	
ANALYZE	Injected fluid total dissolved solids (mg/l)
	Injected fluid specific gravity
	Injected fluid specific conductivity
	Injected fluid pH

ANNUALLY	
REPORT	Each month's maximum and averaged injection pressures (psig)
	Each month's maximum and averaged annulus pressure(s) (psig)
	Each month's averaged injection rate (bbl/day)
	Fluid volume injected since the well began injecting (bbl)
	Written results of annual injected fluid analysis
	Sources of all fluids injected during the year

Records of all monitoring activities must be retained and made available for inspection at the following location:

Pengagon Energy Partners, Inc.
621 17th Street, Suite 750
Denver, CO 80293

APPENDIX E

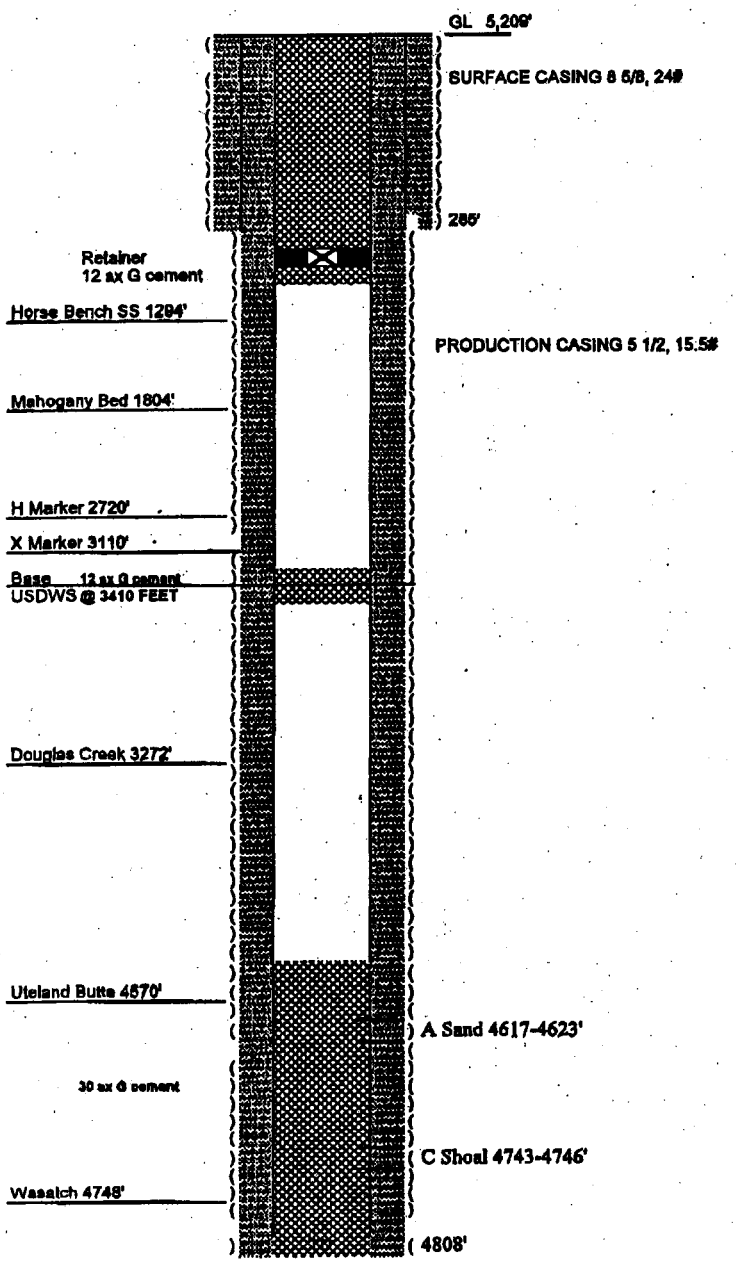
PLUGGING AND ABANDONMENT REQUIREMENTS

Plugging gel of a density of at least 9.6 ppg shall be placed between all cement plugs.

WELLBORE DIAGRAM

Company: PENDRAGON
Well name: State 11-16-10-18
Lease Number: ML 45176
Location: SESW, Sec.16 T10S
County: Uintah
Date: 7/19/2004

P&A DIAGRAM



UT20964-06346

UT20964 State 11-16 P-A.bmp

APPENDIX F

CORRECTIVE ACTION REQUIREMENTS

No corrective action is deemed necessary for this project.

