



***Enduring Resources***

475 17<sup>th</sup> Street Suite 1500 Denver Colorado 80202  
Telephone 303 573-1222 Fax 303 573 0461

July 20, 2006

Utah Division of Oil, Gas and Mining  
1594 West North Temple, Suite 1210  
P. O. Box 145801  
Salt Lake City, Utah 84114-5801

Attn.: Ms. Diana Whitney

RE: Enduring Resources, LLC  
Southam Canyon 10-25-34-32  
SW-SE 32-10S-25E (Bottom Hole Location)  
NW-SE 32-10S-25E (Surface Location)  
State Lease: ML-47065  
Uintah County, Utah

Dear Ms. Whitney:

Enclosed are two original applications to drill concerning the above-referenced proposed well. This information was also submitted to SITLA.

Enduring Resources, LLC is requesting the Utah Division of Oil, Gas and Mining to hold this application and all future information as confidential.

If any questions arise or additional information is required, please contact me at 303-350-5114.

Very truly yours,

**ENDURING RESOURCES, LLC**

Alvin R. (Al) Arlian  
Landman-Regulatory Specialist

ara  
Enclosures:

cc: SITLA w/ attachments

**RECEIVED**

**JUL 26 2006**

DIV. OF OIL, GAS & MINING

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

FORM 3

AMENDED REPORT   
(highlight changes)

<b>APPLICATION FOR PERMIT TO DRILL</b>				5. MINERAL LEASE NO: <b>ML-47065</b>	6. SURFACE: State
1A. TYPE OF WORK: DRILL <input checked="" type="checkbox"/> REENTER <input type="checkbox"/> DEEPEN <input type="checkbox"/>				7. IF INDIAN, ALLOTTEE OR TRIBE NAME:	
B. TYPE OF WELL: OIL <input type="checkbox"/> GAS <input checked="" type="checkbox"/> OTHER _____ SINGLE ZONE <input type="checkbox"/> MULTIPLE ZONE <input checked="" type="checkbox"/>				8. UNIT or CA AGREEMENT NAME:	
2. NAME OF OPERATOR: <b>Enduring Resources, LLC</b>				9. WELL NAME and NUMBER: <b>Southam Canyon 10-25-34-32</b>	
3. ADDRESS OF OPERATOR: <b>475 17th St., Ste 1500</b> CITY <b>Denver</b> STATE <b>CO</b> ZIP <b>80220</b>			PHONE NUMBER: <b>(303) 350-5114</b>	10. FIELD AND POOL, OR WILDCAT: <del>Undesignated</del> <b>Widamf</b>	
4. LOCATION OF WELL (FOOTAGES) AT SURFACE: <b>2049' FSL - 2139' FEL</b> AT PROPOSED PRODUCING ZONE: <b>659' FSL - 1978' FEL</b> <b>SW 1/4 1610543X 4418122Y 39. 899974 -109.122067</b>				11. QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: <b>NWSE 32 10S 25E</b>	
14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE: <b>11 miles Southwest of Bonanza, UT</b>				12. COUNTY: <b>Uintah</b>	13. STATE: <b>UTAH</b>
15. DISTANCE TO NEAREST PROPERTY OR LEASE LINE (FEET) <b>659'</b>	16. NUMBER OF ACRES IN LEASE: <b>640</b>		17. NUMBER OF ACRES ASSIGNED TO THIS WELL: <b>40 acres</b>		
18. DISTANCE TO NEAREST WELL (DRILLING, COMPLETED, OR APPLIED FOR) ON THIS LEASE (FEET) <b>1000' +</b>	19. PROPOSED DEPTH: <b>4,990</b>		20. BOND DESCRIPTION: <b>RLB0008031</b>		
21. ELEVATIONS (SHOW WHETHER DF, RT, GR, ETC.): <b>5875' RT-KB</b>	22. APPROXIMATE DATE WORK WILL START: <b>10/1/2006</b>		23. ESTIMATED DURATION: <b>20 days</b>		

**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			
20"	14"	line pipe		40	3 yards	Ready Mix		
11"	8-5/8"	J-55	24#	1,716	Premium Lead	110 sxs	3.50	11.1
					Premium Tail	183 sxs	1.15	15.8
7-7/8"	4-1/2"	N-80	11.6#	4,990	Class G	33 sxs	3.3	11.0
					50/50 Poz Class G	587 sxs	1.56	14.3

**25. ATTACHMENTS**

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

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

NAME (PLEASE PRINT) Alvin R. (Al) Arlian TITLE Landman - Regulatory Specialist  
SIGNATURE *Al Arlian* DATE 7/19/2006

(This space for State use only)

API NUMBER ASSIGNED: 43-047-38401

**Approved by the  
Utah Division of  
Oil, Gas and Mining**  
APPROVAL:

**RECEIVED**  
**JUL 26 2006**

(11/2001)

Date: 09-21-06  
By: *[Signature]*

DIV. OF OIL, GAS & MINING



**Enduring Resources, LLC  
Soutam Canyon 10-25-34-32  
SW-SE 32-10S-25E (Bottom hole Location)  
NW-SE 32-10S-25E (Surface Location)  
Uintah County, Utah  
State Lease: ML-47065**

**ONSHORE ORDER 1 - DRILLING PLAN**

**1. Estimated Tops of Geological Markers:**

Formation	Depth (K.B.)
Uinta	Surface
Green River	90
Wasatch	2175
Mesaverde	3066

**2. Estimated Depths of Anticipated Water, Oil, Gas or Other Minerals:**

Substance	Formation	Depth (K.B.)
	KB-Uinta Elevation:5875'	
Oil / Gas	Green River	90
Oil /Gas	Wasatch	2175
Oil /Gas	Mesaverde	3066
	Estimated TD	4990

An 11" hole will be drilled to approximately 1,716 feet. The depth will be determined by the depth that the Birds Nest zone is encountered. The hole will be drilled 400 feet beyond the top of the Birds Nest zone and surface casing will be set.

**3. Pressure Control Equipment: (3000 psi schematic attached)**

- A. Type: Eleven (11) inch double gate hydraulic BOP with eleven (11) inch annular preventer on 3,000 psi casinghead, with 3,000 psi choke manifold equipped per the attached diagram. BOPE as specified in *Onshore Oil & Gas Order Number 2*. A PVT, stroke counter and flow sensor will be installed to check for flow and monitor pit volume.
- B. Pressure Rating: 3,000 psi BOPE
- C. Kelly will be equipped with upper and lower Kelly valves.
- D. Testing Procedure: Annular Preventer

At a minimum, the annular preventer will be pressure tested to 50% of the stack rated working pressure for a period of ten (10) minutes or until provisions of the test are met, whichever is longer.

At a minimum, the above pressure test will be performed:

1. When the annular preventer is initially installed;
2. Whenever any seal subject to test pressure is broken;
3. Following related repairs; and
4. At thirty (30) day intervals.

In addition to the above, the annular preventer will be functionally operated at least weekly.

**Blow-Out Preventer**

At a minimum, the BOP, choke manifold, and related equipment will be pressure tested to the approved working pressure of the BOP stack (if isolated from the surface casing by a test plug) or to 70% of the internal yield strength of the surface casing (if the BOP is not isolated from the casing by a test plug). Pressure will be maintained for a period of at least ten (10) minutes or until the requirements of the test are met, whichever is longer.

At a minimum, the above pressure test will be performed:

1. When the BOP is initially installed;
2. Whenever any seal subject to test pressure is broken;
3. Following related repairs; and
4. At thirty (30) day intervals.

In addition to the above, the pipe and blind rams will be activated each trip, but not more than once each day. All BOP drills and tests will be recorded in the IADC driller's log.

**E. Miscellaneous Information:**

The blowout preventer and related pressure control equipment will be installed, tested and maintained in compliance with the specifications in and requirements of *Onshore Oil & Gas Order Number 2*.

**4. Proposed Casing & Cementing Program:**

**A. Casing Program: All New**

Hole Size	Casing Size	Wt./Ft.	Grade	Joint	Depth Set (MD)
20"	14" O.D.				40' (GL)
11"	8-5/8"	24#	J-55	ST&C	0 – 1,716' (KB) est.
7-7/8"	4-1/2"	11.6#	N-80	LT&C	0 – 4990' (KB)

→ 5455

The surface casing will have guide shoe, 1 joint, insert float collar. Centralize the shoe joint with bowspring centralizers in the middle and top of the joint and the next 16 joints with bowspring centralizers on every other collar (8 centralizers total). Thread lock guide shoe.

Casing string(s) will be pressure tested to 0.22 psi/foot of casing string length or 1500 psi, whichever is greater (not to exceed 70% of the internal yield strength of the casing), after cementing and prior to drilling out from under the casing shoe.

**B. Casing Design Parameters:**

Depth (MD)	Casing	Collapse(psi)/SF	Burst (psi)/SF	Tension(mlbs)/SF
40' (GL)	14" OD			
2016' (KB)	8-5/8", 24#/ft, J55, STC	1370/1.52(a)	2950/3.28(b)	244/5.81(c)
4990' (KB)	4-1/2", 11.6#/ft, N-80, LTC	6350/2.45(d)	7780/3.26(e)	223/4.48(f)

- (a.) based on full evacuation of pipe with 8.6 ppg fluid on annulus
- (b.) based on 8.6 ppg gradient with no fluid on annulus
- (c.) based on casing string weight in 8.6 ppg mud
- (d.) based on full evacuation of pipe with 10.0 ppg fluid on annulus
- (e.) based on 9.2 ppg gradient, gas to surface, with no fluid on annulus, no gas gradient
- (f.) based on casing string weight in 9.2 ppg mud

**PROPOSED CEMENTING PROGRAM**

**Surface Casing (if well will circulate)-Cemented to surface**

CASING	SLURRY	FT. of FILL	CEMENT TYPE	SXS	EXCESS (%)	WEIGHT (ppg)	YIELD (ft <sup>3</sup> /sx)
8-5/8"	Lead	1516	Premium cement + 16% gel + 0.25 pps celloflake	138	25%	11.1	3.50
8-5/8"	Tail	500	Premium cement + 2% CaCl <sub>2</sub> + 0.25 pps celloflake	138	25%	15.8	1.15

A cement top job is required if cement fallback is greater than 10' below ground level. Top job (weight 15.8 ppg, yield 1.15 ft<sup>3</sup>/sx) cement will be premium cement w/ 3% CaCl<sub>2</sub>.+0.25 pps celloflake. Volume as required

**Surface Casing (if well will not circulate) - Cemented to surface**

CASING	SLURRY	FT. of FILL	CEMENT TYPE	SXS	EXCESS (%)	WEIGHT (ppg)	YIELD (ft <sup>3</sup> /sx)
8-5/8"	Lead	500	Premium cement + 2% CaCl <sub>2</sub> + 0.25 pps celloflake	138	25	15.8	1.15
8-5/8"	Top job	As req.	Premium cement + 3% CaCl <sub>2</sub> + 0.25 pps celloflake	As Req.		15.8	1.15

**Production Casing and Liner** - Cemented TD to 300' above base of surface casing

CASING	SLURRY	FT. of FILL	CEMENT TYPE	SXS	EXCESS (%)	WEIGHT (ppg)	YIELD (ft <sup>3</sup> /sx)
4-1/2"	Lead	359	Class "G" + 5% NaCl + 12% Gel + 0.25 pps celloflake + 0.2% antifoam + 0.25% fluid loss + 1% extender	33	25	11.0	3.3
4-1/2"	Tail	3215	50/50 POZ Class G + 2% gel + 1% CaCl <sub>2</sub> + 0.2% dispersant + 0.2% fluid loss + 0.1% antifoam	587	25	14.3	1.56

Cement volumes for the 4-1/2" Production Casing will be calculated to provide a top of cement to 300' above base of surface casing. Cement volumes are approximate and were calculated under the assumption that a gauge hole will be achieved. Actual cement volumes may vary due to variations in the actual hole size and will be determined by running a caliper log on the drilled hole. Actual cement types may vary due to hole conditions and cement contractor used.

All waiting on cement (WOC) times will be adequate to achieve a minimum of 500 psi compressive strength at the casing shoe prior to drilling out.

**5. Drilling Fluids (mud) Program:**

Interval (MD)	Mud Weight	Fluid Loss	Viscosity	Mud Type
0' - 1716' (KB)		No cntrl		Air/mist
1716'-3000' (KB)	8.4-8.6	No cntrl	28-36	Water
3000'-4990' (KB)	8.8-9.8	8 - 10 ml	32-42	Water/Gel

Sufficient mud material(s) to maintain mud properties, control lost circulation and contain a blowout will be available at the well site during drilling operations.

**6. Evaluation Program:**

Tests: No tests are currently planned.

Coring: No cores are currently planned.

Samples: No sampling is currently planned.

Logging

- Dual Induction – SFL /Gamma Ray/Caliper/SP/TDLT/CNL/ML  
TD to Base Surface Casing
- Cement Bond Log / Gamma Ray:  
TD to Base of Surface Casing or Top of Cement if below Base of Surface Casing

Stimulation: A stimulation or frac treatment will be designed for completion of this well based on openhole log analysis. The drill site, as approved, will be sufficient size to accommodate all completion activities.

7. **Abnormal Conditions:**

No abnormal temperatures or pressures are anticipated. No H<sub>2</sub>S has been encountered or known to exist from previous wells drilled to similar depths in the general area.

Maximum anticipated bottom hole pressure equals approximately 2,595 psi (calculated at 0.52psi/foot of hole) and maximum anticipated surface pressure equals approximately 1,497 psi (anticipated bottom hole pressure minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot of hole).

8. **Anticipated Starting Dates:**

- Anticipated Commencement Date- Within one year of APD issue.
- Drilling Days- Approximately 10 days
- Completion Days - Approximately 10 days
- Anticipate location construction within 30 days of permit issue.

9. **Variations:**

None anticipated

10. **Other:**

A Cultural Resource Inventory and Paleontology reconnaissance shall be conducted for the well location, access route and pipeline. The reports shall be submitted to the Division of Oil, Gas and Mining and the School and Institutional Trust lands Administration upon their receipt.

Single Shot directional surveys will be dropped every 2000 feet to monitor hole angle.

**Directions to the Well Pad for:  
Southam Canyon 10-25-33-32  
Southam Canyon 10-25-34-32**

**Pad Location: NWSE of Sec. 32, T10S, R25E, S.L.B.&M.**

Beginning at the city of Bonanza, Utah. Leave the city of Bonanza heading south on U.S. Highway 45, which becomes a paved road, for a distance of approximately 3.7 miles where the road turns left at a gaging station. Do not turn left. Continue southeasterly on the same road for a distance of 5.9 miles, where there is a fork in the road. Turn left, and proceed for a distance of approximately 1.2 miles. Turn right and bear westerly approximately 0.2 miles to the beginning of the proposed access. Thence proceed southwesterly for approximately 4,480 feet (0.8 miles) along the proposed access to the proposed well pad.

# Enduring Resources, LLC

**Southam Canyon 10-25-34-32**  
SW-SE 32-10S-25E (Bottom Hole Location)  
NW-SE 32-10S-25E (Surface Location)  
Uintah County, Utah  
State Lease: ML-47065

## MULTI-POINT SURFACE USE & OPERATIONS PLAN

### 1. Existing Roads:

Directions to the Southam Canyon 10-25-34-32 Well Pad

Beginning at the city of Bonanza, Utah. Leave the city of Bonanza heading south on U.S. Highway 45, which becomes a paved road, for a distance of approximately 3.7 miles where the road turns left at a gauging station. Do not turn left. Continue southeasterly on the same road for a distance of 5.9 miles, where there is a fork in the road. Turn left, and proceed for a distance of approximately 1.2 miles. Turn right and bear westerly approximately 0.2 miles to the beginning of the proposed access. Thence proceed southwesterly for approximately 4,480 feet (0.8 miles) along the proposed access to the proposed well pad.

### 2. Planned Access Roads:

The proposed access road will be approximately 4,495 feet of new construction on-lease and 290 feet off-lease.

ALL NEW CONSTRUCTION IS ON SITLA AND BLM LANDS.

The proposed access road will be utilized to transport personnel, equipment and supplies to and from the proposed well site during drilling, completion and production operations. The road will be utilized year round.

The access road will be crowned 2% to 3%, ditched and constructed with a running surface of 18 feet and a maximum disturbed width of 30 feet right-of-way. Maximum grade of road is 5% or less. Graveling or capping the roadbed will be performed as necessary to provide a well constructed, safe road. No fence crossings, culverts, turnouts, cattle guards or major cuts and fills are required. Prior to construction or upgrading, the proposed road shall be cleared of any snow and allowed to dry completely.

Surface disturbance and vehicular traffic will be limited to the proposed location and proposed access route. Any additional area needed will be approved in advance. All construction shall be in conformance with the standards outlined in the BLM and Forest Service publication: Surface Operating Standards for Oil and Gas Exploration and Development. 1989.

The road surface and shoulders will be kept in a safe usable condition and will be maintained in accordance with the original construction standards. All drainage ditches will be kept clear and free flowing and will be maintained according to original

construction standards. The access road surface will be kept free of trash during operations. All traffic will be confined to the approved disturbed surface. Road drainage crossings shall be designed so they will not cause siltation or accumulation of debris in the drainage crossing nor shall the drainages be blocked by the road bed. Erosion of 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 shall be filled in and detours around them avoided. When snow is removed from the road during the winter months, the snow shall be pushed outside of the borrow ditches and the turnouts kept clear so that snowmelt will be channeled away from the road.

**3. Location of Existing Wells within a One-Mile radius (See "Topo" Map "C" attached):**

The following wells are wells located within a one (1) mile or greater radius of the proposed location.

- a. None: Water Wells:
- b. None: Injection Wells:
- c. None: Producing Wells:
- d. (1): Drilling Wells:
  - 1. Southam Canyon 10-25-21-32
- e. None: Shut-in Wells:
- f. None: Temporarily Abandoned Wells:
- g. None: Disposal Wells:
- h. None: Abandoned Wells:
- i. None: Dry Holes:
- j. None: Observation Wells:
- k. (9): Pending (staked) Wells:
  - i. Enduring has nine other wells staked in this section.

**4. Location of Existing and/or Proposed Facilities:**

All production facilities will be located on the disturbed portion of the well pad and at a minimum of 25 feet from the toe of the back slope or the top of the fill slope.

A dike will be constructed completely around those production facilities which contain fluids (i.e. production tanks, produced water tanks and/or heater treater). These dikes will be constructed of compacted subsoil, be impervious, hold 100% of the capacity of the largest tank and be independent of the back cut.

All permanent (on site for six months or longer) above the ground structures constructed or installed, including pumping units, will be painted a flat, non-reflective, earth tone color to match one of the standard environmental colors, as determined by the Rocky Mountain Five State Inter-Agency Committee

All facilities will be painted within 6 months of installation. The color shall be designated by DOG&M and SITLA. Facilities required to comply with the Occupational Safety and Health Act (OSHA) will be excluded.

Any necessary pits will be properly fenced to protect livestock and prevent wildlife entry.

Gas Gathering Pipeline for this well will be:

1,910'	Surface Pipeline	On-Lease	SITLA
-0-	Surface Pipeline	Off-Lease	n/a

If this well is capable of economic production, a 4" (or less) steel surface gas gathering line and related equipment shall be installed. The surface gas gathering line shall be in use year round. A total of approximately less than 1,910 feet of surface gas gathering pipeline shall be laid on the surface to minimize surface disturbance:

The proposed pipeline will begin at the well site; and be laid on the surface next to the new access road to tie-in to a steel surface pipeline that is located next to the county road.

The meter run will be housed. The gas gathering line will be buried or anchored down from the wellhead to the meter.

Upon plugging and abandonment, the gas gathering line will be removed and the disturbed area will be re-contoured and restored as near as practical to the original condition. If necessary, re-seeding operations will be performed after completion of other reclamation operations.

**5. Location and Type of Water Supply:**

Water will be purchased from American Gilsonite from the following source. Water Right No. 49-222, Application/Claim No. A29909/a4958, Certificate No. 9915 ("AGC Water Right"). The AGC Water Right consists of nineteen underground water wells located in Sec.2, T10S, R24E, SLBM, piped to and stored in a cistern located in Section 25, T9S, R24E.

Water will be hauled to the location over the roads marked on "Topo" Maps "A" and "B."

No water well is to be drilled on this lease.

**6 Source of Construction Materials:**

Surface and subsoil materials in the immediate area will be utilized for location and access road construction.

Any gravel will be obtained from a commercial source; however, gravel sized rock debris associated with location and access road construction may be used as access road surfacing material.

**7. Methods of Handling Waste Materials:**

Drill cuttings will be contained and buried in the reserve pit.

Drilling fluids, including salts and chemicals, will be contained in the reserve pit will be removed and disposed of at an approved waste disposal facility within 120 days after drilling is terminated.

The reserve pit will be constructed on the location and will not be located within natural drainage, where a flood hazard exists or surface runoff will destroy or damage the pit walls. The reserve pit will be constructed so that it will not leak, brake or allow discharge of liquids.

The reserve pit will be lined with ¼ felt and a minimum of 16 mm plastic with sufficient bedding used to cover any rocks. The liner will overlap the pit walls and be covered with dirt and/or rocks to hold it in place. No trash or scrap that could puncture the will be disposed of in the pit.

A chemical portable toilet will be furnished with the drilling rig. The toilet will be replaced periodically utilizing a licensed contractor to transport by truck the portable chemical toilet so that its contents can be delivered to the Vernal Wastewater Treatment Facility in accordance with state and county regulations.

Garbage, trash and other waste materials will be collected in a portable, self-contained, fully enclosed trash cage during operations. No trash well is burned on location.

All debris and other waste material not contained in the trash cage will be cleaned up and removed from the location immediately after removal of the drilling rig.

Any open pits will be fenced during the operations. The fencing will be maintained until such time as the pits are backfilled.

No chemicals subject to reporting under SARA Title III (hazardous materials) in an amount greater than 10,000 pounds will be used, produced, stored, transported or disposed of in association with the drilling, completion or testing of this well. Furthermore, no extremely hazardous substances, as defined in 40 CFR 355, in threshold planning quantities, will be used, produced, stored, transported or disposed of in association with the drilling, completion or testing of this well.

Produced oil will be stored in an oil tank and then hauled by truck to a crude purchaser facility. Any produced water from the proposed well will be contained in a water tank and will then be hauled by truck to an approved disposal site.

**8. Ancillary Facilities:**

During drilling operations, approximately 20 days, the site will be a manned camp. Three or four additional trailers will be on location to serve as the crews' housing and eating facilities. These will be located on the perimeter of the pad site within the topsoil stockpiles. Refer to Sheet 4.

**9. Well Site Layout: (Refer to Sheets #2, #3, and #4)**

The attached Location Layout Diagrams described drill pad cross-sections, cuts and fills and locations of the mud tanks, reserve pit, flare pit, pipe racks, trailer parking, spoil dirt stockpile(s) and surface material stockpiles(s).

Please see the attached diagram for rig orientation and access roads.

The top soil will be windrowed rather than piled. It will be reseeded and track walker at the time the location is constructed. Seeding will be with the determined during the onsite. (Refer to "Seed Mixture for Windrowed Top Soil Will included:" following herein.

The top soil removed from the pit area will be store separately and will not be reseeded until the pit is reclaimed.

All pits shall be fence to the following minimum standards:

- a. 39 inch net wire shall be used with at least one strand of barbed wire on top of the net wire. Barbed wire is not necessary if pipe or some type of reinforcement rod is attached to the top of the entire fence.
- b. The net wire shall be no more than 2 inches above the ground. The barbed wire shall be 3 inches over the new wire. Total height of the fence shall be at least 42 inches.
- c. Corner posts shall be cemented and/or braced in such a manner to keep the fence tight at all times.
- d. Standard steel, wood or pipe posts shall be used between the corner braces. Maximum distance between any two fence posts shall be no greater than 16 feet.
- e. All wire shall be stretched by, using a stretching device, before it is attached to corner posts.
- f. The reserve pit fencing will be on three sides during drilling operations and on the fourth side when the rig moves off location. Pits will be fenced and maintained until cleanup.
- g. Location size may change prior to drilling the well due to the current rig availability. If the proposed location is not large enough to accommodate the drilling, the location will be re-surveyed and a Form 9 will be submitted.

**10. Plans for Surface Reclamation:****Producing Location:**

- a. Immediately upon well completion **of the last well to be drilled on this pad**, the location and surrounding area will be cleared of all unused tubing, equipment, materials, trash and debris not required for production.
- b. Immediately upon well completion any hydrocarbons in the pit shall be removed in accordance with 40CFR 3162.7.
- c. Before any dirt work associated with location restoration takes place, the reserve pit shall be as dry as possible. All debris in it will be removed. Other waste and spoil materials will be disposed of immediately upon completion of operations.
- d. The reserve pit that portion of the location not needed for production (**and drilling the other directional wells**) facilities/operations will be re-contoured to the approximated natural contours. The reserve pit will be reclaimed within 90 days from the date of well completion, weather permitting.
- e. To prevent surface water(s) from standing (ponding) on the reclaimed reserve pit area, final reclamation of the reserve pit will consist of "mounding" the surface 3 feet above surrounding round surface to allow the reclaimed pit area to drain effectively.
- f. Upon completion of back filling, leveling and re-contouring, the stockpiled topsoil will be spread evenly over the reclaimed area(s).