DIVISION OF OIL, GAS AND MINING

MONTHLY OIL AND GAS PRODUCTION REPORT

OPERATOR NAME AND ADDRESS

JANEEN FRITTS
PENDRAGON ENERGY PTNRS INC
621 17TH ST STE 750
DENVER, CO 80293

UTAH ACCOUNT NUMBER: N2965

REPORT PERIOD (MONTH/YEAR): Jun-05

AMENDED REPORT (Highlight Changes)

WELL NAME API Number Entity Location	Producing Zone	Well Status	Well Type	Days Oper	Production Volumes OIL (BBL)	GAS (MCF)	WATER (BBL)
STATE 3-16-10-18 4304734766 14366 10S 18E 16	GRRV	P	OW	30	320	80	0
STATE 11-16-10-18 4304734767 14366 10S 18E 16	GRRV	P	OW	30	440	110	19
WEST RIVER BEND 3-12-10-15 4301331888 14542 10S 15E 12	GRRV	P	OW	28	71	18	25
WEST RIVER BEND 16-17-10-17 4301332057 14543 10S 17E 17	GRRV	P	OW	30	43	11	90
WILKIN RIDGE 13-23-10-16 4301332084 14544 10S 16E 23	WSTC	SI	OW	0	0	0	0
W. DESERT SPRING 11-20-10-17 4301332088 14545 10S 17E 20	WSTC	SI	OW	0	0	0	0
TOTALS					874	219	134

COMMENTS:

I hearby certify that the report is true and complete to the best of my knowledge.

Date: July 27, 2005

Name & Signature: Janeen Fritts
JANEEN FRITTS

Telephone Number: 303-295-9402

RECEIVED
JUL 29 2005
DIV. OF OIL, GAS & MINING

FORM 6

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

010

ENTITY ACTION FORM

Operator: PENDRAGON ENERGY PARTNERS, INC.
Operator Account Number: N 2965
Address: 621 17TH STREET, STE. 750
city DENVER
state CO zip 80293
Phone Number: (303) 296-9402

Well 1

API Number	Well Name	QQ	Sec	Twp	Rng	County
047-34767	STATE #11-16-10-18	NESW	16	10S	18E	UINTAH

Action Code	Current Entity Number	New Entity Number	Spud Date	Entity Assignment Effective Date
E	13734	14366		11/4/04

K

Comments: EFFECTIVE 9/1/04 PART OF UTELAND BUTTE WATERFLOOD
GRRV eff 9/1/04

Well 2

API Number	Well Name	QQ	Sec	Twp	Rng	County
047-33807	STATE #1-16-10-18	NENE	16	10S	18E	UINTAH

Action Code	Current Entity Number	New Entity Number	Spud Date	Entity Assignment Effective Date
E	13103	14366		11/4/04

K

Comments: EFFECTIVE 9/1/04 PART OF UTELAND BUTTE WATERFLOOD
GRRV eff 9/1/04

Well 3

API Number	Well Name	QQ	Sec	Twp	Rng	County
047-34766	STATE #3-16-10-18	NENW	16	10S	18E	UINTAH

Action Code	Current Entity Number	New Entity Number	Spud Date	Entity Assignment Effective Date
E	13733	14366		11/4/04

K

Comments: EFFECTIVE 9/1/04 PART OF UTELAND BUTTE WATERFLOOD
GRRV eff 9/1/04

ACTION CODES:
- A - Establish new entity for new well (single well only)
- B - Add new well to existing entity (group or unit well)
- C - Re-assign well from one existing entity to another existing entity
- D - Re-assign well from one existing entity to a new entity
- E - Other (Explain in 'comments' section)

JANEEN FRITTS
Name (Please Print)
Janeen Fritts
Signature
ADMIN SECY
Title
11/04/04
Date

RECEIVED
NOV 04 2004
DIV OF OIL, GAS

(5/2000)

FORM 6

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

ENTITY ACTION FORM

Operator: PENDRAGON ENERGY PARTNERS, INC.
Operator Account Number: N 2965
Address: 621 17TH STREET, STE. 750
city DENVER
state CO zip 80293
Phone Number: (303) 296-9402

Well 1

API Number	Well Name	QQ	Sec	Twp	Rng	County
047-34767	STATE #11-16-10-18	NESW	16	10S	18E	UINTAH