**Dry Hole/Abandoned Location:**

- i. Abandoned well sites, roads and other disturbed areas will be restored as nearly as practical to their original condition. Where applicable, these conditions include the re-establishment of irrigation systems, the re-establishment of appropriate soil conditions and re-establishment of vegetation as specified.
- ii. All disturbed surfaces will be re-contoured to the approximated natural contours with reclamation of the well pad and access road to be performed as soon as practical after final abandonment. If necessary, re-seeding operations will be performed after completion of other reclamation operations.

**Seed Mixture for Windrowed Top Soil Will Included:**

To be provided by the DOG&M and/or SITLA.

**11. Surface Ownership: Location, Access and Pipeline Route:**

Wellsite: SITLA

Access: SITLA, BLM

Pipeline: SITLA

**12. Other Information****On-site Inspection for Location, Access and Pipeline Route:**

The on-site will be scheduled by SITLA and DOG&M.

**Special Conditions of Approval:**

- Tanks and Production Equipment shall be painted Dark Olive Black.
- Surface Gathering Pipeline shall be 4" or less

**Archeology:**

- a. A Cultural Resource Inventory Report is pending and to be prepared by Montgomery Archaeological Consultants.

**Paleontology:**

- a. A Paleontology Reconnaissance Report is pending and to be prepared by Intermountain Paleo-Consulting.

If, during operations, any archaeological or historical sites, or any objects of antiquity (subject to the Antiquities Act of June 8, 1906) are discovered, all operations which would affect such sites will be suspended and the discovery reported promptly to the surface management agency.

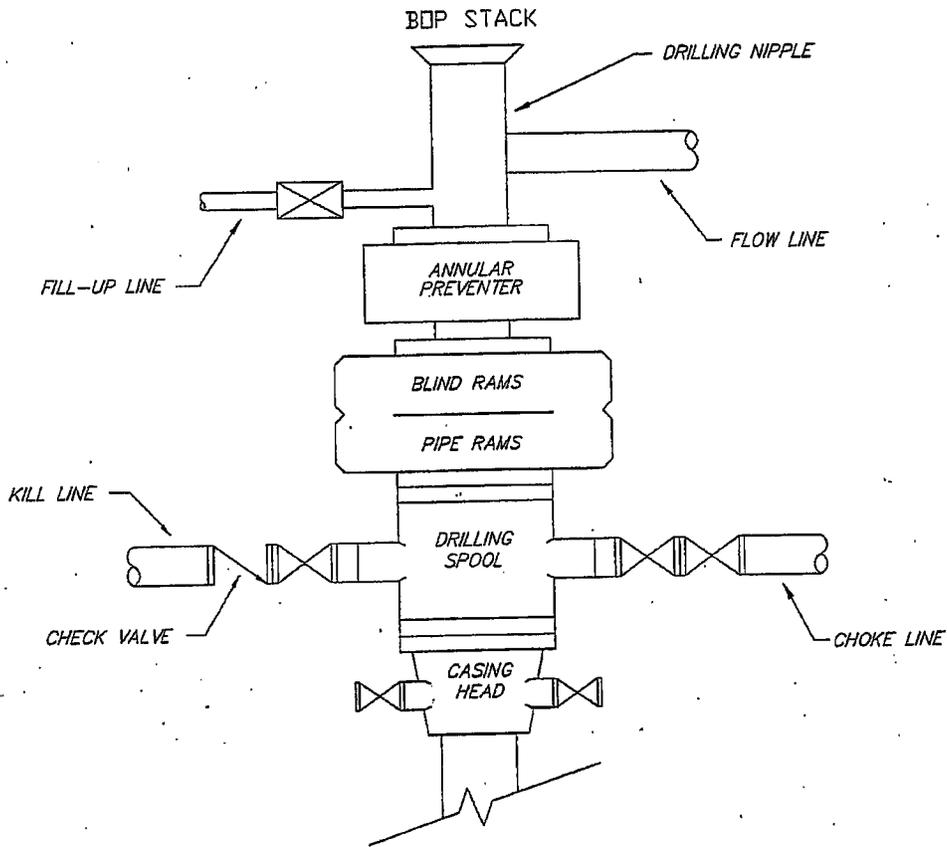
**13, Lessee's or Operator's Representatives:****Representatives:**

Alvin R. (Al) Arlian  
Landman – Regulatory Specialist  
Enduring Resources, LLC  
475 17<sup>th</sup> Street, Suite 1500  
Denver, Colorado 80202  
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Fax Tel: 303-573-0461  
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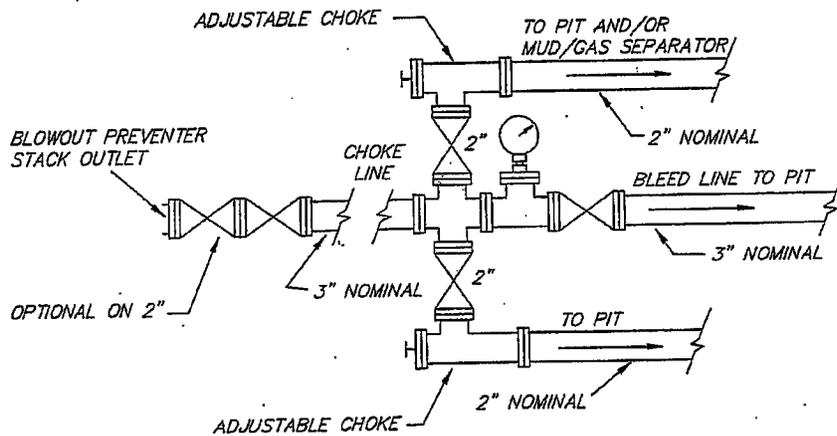
Teme Singleton  
Drilling Engineer  
Enduring Resources, LLC  
475 17<sup>th</sup> Street, Suite 1500  
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**ENDURING RESOURCES, LLC**

*TYPICAL 3,000 p.s.i.  
BLOWOUT PREVENTER SCHEMATIC*



*TYPICAL 3,000 p.s.i.  
CHOKE MANIFOLD SCHEMATIC*





**ENDURING RESOURCES**  
**Southam Canyon 10-25-34-32**  
**SW/SW Sec. 32, T10S, R25E**  
**Uintah County, Utah**



SECTION DETAILS										
Sec	MD	Inc	Azi	TVD	+N-S	+E-W	DLeg	TFace	VSec	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	
3	900.00	15.00	173.34	894.31	-64.64	7.55	3.00	173.34	65.08	Start Nudge
4	1600.00	15.00	173.34	1570.46	-244.59	28.56	0.00	0.00	246.25	End Nudge
5	2453.43	57.67	173.34	2242.17	-735.32	85.86	5.00	0.00	740.32	Start Build
6	2602.16	57.67	173.34	2321.70	-860.15	100.44	0.00	0.00	866.00	End Build
7	3755.60	0.00	173.34	3290.00	-1389.67	162.27	5.00	180.00	1399.11	Start Drop
8	5455.60	0.00	173.34	4990.00	-1389.67	162.27	0.00	173.34	1399.11	End Drop
										TD

WELL DETAILS							
Name	+N-S	+E-W	Northing	Easting	Latitude	Longitude	Slot
Southam Canyon 10-25-34-32	0.00	0.00	7142558.98	2307106.93	39°54'13.710N	109°07'23.440W	N/A



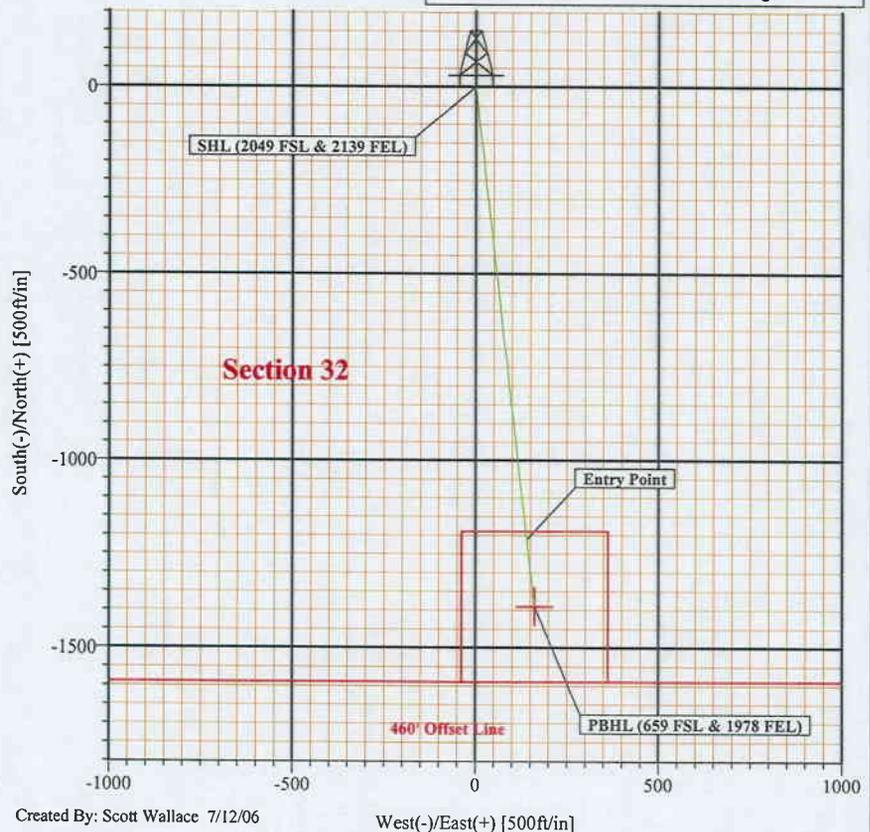
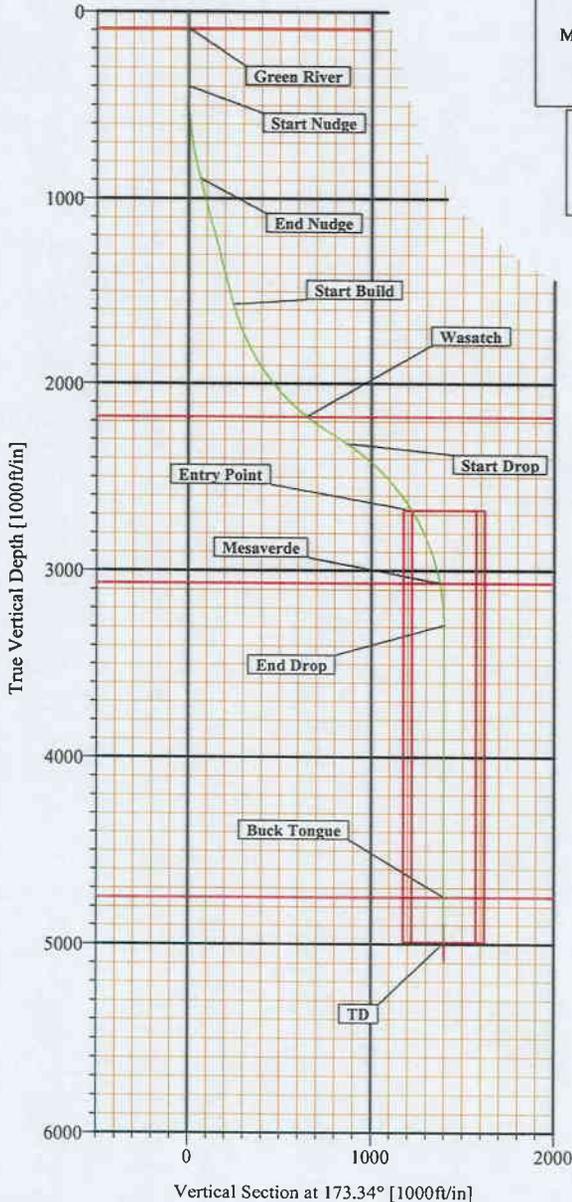
RKB Elevation: 5875.0  
 Ground Elevation: 5858.8

**FIELD DETAILS**  
 Uintah, Utah  
 Utah Central Zone  
 U.S.A.  
 Geodetic System: US State Plane Coordinate System 1983  
 Ellipsoid: GRS 1980  
 Zone: Utah, Central Zone  
 Magnetic Model: igrf2005  
 System Datum: Mean Sea Level  
 Local North: True North

**SITE DETAILS**  
 NW/SE 32-10S-25E  
 Sec. 32, T10S, R25E, Uintah County, Utah  
 2049 FSL & 2139 FEL  
 Site Centre Latitude: 39°54'13.710N  
 Longitude: 109°07'23.440W  
 Ground Level: 5858.80  
 Positional Uncertainty: 0.00  
 Convergence: 1.52

TARGET DETAILS				
Name	TVD	+N-S	+E-W	Shape
10-25-34-32 Target	4990.00	-1389.67	162.27	Rectangle (400x400)

FORMATION TOP DETAILS			
No.	TVDPath	MDPath	Formation
1	90.00	90.00	Green River
2	2175.00	2336.98	Wasatch
3	3066.00	3530.15	Mesaverde
4	4750.00	5215.60	Buck Tongue



Created By: Scott Wallace 7/12/06

# Weatherford International

## Planning Report

Company: Enduring Resources	Date: 7/12/2006	Time: 08:58:32	Page: 1
Field: Uintah, Utah	Co-ordinate(NE) Reference: Well: Southam Canyon 10-25-34-32	Vertical (TVD) Reference: SITE 5875.0	
Site: NW/SE 32-10S-25E	Section (VS) Reference: Well (0.00N,0.00E,173.34Az)	Plan: Plan #1	
Well: Southam Canyon 10-25-34-32			
Wellpath: 1			

Field: Uintah, Utah Utah Central Zone U.S.A.	Map Zone: Utah, Central Zone
Map System: US State Plane Coordinate System 1983	Coordinate System: Well Centre
Geo Datum: GRS 1980	Geomagnetic Model: igrf2005
Sys Datum: Mean Sea Level	

Site: NW/SE 32-10S-25E  
Sec. 32, T10S, R25E, Uintah County, Utah  
2049 FSL & 2139 FEL

Site Position: Northing: 7142558.98 ft	Latitude: 39 54 13.710 N
From: Geographic Easting: 2307106.93 ft	Longitude: 109 7 23.440 W
Position Uncertainty: 0.00 ft	North Reference: True
Ground Level: 5858.80 ft	Grid Convergence: 1.52 deg

Well: Southam Canyon 10-25-34-32	Slot Name:
Well Position: +N/-S 0.00 ft	Northing: 7142558.98 ft
+E/-W 0.00 ft	Easting: 2307106.93 ft
Position Uncertainty: 0.00 ft	Latitude: 39 54 13.710 N
	Longitude: 109 7 23.440 W

Wellpath: 1	Drilled From: Surface
Current Datum: SITE	Tie-on Depth: 0.00 ft
Magnetic Data: 7/11/2006	Above System Datum: Mean Sea Level
Field Strength: 52878 nT	Declination: 11.53 deg
Vertical Section: Depth From (TVD)	Mag Dip Angle: 65.99 deg
ft	+N/-S
	+E/-W
	Direction
	deg
0.00	0.00
	0.00
	173.34

Plan: Plan #1	Date Composed: 7/11/2006
Principal: Yes	Version: 1
	Tied-to: From Surface

**Plan Section Information**

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	TFO deg	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00	
900.00	15.00	173.34	894.31	-64.64	7.55	3.00	3.00	0.00	173.34	
1600.00	15.00	173.34	1570.46	-244.59	28.56	0.00	0.00	0.00	0.00	
2453.43	57.67	173.34	2242.17	-735.32	85.86	5.00	5.00	0.00	0.00	
2602.16	57.67	173.34	2321.70	-860.15	100.44	0.00	0.00	0.00	0.00	
3755.60	0.00	173.34	3290.00	-1389.67	162.27	5.00	-5.00	0.00	180.00	
5455.60	0.00	173.34	4990.00	-1389.67	162.27	0.00	0.00	0.00	173.34	10-25-34-32 Target

**Section 1 : Start Hold**

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	TFO deg
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

**Section 2 : Start Build 3.00**

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	TFO deg
500.00	3.00	173.34	499.95	-2.60	0.30	2.62	3.00	3.00	0.00	0.00
600.00	6.00	173.34	599.63	-10.39	1.21	10.46	3.00	3.00	0.00	0.00
700.00	9.00	173.34	698.77	-23.35	2.73	23.51	3.00	3.00	0.00	0.00
800.00	12.00	173.34	797.08	-41.45	4.84	41.74	3.00	3.00	0.00	0.00
900.00	15.00	173.34	894.31	-64.64	7.55	65.08	3.00	3.00	0.00	0.00

# Weatherford International

## Planning Report

**Company:** Enduring Resources  
**Field:** Uintah, Utah  
**Site:** NW/SE 32-10S-25E  
**Well:** Southam Canyon 10-25-34-32  
**Wellpath:** 1

**Date:** 7/12/2006 **Time:** 08:58:32 **Page:** 2  
**Co-ordinate(NE) Reference:** Well: Southam Canyon 10-25-34-32  
**Vertical (TVD) Reference:** SITE 5875.0  
**Section (VS) Reference:** Well (0.00N,0.00E,173.34Azi)  
**Plan:** Plan #1

**Section 3 : Start Hold**

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	TFO deg
1000.00	15.00	173.34	990.90	-90.34	10.55	90.96	0.00	0.00	0.00	0.00
1100.00	15.00	173.34	1087.49	-116.05	13.55	116.84	0.00	0.00	0.00	0.00
1200.00	15.00	173.34	1184.09	-141.76	16.55	142.72	0.00	0.00	0.00	0.00
1300.00	15.00	173.34	1280.68	-167.47	19.55	168.60	0.00	0.00	0.00	0.00
1400.00	15.00	173.34	1377.27	-193.17	22.56	194.49	0.00	0.00	0.00	0.00
1500.00	15.00	173.34	1473.86	-218.88	25.56	220.37	0.00	0.00	0.00	0.00
1600.00	15.00	173.34	1570.46	-244.59	28.56	246.25	0.00	0.00	0.00	0.00

**Section 4 : Start Build 5.00**

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	TFO deg
1700.00	20.00	173.34	1665.80	-274.45	32.05	276.31	5.00	5.00	0.00	0.00
1800.00	25.00	173.34	1758.16	-312.44	36.48	314.57	5.00	5.00	0.00	0.00
1900.00	30.00	173.34	1846.83	-358.29	41.84	360.73	5.00	5.00	0.00	0.00
2000.00	35.00	173.34	1931.14	-411.64	48.07	414.44	5.00	5.00	0.00	0.00
2100.00	40.00	173.34	2010.45	-472.09	55.12	475.30	5.00	5.00	0.00	0.00
2200.00	45.00	173.34	2084.16	-539.17	62.96	542.83	5.00	5.00	0.00	0.00
2300.00	50.00	173.34	2151.69	-612.38	71.50	616.54	5.00	5.00	0.00	0.00
2336.98	51.85	173.34	2175.00	-640.89	74.83	645.24	5.00	5.00	0.00	0.00
2400.00	55.00	173.34	2212.55	-691.15	80.70	695.85	5.00	5.00	0.00	0.00
2453.43	57.67	173.34	2242.17	-735.32	85.86	740.32	5.00	5.00	0.00	0.00

**Section 5 : Start Hold**

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	TFO deg
2500.00	57.67	173.34	2267.07	-774.41	90.42	779.67	0.00	0.00	0.00	0.00
2600.00	57.67	173.34	2320.55	-858.34	100.22	864.17	0.00	0.00	0.00	0.00
2602.16	57.67	173.34	2321.70	-860.15	100.44	866.00	0.00	0.00	0.00	0.00

**Section 6 : Start Drop -5.00**

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	TFO deg
2700.00	52.78	173.34	2377.49	-939.95	109.75	946.33	5.00	-5.00	0.00	180.00
2800.00	47.78	173.34	2441.37	-1016.32	118.67	1023.23	5.00	-5.00	0.00	180.00
2900.00	42.78	173.34	2511.71	-1086.88	126.91	1094.26	5.00	-5.00	0.00	180.00
3000.00	37.78	173.34	2587.98	-1151.07	134.41	1158.89	5.00	-5.00	0.00	180.00
3100.00	32.78	173.34	2669.59	-1208.42	141.10	1216.63	5.00	-5.00	0.00	180.00
3106.43	32.46	173.34	2675.00	-1211.86	141.50	1220.10	5.00	-5.00	0.00	180.00
3200.00	27.78	173.34	2755.92	-1258.49	146.95	1267.04	5.00	-5.00	0.00	-180.00
3300.00	22.78	173.34	2846.31	-1300.89	151.90	1309.73	5.00	-5.00	0.00	180.00
3400.00	17.78	173.34	2940.08	-1335.31	155.92	1344.38	5.00	-5.00	0.00	180.00
3500.00	12.78	173.34	3036.52	-1361.47	158.97	1370.72	5.00	-5.00	0.00	180.00
3530.15	11.27	173.34	3066.00	-1367.71	159.70	1377.00	5.00	-5.00	0.00	180.00
3600.00	7.78	173.34	3134.88	-1379.19	161.04	1388.56	5.00	-5.00	0.00	180.00
3700.00	2.78	173.34	3234.42	-1388.33	162.11	1397.76	5.00	-5.00	0.00	180.00
3755.60	0.00	173.34	3290.00	-1389.67	162.27	1399.11	5.00	-5.00	0.00	-180.00

**Section 7 : Start Hold**

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	TFO deg
3800.00	0.00	173.34	3334.40	-1389.67	162.27	1399.11	0.00	0.00	0.00	173.34
3900.00	0.00	173.34	3434.40	-1389.67	162.27	1399.11	0.00	0.00	0.00	173.34
4000.00	0.00	173.34	3534.40	-1389.67	162.27	1399.11	0.00	0.00	0.00	173.34
4100.00	0.00	173.34	3634.40	-1389.67	162.27	1399.11	0.00	0.00	0.00	173.34
4200.00	0.00	173.34	3734.40	-1389.67	162.27	1399.11	0.00	0.00	0.00	173.34
4300.00	0.00	173.34	3834.40	-1389.67	162.27	1399.11	0.00	0.00	0.00	173.34
4400.00	0.00	173.34	3934.40	-1389.67	162.27	1399.11	0.00	0.00	0.00	173.34
4500.00	0.00	173.34	4034.40	-1389.67	162.27	1399.11	0.00	0.00	0.00	173.34
4600.00	0.00	173.34	4134.40	-1389.67	162.27	1399.11	0.00	0.00	0.00	173.34
4700.00	0.00	173.34	4234.40	-1389.67	162.27	1399.11	0.00	0.00	0.00	173.34

# Weatherford International

## Planning Report

<b>Company:</b> Enduring Resources	<b>Date:</b> 7/12/2006	<b>Time:</b> 08:58:32	<b>Page:</b> 3
<b>Field:</b> Uintah, Utah	<b>Co-ordinate(NE) Reference:</b> Well: Southam Canyon 10-25-34-32		
<b>Site:</b> NW/SE 32-10S-25E	<b>Vertical (TVD) Reference:</b> SITE 5875.0		
<b>Well:</b> Southam Canyon 10-25-34-32	<b>Section (VS) Reference:</b> Well (0.00N,0.00E,173.34Azi)		
<b>Wellpath:</b> 1	<b>Plan:</b>	<b>Plan #1</b>	

**Section 7 : Start Hold**

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	TFO deg
4800.00	0.00	173.34	4334.40	-1389.67	162.27	1399.11	0.00	0.00	0.00	173.34
4900.00	0.00	173.34	4434.40	-1389.67	162.27	1399.11	0.00	0.00	0.00	173.34
5000.00	0.00	173.34	4534.40	-1389.67	162.27	1399.11	0.00	0.00	0.00	173.34
5100.00	0.00	173.34	4634.40	-1389.67	162.27	1399.11	0.00	0.00	0.00	173.34
5200.00	0.00	173.34	4734.40	-1389.67	162.27	1399.11	0.00	0.00	0.00	173.34
5215.60	0.00	173.34	4750.00	-1389.67	162.27	1399.11	0.00	0.00	0.00	173.34
5300.00	0.00	173.34	4834.40	-1389.67	162.27	1399.11	0.00	0.00	0.00	173.34
5400.00	0.00	173.34	4934.40	-1389.67	162.27	1399.11	0.00	0.00	0.00	173.34
5455.60	0.00	173.34	4990.00	-1389.67	162.27	1399.11	0.00	0.00	0.00	173.34