Action Code	Current Entity Number	New Entity Number	Spud Date	Entity Assignment Effective Date
E	13734	14366		11/4/04

K

Comments: EFFECTIVE 9/1/04 PART OF UTELAND BUTTE WATERFLOOD
GRRV eff 9/1/04

Well 2

API Number	Well Name	QQ	Sec	Twp	Rng	County
047-33807	STATE #1-16-10-18	NENE	16	10S	18E	UINTAH

Action Code	Current Entity Number	New Entity Number	Spud Date	Entity Assignment Effective Date
E	13103	14366		11/4/04

Comments: EFFECTIVE 9/1/04 PART OF UTELAND BUTTE WATERFLOOD
GRRV eff 9/1/04

Well 3

API Number	Well Name	QQ	Sec	Twp	Rng	County
047-34766	STATE #3-16-10-18	NENW	16	10S	18E	UINTAH

Action Code	Current Entity Number	New Entity Number	Spud Date	Entity Assignment Effective Date
E	13733	14366		11/4/04

K

Comments: EFFECTIVE 9/1/04 PART OF UTELAND BUTTE WATERFLOOD
GRRV eff 9/1/04

ACTION CODES:
- A - Establish new entity for new well (single well only)
- B - Add new well to existing entity (group or unit well)
- C - Re-assign well from one existing entity to another existing entity
- D - Re-assign well from one existing entity to a new entity
- E - Other (Explain in 'comments' section)

JANEEN FRITTS
Name (Please Print)
Janeen Fritts
Signature
ADMIN SECY
Title
11/04/04
Date

RECEIVED
NOV 04 2004
DIV. OF OIL, GAS &

(5/2000)

FORM 9

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

5. LEASE DESIGNATION AND SERIAL NUMBER: ML 45175

SUNDRY NOTICES AND REPORTS ON WELLS

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

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.

7. UNIT or CA AGREEMENT NAME: UTU 81306X

1. TYPE OF WELL: OIL WELL ☑ GAS WELL ☐ OTHER

8. WELL NAME and NUMBER: STATE #11-16-10-18

2. NAME OF OPERATOR: PENDRAGON ENERGY PARTNERS, INC.

9. API NUMBER: 43-047-34767

3. ADDRESS OF OPERATOR: 621 17TH ST., STE. #750 CITY DENVER STATE CO ZIP 80293

PHONE NUMBER: (303) 296-9402

10. FIELD AND POOL, OR WILDCAT: UTELAND BUTTE

4. LOCATION OF WELL

FOOTAGES AT SURFACE: 2022' FSL, 2104' FWL

COUNTY: UINTAH

QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: NESW 16 10S 18E

STATE: UTAH

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

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

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

THIS WELL HAS BEEN PERMITTED FOR CONVERSION TO A WATER INJECTION WELL BUT HAS NOT YET BEEN CONVERTED. CONVERSION IS EXPECTED TO OCCUR AFTER WATER BREAK-THROUGH FROM EXISTING INJECTION - PROBABLY SOME TIME IN CALENDAR 2006.

NAME (PLEASE PRINT) ALAN B. NICOL TITLE PRESIDENT

SIGNATURE DATE 9/26/2005

(This space for State use only)

RECEIVED
SEP 28 2005
DIV. OF OIL, GAS & MINING

(5/2000) (See Instructions on Reverse Side)

Division of Oil, Gas and Mining

OPERATOR CHANGE WORKSHEET

ROUTING
1. DJJ
2. CDW

X - Change of Operator (Well Sold) Operator Name Change/Merger

The operator of the well(s) listed below has changed, effective: **12/15/2009**

FROM: (Old Operator):	**TO:** (New Operator):
N2965-Pendragon Energy Partners, Inc.	N5085-Questar E&P Company
468 South Reed St.	1050 17th St, Suite 500
Lakewood, CO 80226	Denver, CO 80265
Phone: 1 (303) 296-9402	Phone: 1 (303) 672-6900

CA No. **Unit:** **UTELAND BUTTE (GRRV)**

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

1. (R649-8-10) Sundry or legal documentation was received from the **FORMER** operator on: 12/24/2009
2. (R649-8-10) Sundry or legal documentation was received from the **NEW** operator on: 12/24/2009
3. The new company was checked on the **Department of Commerce, Division of Corporations Database on:** 1/20/2010

4a. Is the new operator registered in the State of Utah: _____ Business Number: 764611-0143