**Survey**

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	Tool/Comment
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00	Start Nudge
500.00	3.00	173.34	499.95	-2.60	0.30	2.62	3.00	3.00	0.00	MWD
600.00	6.00	173.34	599.63	-10.39	1.21	10.46	3.00	3.00	0.00	MWD
700.00	9.00	173.34	698.77	-23.35	2.73	23.51	3.00	3.00	0.00	MWD
800.00	12.00	173.34	797.08	-41.45	4.84	41.74	3.00	3.00	0.00	MWD
900.00	15.00	173.34	894.31	-64.64	7.55	65.08	3.00	3.00	0.00	End Nudge
1000.00	15.00	173.34	990.90	-90.34	10.55	90.96	0.00	0.00	0.00	MWD
1100.00	15.00	173.34	1087.49	-116.05	13.55	116.84	0.00	0.00	0.00	MWD
1200.00	15.00	173.34	1184.09	-141.76	16.55	142.72	0.00	0.00	0.00	MWD
1300.00	15.00	173.34	1280.68	-167.47	19.55	168.60	0.00	0.00	0.00	MWD
1400.00	15.00	173.34	1377.27	-193.17	22.56	194.49	0.00	0.00	0.00	MWD
1500.00	15.00	173.34	1473.86	-218.88	25.56	220.37	0.00	0.00	0.00	MWD
1600.00	15.00	173.34	1570.46	-244.59	28.56	246.25	0.00	0.00	0.00	Start Build
1700.00	20.00	173.34	1665.80	-274.45	32.05	276.31	5.00	5.00	0.00	MWD
1800.00	25.00	173.34	1758.16	-312.44	36.48	314.57	5.00	5.00	0.00	MWD
1900.00	30.00	173.34	1846.83	-358.29	41.84	360.73	5.00	5.00	0.00	MWD
2000.00	35.00	173.34	1931.14	-411.64	48.07	414.44	5.00	5.00	0.00	MWD
2100.00	40.00	173.34	2010.45	-472.09	55.12	475.30	5.00	5.00	0.00	MWD
2200.00	45.00	173.34	2084.16	-539.17	62.96	542.83	5.00	5.00	0.00	MWD
2300.00	50.00	173.34	2151.69	-612.38	71.50	616.54	5.00	5.00	0.00	MWD
2336.98	51.85	173.34	2175.00	-640.89	74.83	645.24	5.00	5.00	0.00	Wasatch
2400.00	55.00	173.34	2212.55	-691.15	80.70	695.85	5.00	5.00	0.00	MWD
2453.43	57.67	173.34	2242.17	-735.32	85.86	740.32	5.00	5.00	0.00	End Build
2500.00	57.67	173.34	2267.07	-774.41	90.42	779.67	0.00	0.00	0.00	MWD
2600.00	57.67	173.34	2320.55	-858.34	100.22	864.17	0.00	0.00	0.00	MWD
2602.16	57.67	173.34	2321.70	-860.15	100.44	866.00	0.00	0.00	0.00	Start Drop
2700.00	52.78	173.34	2377.49	-939.95	109.75	946.33	5.00	-5.00	0.00	MWD
2800.00	47.78	173.34	2441.37	-1016.32	118.67	1023.23	5.00	-5.00	0.00	MWD
2900.00	42.78	173.34	2511.71	-1086.88	126.91	1094.26	5.00	-5.00	0.00	MWD
3000.00	37.78	173.34	2587.98	-1151.07	134.41	1158.89	5.00	-5.00	0.00	MWD
3100.00	32.78	173.34	2669.59	-1208.42	141.10	1216.63	5.00	-5.00	0.00	MWD
3106.43	32.46	173.34	2675.00	-1211.86	141.50	1220.10	5.00	-5.00	0.00	Entry Point
3200.00	27.78	173.34	2755.92	-1258.49	146.95	1267.04	5.00	-5.00	0.00	MWD
3300.00	22.78	173.34	2846.31	-1300.89	151.90	1309.73	5.00	-5.00	0.00	MWD
3400.00	17.78	173.34	2940.08	-1335.31	155.92	1344.38	5.00	-5.00	0.00	MWD
3500.00	12.78	173.34	3036.52	-1361.47	158.97	1370.72	5.00	-5.00	0.00	MWD
3530.15	11.27	173.34	3066.00	-1367.71	159.70	1377.00	5.00	-5.00	0.00	Mesaverde
3600.00	7.78	173.34	3134.88	-1379.19	161.04	1388.56	5.00	-5.00	0.00	MWD
3700.00	2.78	173.34	3234.42	-1388.33	162.11	1397.76	5.00	-5.00	0.00	MWD
3755.60	0.00	173.34	3290.00	-1389.67	162.27	1399.11	5.00	-5.00	0.00	End Drop
3800.00	0.00	173.34	3334.40	-1389.67	162.27	1399.11	0.00	0.00	0.00	MWD
3900.00	0.00	173.34	3434.40	-1389.67	162.27	1399.11	0.00	0.00	0.00	MWD

# Weatherford International

## Planning Report

<b>Company:</b> Enduring Resources	<b>Date:</b> 7/12/2006	<b>Time:</b> 08:58:32	<b>Page:</b> 4
<b>Field:</b> Uintah, Utah	<b>Co-ordinate(NE) Reference:</b> Well: Southam Canyon 10-25-34-32		
<b>Site:</b> NW/SE 32-10S-25E	<b>Vertical (TVD) Reference:</b> SITE 5875.0		
<b>Well:</b> Southam Canyon 10-25-34-32	<b>Section (VS) Reference:</b> Well (0.00N,0.00E,173.34Azi)		
<b>Wellpath:</b> 1	<b>Plan:</b>		<b>Plan #1</b>

### Survey

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	Tool/Comment
4000.00	0.00	173.34	3534.40	-1389.67	162.27	1399.11	0.00	0.00	0.00	MWD
4100.00	0.00	173.34	3634.40	-1389.67	162.27	1399.11	0.00	0.00	0.00	MWD
4200.00	0.00	173.34	3734.40	-1389.67	162.27	1399.11	0.00	0.00	0.00	MWD
4300.00	0.00	173.34	3834.40	-1389.67	162.27	1399.11	0.00	0.00	0.00	MWD
4400.00	0.00	173.34	3934.40	-1389.67	162.27	1399.11	0.00	0.00	0.00	MWD
4500.00	0.00	173.34	4034.40	-1389.67	162.27	1399.11	0.00	0.00	0.00	MWD
4600.00	0.00	173.34	4134.40	-1389.67	162.27	1399.11	0.00	0.00	0.00	MWD
4700.00	0.00	173.34	4234.40	-1389.67	162.27	1399.11	0.00	0.00	0.00	MWD
4800.00	0.00	173.34	4334.40	-1389.67	162.27	1399.11	0.00	0.00	0.00	MWD
4900.00	0.00	173.34	4434.40	-1389.67	162.27	1399.11	0.00	0.00	0.00	MWD
5000.00	0.00	173.34	4534.40	-1389.67	162.27	1399.11	0.00	0.00	0.00	MWD
5100.00	0.00	173.34	4634.40	-1389.67	162.27	1399.11	0.00	0.00	0.00	MWD
5200.00	0.00	173.34	4734.40	-1389.67	162.27	1399.11	0.00	0.00	0.00	MWD
5215.60	0.00	173.34	4750.00	-1389.67	162.27	1399.11	0.00	0.00	0.00	Buck Tongue
5300.00	0.00	173.34	4834.40	-1389.67	162.27	1399.11	0.00	0.00	0.00	MWD
5400.00	0.00	173.34	4934.40	-1389.67	162.27	1399.11	0.00	0.00	0.00	MWD
5455.60	0.00	173.34	4990.00	-1389.67	162.27	1399.11	0.00	0.00	0.00	10-25-34-32 Target

### Targets

Name	Description Dip. Dir.	TVD ft	+N/-S ft	+E/-W ft	Map Northing ft	Map Easting ft	← Latitude →			← Longitude →		
							Deg	Min	Sec	Deg	Min	Sec
10-25-34-32 Target		4990.00	-1389.67	162.27	7141174.11	2307306.06	39	53	59.975 N	109	7	21.358 W
-Rectangle (400x400)												
-Plan hit target												

### Formations

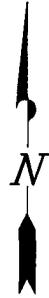
MD ft	TVD ft	Formations	Lithology	Dip Angle deg	Dip Direction deg
90.00	90.00	Green River		0.00	0.00
2336.98	2175.00	Wasatch		0.00	0.00
3530.15	3066.00	Mesaverde		0.00	0.00
5215.60	4750.00	Buck Tongue		0.00	0.00

### Annotation

MD ft	TVD ft	
400.00	400.00	SHL (2049 FSL & 2139 FEL)
900.00	894.31	Start Nudge
1600.00	1570.46	End Nudge
2453.43	2242.17	Start Build
2602.16	2321.70	End Build
3106.43	2675.00	Start Drop
3755.60	3290.00	End Drop
5455.60	4990.00	Entry Point
5455.60	4990.00	TD
5455.60	4990.00	PBHL (659 FSL & 1978 FEL)

# ENDURING RESOURCES

WELL PAD INTERFERENCE PLAT  
 SOUTHAM CANYON 10-25-33-32  
 SOUTHAM CANYON 10-25-34-32  
 Section 32, T10S, R25E, S.L.B.&M.

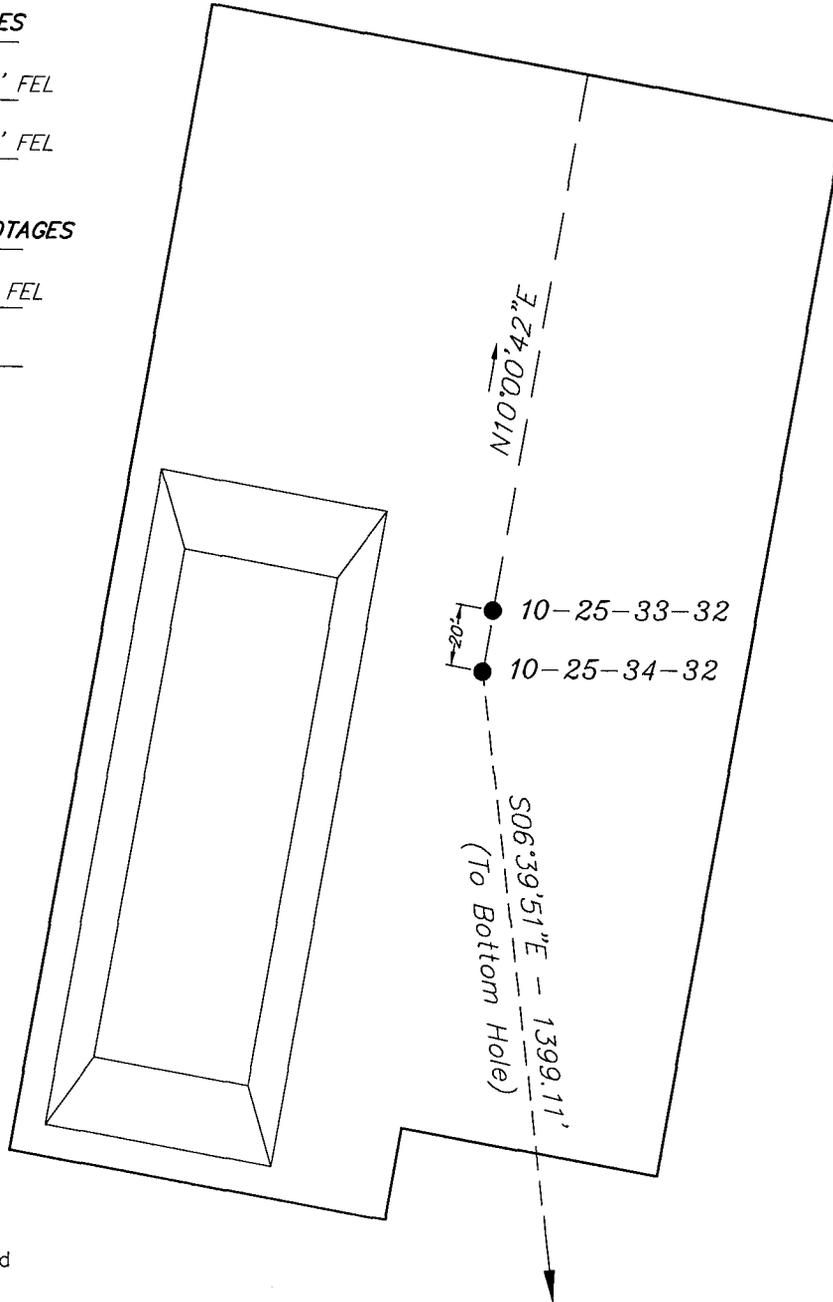


**TOP HOLE FOOTAGES**

10-25-34-32  
 2049' FSL & 2139' FEL  
 10-25-33-32  
 2068' FSL & 2136' FEL

**BOTTOM HOLE FOOTAGES**

10-25-34-32  
 659' FSL & 1978' FEL  
 10-25-33-32  
 VERTICAL



**Note:**  
 Bearings are derived  
 using true North.

RELATIVE COORDINATES From top hole to bottom hole		
WELL	NORTH	EAST
34-32	-1,390'	162'
33-32	N/A	N/A