5a. (R649-9-2)Waste Management Plan has been received on: IN PLACE

5b. Inspections of LA PA state/fee well sites complete on: 1/12/2010 ok per DJJ

5c. Reports current for Production/Disposition & Sundries on: ok

6. **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 not yet BIA
7. **Federal and Indian Units:**
   The BLM or BIA has approved the successor of unit operator for wells listed on: not yet
8. **Federal and Indian Communization Agreements ("CA"):**
   The BLM or BIA has approved the operator for all wells listed within a CA on: n/a
9. **Underground Injection Control ("UIC")** The 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: 1/12/2010

DATA ENTRY:

1. Changes entered in the **Oil and Gas Database on:** 1/20/2010
2. Changes have been entered on the **Monthly Operator Change Spread Sheet on:** 1/20/2010
3. Bond information entered in RBDMS on: 1/20/2010
4. Fee/State wells attached to bond in RBDMS on: 1/20/2010
5. Injection Projects to new operator in RBDMS on: 1/20/2010
6. Receipt of Acceptance of Drilling Procedures for APD/New on: n/a

BOND VERIFICATION:

1. Federal well(s) covered by Bond Number: ESB000024
2. Indian well(s) covered by Bond Number: n/a

3a. (R649-3-1) The **NEW** operator of any state/fee well(s) listed covered by Bond Number 965003033

3b. The **FORMER** operator has requested a release of liability from their bond on: not yet

LEASE INTEREST OWNER NOTIFICATION:

4. (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: n/a

COMMENTS:

Pendragon (N2965) to Questar Exploration Production (N5085)

DESERT SPRINGS 20-1	20	100S	180E	4304732052	14366	FEDERAL	OW	S		UTU-74836
DESERT SPRING 3-29-10-18	29	100S	180E	4304733162	14366	FEDERAL	OW	P		U-74836
DESERT SPRING 16-19-10-18	19	100S	180E	4304733164	14366	FEDERAL	OW	P		U-74408
FEDERAL 7-19-10-18	19	100S	180E	4304733244	14366	FEDERAL	WS	A		UTU74408
FEDERAL 5-20-10-18	20	100S	180E	4304733245	14366	FEDERAL	WI	A		UTU74836
FEDERAL 14-17-10-18	17	100S	180E	4304733712	14366	FEDERAL	OW	S		UTU74407
FED 2-20-10-18	20	100S	180E	4304734134	14366	FEDERAL	OW	P		UTU-0182660-A
FED 9-17-10-18	17	100S	180E	4304734135	14366	FEDERAL	WI	A		UTU-77407
DESERT SPRING 7-30-10-18	30	100S	180E	4304734760	14366	FEDERAL	OW	S		U74408
STATE 1-16-10-18	16	100S	180E	4304733807	14366	STATE	OW	P		ML-45175
STATE 3-16-10-18	16	100S	180E	4304734766	14366	STATE	OW	P		ML 45175
STATE 11-16-10-18	16	100S	180E	4304734767	14366	STATE	OW	P		ML 45175

1/20/2010

FORM 9

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

5. LEASE DESIGNATION AND SERIAL NUMBER: ML-45175

SUNDRY NOTICES AND REPORTS ON WELLS

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7. UNIT or CA AGREEMENT NAME:

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 ☑ GAS WELL ☐ OTHER

8. WELL NAME and NUMBER: State 11-16-10-18

2. NAME OF OPERATOR: Questar Exploration & Production Company N5085

9. API NUMBER: 4304734767

3. ADDRESS OF OPERATOR: 1050 17th Street Suite 500 | CITY Denver STATE CO ZIP 80265

PHONE NUMBER: (303) 672-6900

10. FIELD AND POOL, OR WILDCAT: Uteland Butte

4. LOCATION OF WELL

FOOTAGES AT SURFACE: 2022' FSL, 2104' FWL

COUNTY: Uintah

QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: NESW 16 10S 18E S

STATE: UTAH

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

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

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

Effective 12/15/09 Questar Exploration & Production Company was appointed operator of this well and agrees to be responsible under the terms and conditions of the lease for all oil and gas operations conducted on this lease. Bond coverage is provided by our bond # 965-003-033.