LATITUDE & LONGITUDE Surface position of Wells (NAD 83)		
WELL	LATITUDE	LONGITUDE
34-32	39° 54' 13.71"	109° 07' 23.44"
33-32	39° 54' 13.91"	109° 07' 23.39"

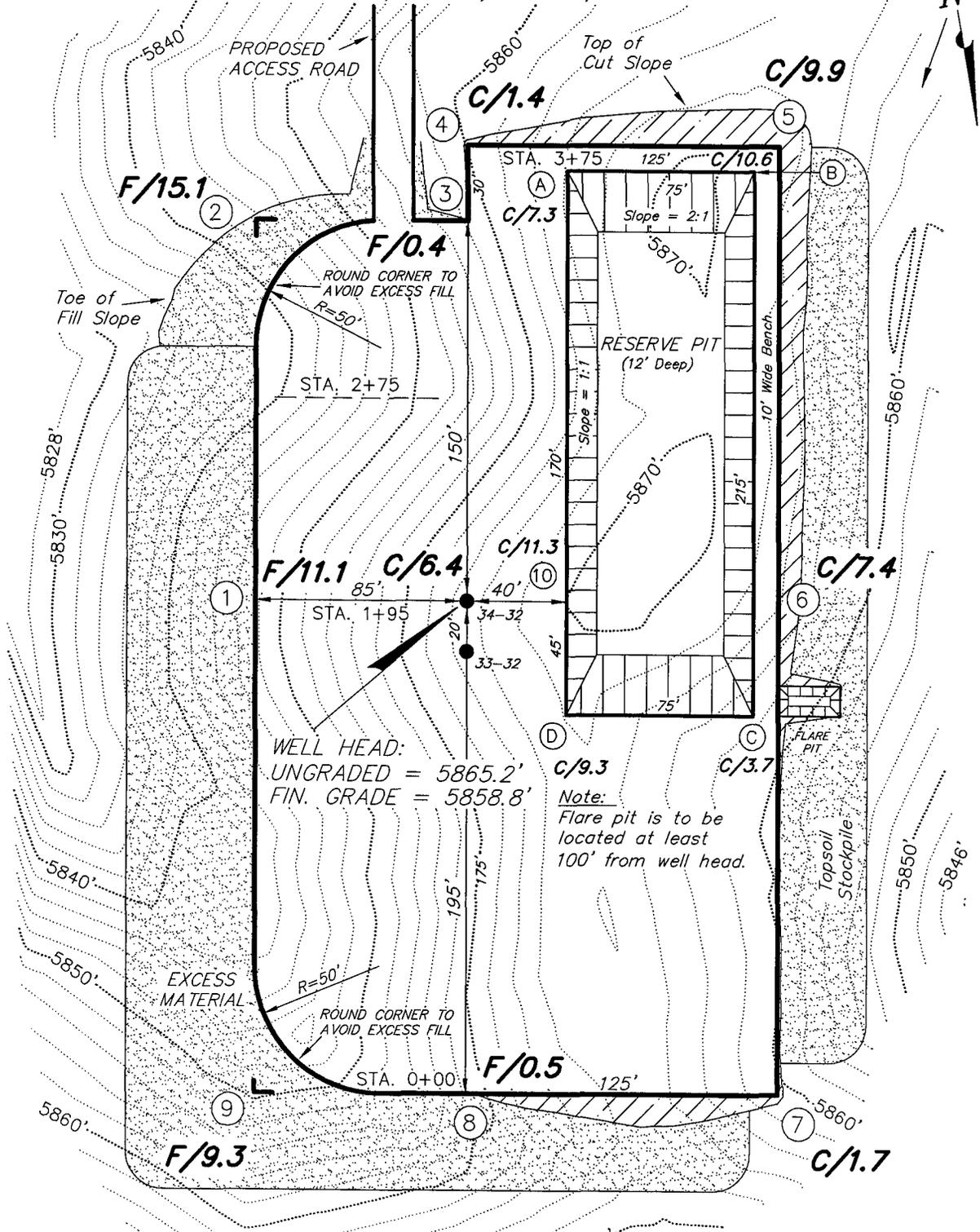
SURVEYED BY:	J.H.	DATE DRAWN:	10-26-05
DRAWN BY:	F.T.M.	SCALE:	1" = 60'
NOTES:			

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

SHEET  
**3**  
 OF 10

# ENDURING RESOURCES

SOUTHAM CANYON 10-25-33-32  
 SOUTHAM CANYON 10-25-34-32  
 Section 32, T10S, R25E, S.L.B.&M.



REFERENCE POINTS  
 175' EASTERLY = 5836.6'  
 225' EASTERLY = 5826.1'

SURVEYED BY: J.H.	DATE DRAWN: 10-26-05
DRAWN BY: F.T.M.	SCALE: 1" = 60'
NOTES:	

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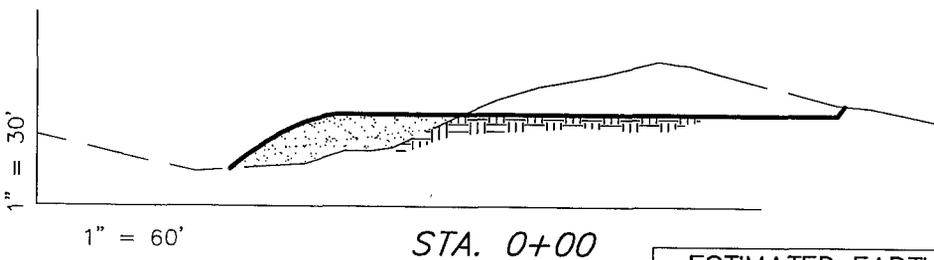
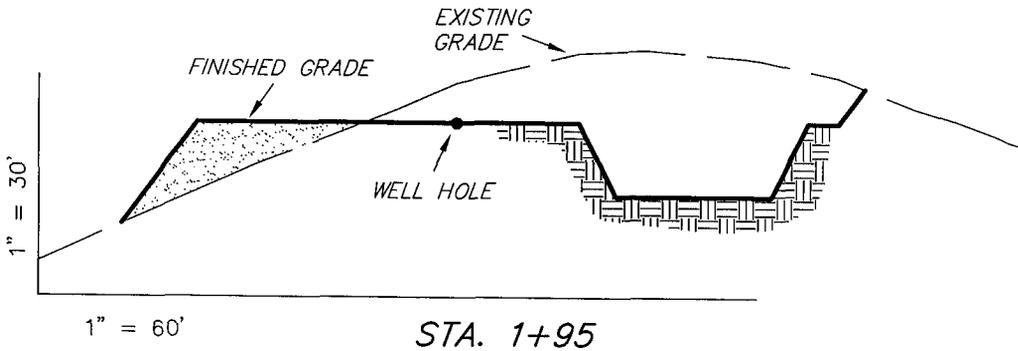
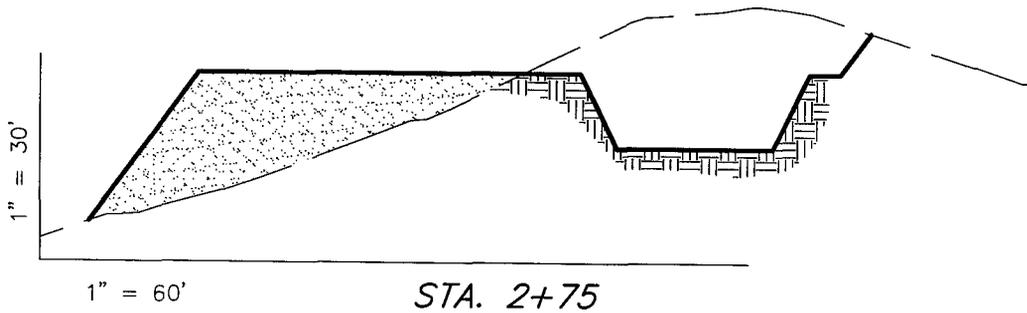
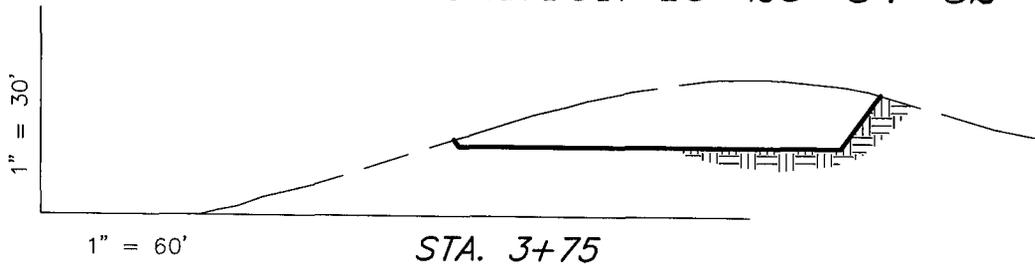
SHEET  
 4  
 OF 10

# ENDURING RESOURCES

## CROSS SECTIONS

SOUTHAM CANYON 10-25-33-32

SOUTHAM CANYON 10-25-34-32



ESTIMATED EARTHWORK QUANTITIES (No Shrink or swell adjustments have been used) (Expressed in Cubic Yards)				
ITEM	CUT	FILL	6" TOPSOIL	EXCESS
PAD	12,250	12,240	Topsoil is not included in Pad Cut	10
PIT	5,390	0		5,390
TOTALS	17,640	12,240	1,690	5,400

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

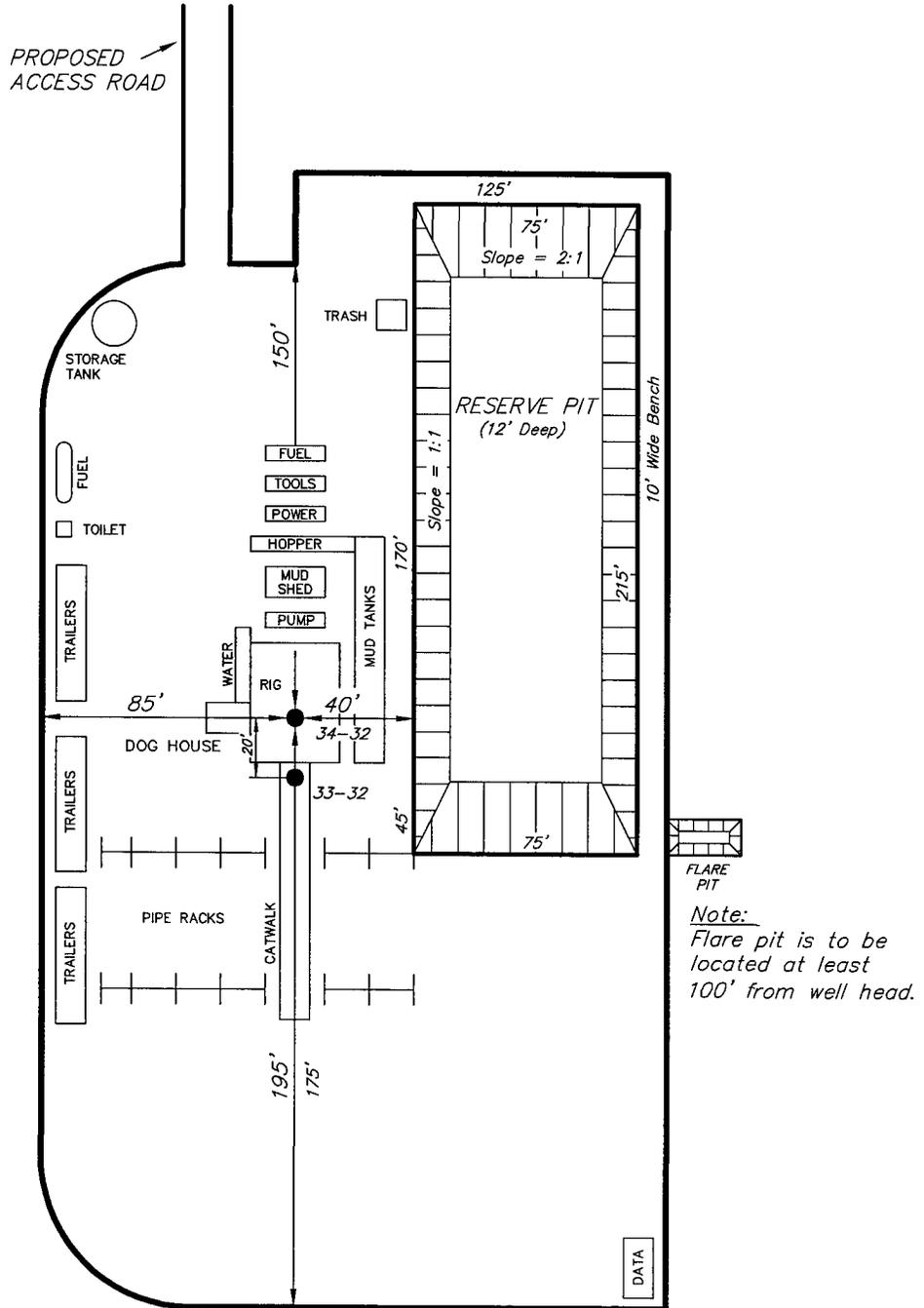
SURVEYED BY: J.H. DATE DRAWN: 10-26-05  
DRAWN BY: F.T.M. SCALE: 1" = 60'  
NOTES:

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SHEET  
5  
OF 10

# ENDURING RESOURCES

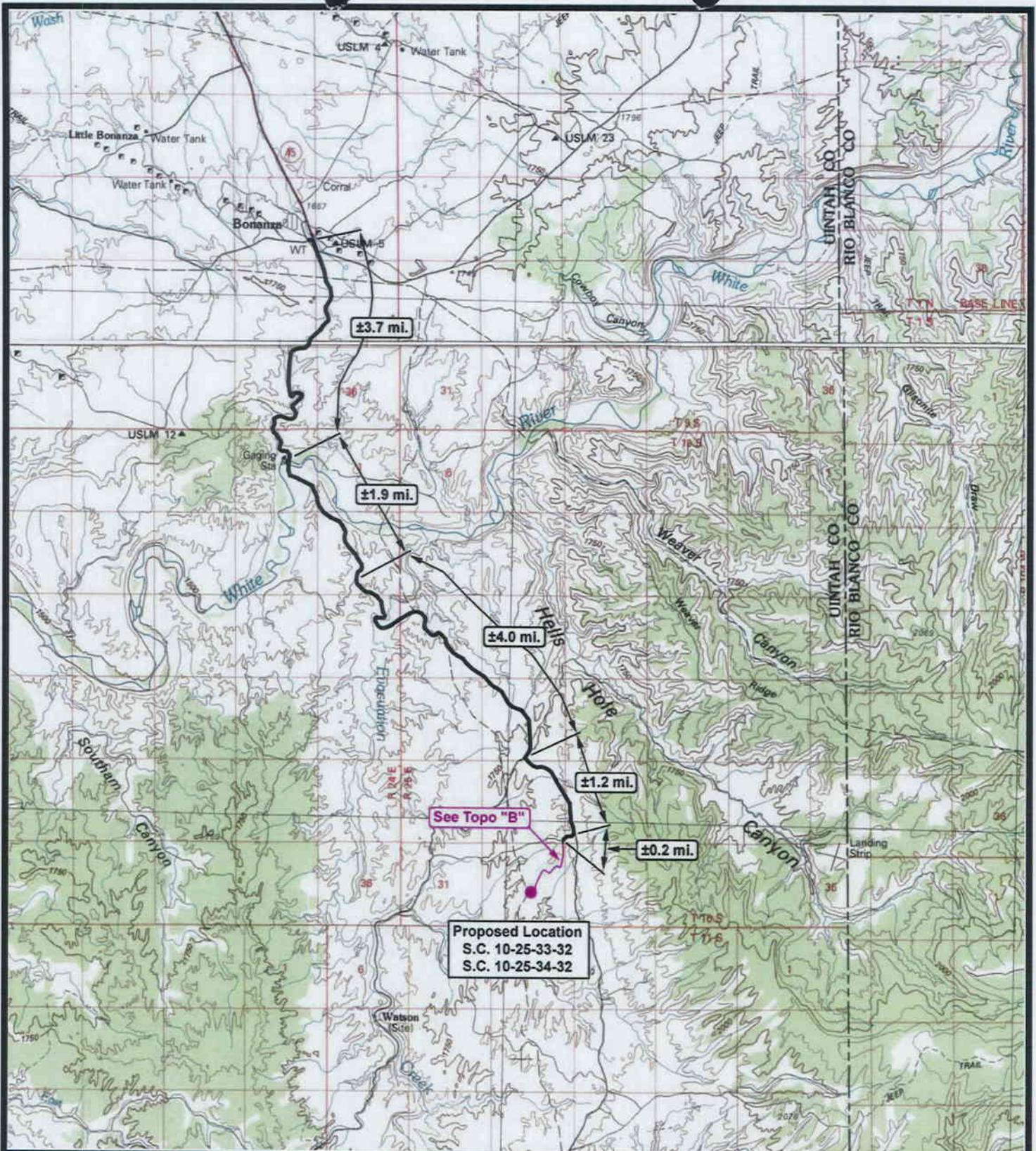
## TYPICAL RIG LAYOUT SOUTHAM CANYON 10-25-33-32 SOUTHAM CANYON 10-25-34-32



Note:  
Flare pit is to be located at least 100' from well head.

SURVEYED BY: J.H.	DATE DRAWN: 10-26-05
DRAWN BY: F.T.M.	SCALE: 1" = 60'
NOTES:	

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Proposed Location  
 S.C. 10-25-33-32  
 S.C. 10-25-34-32

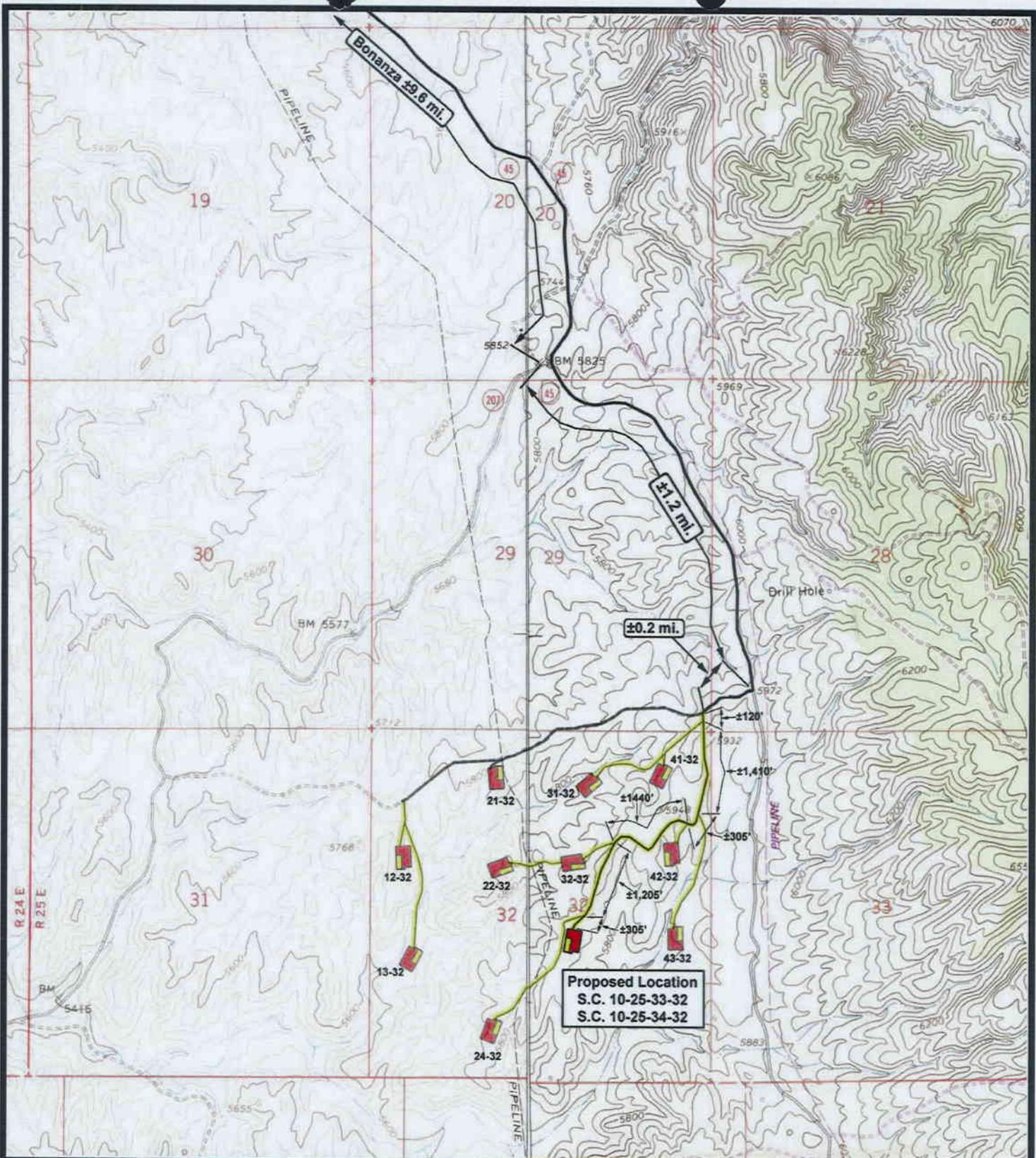
See Topo "B"

  
**ENDURING RESOURCES**  
 Southam Canyon 10-25-33-32  
 Southam Canyon 10-25-34-32  
 Pad Location: NWSE of Sec. 32, T10S, R25E, S.L.B.&M.



  
**Tri-State  
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 180 North Vernal Ave. Vernal, Utah 84078  
 SCALE: 1 = 100,000  
 DRAWN BY: bgm  
 DATE: 07-17-2006

**Legend**  
 Existing Road  
 Proposed Access  
**TOPOGRAPHIC MAP** SHEET  
**"A"** **7**  
 OF 10



**ENDURING RESOURCES**

**Southam Canyon 10-25-33-32**

**Southam Canyon 10-25-34-32**

Pad Location: NWSE of Sec. 32, T10S, R25E, S.L.B.&M.



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Land Surveying Inc.*

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SCALE: 1" = 2,000'