12/15/09
Alan B. Nicol — Date
President
Pendragon Energy Partners, Inc. N2965
468 South Reed Street
Lakewood, CO 80226
(303) 296-9402

12-15-2009
Jay Neese — Date
Executive Vice President
Questar Exploration and Production Company
1050 17th Street, Suite 500
Denver, CO 80265

NAME (PLEASE PRINT) Chad Matney TITLE Landman

SIGNATURE DATE 12-15-2009

(This space for State use only)

APPROVED 01/30/2010
Earlene Russell
Division of Oil, Gas and Mining
Earlene Russell, Engineering Technician

(5/2000) (See Instructions on Reverse Side)

RECEIVED
DEC 24 2009
DIV. OF OIL, GAS & MINING

Division of Oil, Gas and Mining

OPERATOR CHANGE WORKSHEET (for state use only)

ROUTING
CDW

Change of Operator (Well Sold) **X - Operator Name Change**

The operator of the well(s) listed below has changed, effective: **6/14/2010**

FROM: (Old Operator):	**TO:** (New Operator):
N5085-Questar Exploration and Production Company 1050 17th St, Suite 500 Denver, CO 80265	N3700-QEP Energy Company 1050 17th St, Suite 500 Denver, CO 80265
Phone: 1 (303) 308-3048	Phone: 1 (303) 308-3048

CA No. **Unit:** **UTELAND BUTTE (GRRV)**

WELL NAME	SEC	TWN	RNG	API NO	ENTITY NO	LEASE TYPE	WELL TYPE	WELL STATUS
SEE ATTACHED								

OPERATOR CHANGES DOCUMENTATION

Enter date after each listed item is completed

1. (R649-8-10) Sundry or legal documentation was received from the **FORMER** operator on: 6/28/2010
2. (R649-8-10) Sundry or legal documentation was received from the **NEW** operator on: 6/28/2010
3. The new company was checked on the **Department of Commerce, Division of Corporations Database on:** 6/24/2010

4a. Is the new operator registered in the State of Utah: Business Number: 764611-0143

5a. (R649-9-2)Waste Management Plan has been received on: Requested

5b. Inspections of LA PA state/fee well sites complete on: n/a

5c. Reports current for Production/Disposition & Sundries on: ok

6. **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 8/16/2010 BIA not yet
7. **Federal and Indian Units:**
   The BLM or BIA has approved the successor of unit operator for wells listed on: 8/16/2010
8. **Federal and Indian Communization Agreements ("CA"):**
   The BLM or BIA has approved the operator for all wells listed within a CA on: N/A
9. **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: 6/29/2010

DATA ENTRY:

1. Changes entered in the **Oil and Gas Database on:** 6/30/2010
2. Changes have been entered on the **Monthly Operator Change Spread Sheet on:** 6/30/2010
3. Bond information entered in RBDMS on: 6/30/2010
4. Fee/State wells attached to bond in RBDMS on: 6/30/2010
5. Injection Projects to new operator in RBDMS on: 6/30/2010
6. Receipt of Acceptance of Drilling Procedures for APD/New on: n/a

BOND VERIFICATION:

1. Federal well(s) covered by Bond Number: ESB000024
2. Indian well(s) covered by Bond Number: 965010693

3a. (R649-3-1) The **NEW** operator of any state/fee well(s) listed covered by Bond Number 965010695

3b. The **FORMER** operator has requested a release of liability from their bond on: n/a

LEASE INTEREST OWNER NOTIFICATION:

4. (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: n/a

COMMENTS:

Questar Exploration Production Company (N5085) to QEP Energy Company (N3700)
UTELAND BUTTE (GRRV)
effective June 14, 2010

well_name	sec	twp	rng	api	entity	mineral lease	type	stat
DESERT SPRINGS 20-1	20	100S	180E	4304732052	14366	Federal	OW	P
DESERT SPRING 3-29-10-18	29	100S	180E	4304733162	14366	Federal	OW	P
DESERT SPRING 16-19-10-18	19	100S	180E	4304733164	14366	Federal	OW	P
FEDERAL 14-17-10-18	17	100S	180E	4304733712	14366	Federal	OW	P
STATE 1-16-10-18	16	100S	180E	4304733807	14366	State	OW	P
FED 2-20-10-18	20	100S	180E	4304734134	14366	Federal	OW	P
DESERT SPRING 7-30-10-18	30	100S	180E	4304734760	14366	Federal	OW	P
STATE 3-16-10-18	16	100S	180E	4304734766	14366	State	OW	P
STATE 11-16-10-18	16	100S	180E	4304734767	14366	State	OW	P

Bonds: BLM = ESB000024
BIA = 956010693
State = 965010695

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.

5. LEASE DESIGNATION AND SERIAL NUMBER: See attached

6. IF INDIAN, ALLOTTEE OR TRIBE NAME: See attached

7. UNIT or CA AGREEMENT NAME: See attached

8. WELL NAME and NUMBER: See attached

9. API NUMBER: Attached

10. FIELD AND POOL, OR WILDCAT: See attached

1. TYPE OF WELL: OIL WELL ☐ GAS WELL ☐ OTHER

2. NAME OF OPERATOR: Questar Exploration and Production Company N5085

3. ADDRESS OF OPERATOR: 1050 17th Street, Suite 500 CITY Denver STATE CO ZIP 80265 PHONE NUMBER: (303) 672-6900

4. LOCATION OF WELL

FOOTAGES AT SURFACE: See attached

COUNTY: Attached

QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:

STATE: UTAH

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

TYPE OF SUBMISSION	TYPE OF ACTION		
☑ NOTICE OF INTENT (Submit in Duplicate)	☐ ACIDIZE	☐ DEEPEN	☐ REPERFORATE CURRENT FORMATION
Approximate date work will start: 6/14/2010	☐ ALTER CASING	☐ FRACTURE TREAT	☐ SIDETRACK TO REPAIR WELL
	☐ CASING REPAIR	☐ NEW CONSTRUCTION	☐ TEMPORARILY ABANDON
	☐ CHANGE TO PREVIOUS PLANS	☐ OPERATOR CHANGE	☐ TUBING REPAIR
	☐ CHANGE TUBING	☐ PLUG AND ABANDON	☐ VENT OR FLARE
☐ SUBSEQUENT REPORT (Submit Original Form Only)	☐ CHANGE WELL NAME	☐ PLUG BACK	☐ WATER DISPOSAL
Date of work completion:	☐ CHANGE WELL STATUS	☐ PRODUCTION (START/RESUME)	☐ WATER SHUT-OFF
	☐ COMMINGLE PRODUCING FORMATIONS	☐ RECLAMATION OF WELL SITE	☑ OTHER: Operator Name Change
	☐ CONVERT WELL TYPE	☐ RECOMPLETE - DIFFERENT FORMATION	

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

Effective June 14, 2010 Questar Exploration and Production Company changed its name to QEP Energy Company. This name change involves only an internal corporate name change and no third party change of operator is involved. The same employees will continue to be responsible for operations of the properties described on the attached list. All operations will continue to be covered by bond numbers:

Federal Bond Number: 965002976 (BLM Reference No. ESB000024) N3700

Utah State Bond Number: ~~965003033~~ 965010695

Fee Land Bond Number: ~~965003033~~

BIA Bond Number: ~~799446~~ 965010693

The attached document is an all inclusive list of the wells operated by Questar Exploration and Production Company. As of June 14, 2010 QEP Energy Company assumes all rights, duties and obligations as operator of the properties as described on the list

NAME (PLEASE PRINT): Morgan Anderson TITLE: Regulatory Affairs Analyst

SIGNATURE: Morgan Anderson DATE: 6/23/2010

(This space for State use only)

RECEIVED
JUN 28 2010
DIV. OF OIL, GAS & MINING

APPROVED 6/30/2009
Earlene Russell
Division of Oil, Gas and Mining
Earlene Russell, Engineering Technician

(See Instructions on Reverse Side)

(5/2000)

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Utah State Office
P.O. Box 45155
Salt Lake City, UT 84145-0155
http://www.blm.gov/ut/st/en.html

TAKE PRIDE IN AMERICA

IN REPLY REFER TO:
3100
(UT-922)

JUL 28 2010

Memorandum

To: Vernal Field Office, Price Field Office, Moab Field Office

From: Chief, Branch of Minerals Roger L Bankert

Subject: Name Change Recognized

Attached is a copy of the Certificate of Name Change issued by the Texas Secretary of State and a decision letter recognizing the name change from the Eastern States Office. We have updated our records to reflect the name change in the attached list of leases.

The name change from **Questar Exploration and Production Company** into **QEP Energy Company** is effective June 8, 2010.

cc: MMS
UDOGM

RECEIVED
AUG 16 2010
DIV. OF OIL, GAS & MINING