DRAWN BY: bgm

DATE: 07-17-2006

**Legend**

- Existing Road
- Proposed Access

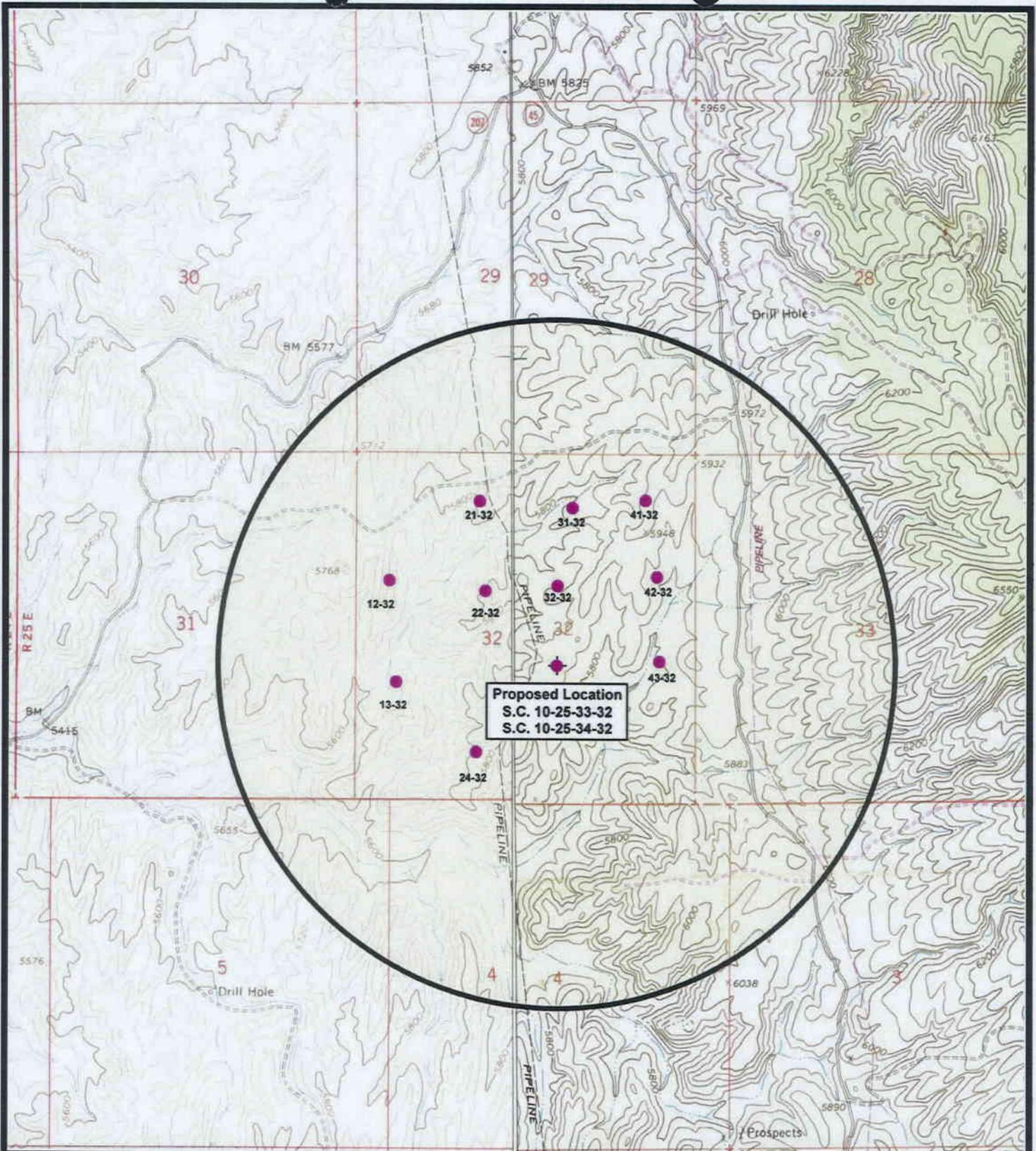
TOPOGRAPHIC MAP

**"B"**

SHEET

**8**

OF 10



  
**ENDURING RESOURCES**

---

**Southam Canyon 10-25-33-32**  
**Southam Canyon 10-25-34-32**  
 Pad Location: NWSE of Sec. 32, T10S, R25E, S.L.B.&M.



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

SCALE: 1" = 2,000'  
 DRAWN BY: bgm  
 DATE: 07-17-2006

**Legend**

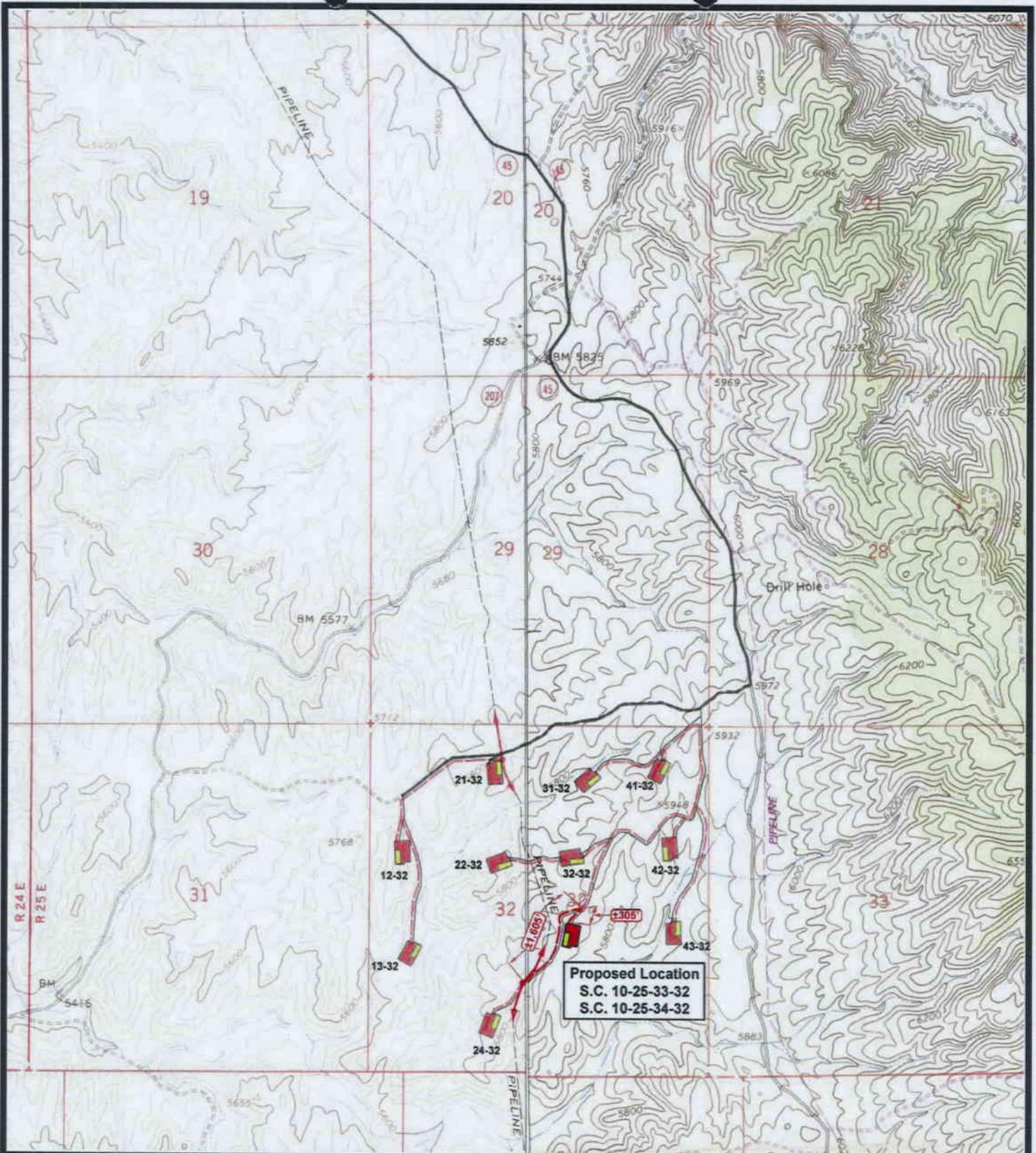
- Location
- One-Mile Radius

---

**TOPOGRAPHIC MAP**

**"C"**

**SHEET**  
**9**  
 OF 10



**ENDURING RESOURCES**

**Southam Canyon 10-25-33-32**

**Southam Canyon 10-25-34-32**

Pad Location: NWSE of Sec. 32, T10S, R25E, S.L.B.&M.



(435) 781-2501  
180 North Vernal Ave. Vernal, Utah 84078

SCALE: 1" = 2,000'

DRAWN BY: bgm

DATE: 07-17-2006

**Legend**

- Roads
- Existing Gas Line
- Proposed Gas Line

TOPOGRAPHIC MAP

**"D"**

SHEET

**10**  
OF 10



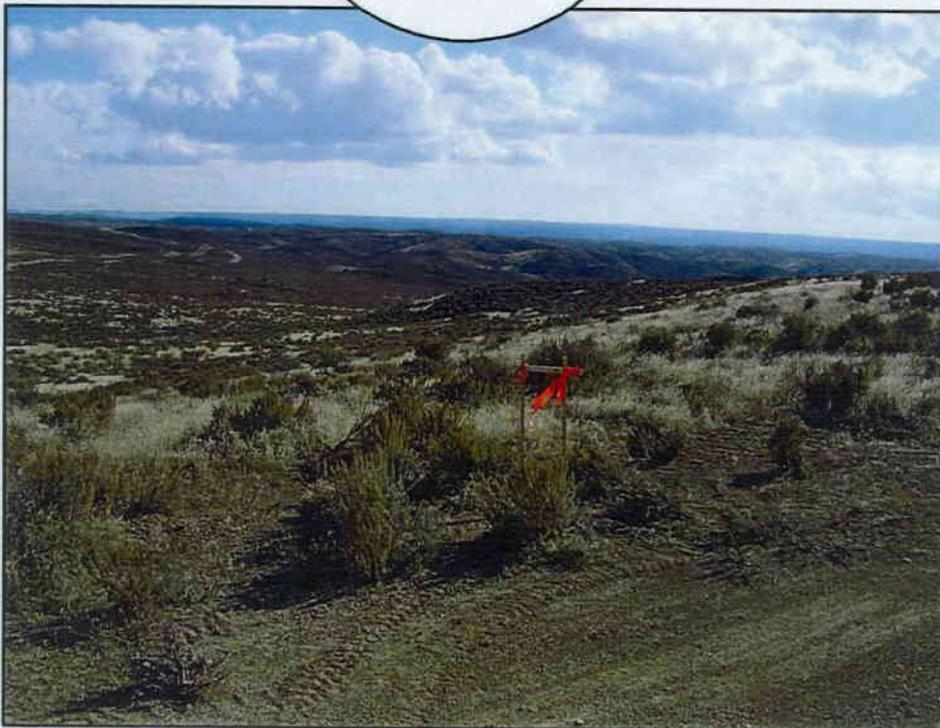
**CENTER STAKE**

  
**ENDURING RESOURCES**  
S.C. 10-25-33-32 & S.C. 10-25-34-32  
Pad Location:  
NW/4E of Sec. 32, T103, R25E, S.L.B.M.

Date Photographed: 11/15/2005  
Date Drawn: 07-17-2006  
Drawn By: bgm

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

**LOOKING SOUTH  
ACCESS**





NORTH

  
**ENDURING RESOURCES**  
S.C. 10-25-33-32 & S.C. 10-25-34-32  
Pad Location:  
NWSE of Sec. 32, T10S, R26E, S1.B.B.M.

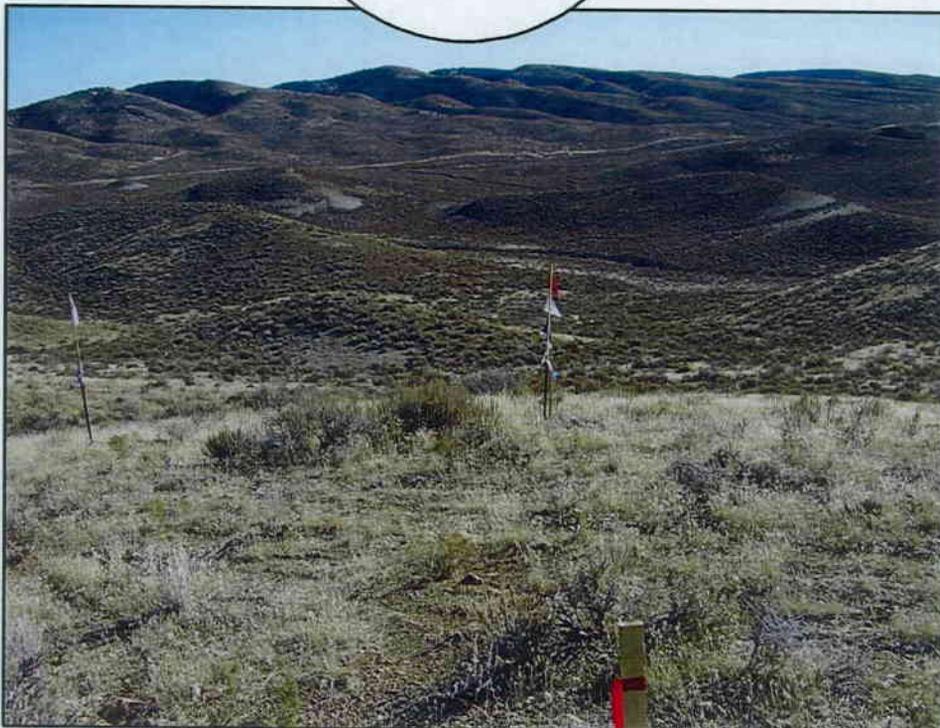
Date Photographed: 11/15/2005

Date Drawn: 07/17/2006

Drawn By: bgm

  
**Tri-State  
Land Surveying Inc.**  
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EAST





SOUTH

  
**ENDURING RESOURCES**  
S.C. 10-25-33-32 & S.C. 10-25-34-32  
Pad Location:  
NWSE of Sec. 32, T10S, R25E, S.L.B.&M.

Date Photographed: 11/15/2005

Date Drawn: 07/17/2006

Drawn By: bgm

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

WEST



**WORKSHEET  
APPLICATION FOR PERMIT TO DRILL**

APD RECEIVED: 07/26/2006

API NO. ASSIGNED: 43-047-38401
--------------------------------

WELL NAME: SOUTHAM CYN 10-25-34-32  
 OPERATOR: ENDURING RESOURCES, LLC ( N2750 )  
 CONTACT: AL ARLIAN

PHONE NUMBER: 303-350-5114

PROPOSED LOCATION:

NWSE 32 100S 250E  
 SURFACE: 2049 FSL 2139 FEL  
 BOTTOM: 0659 FSL 1978 FEL  
 COUNTY: UINTAH  
 LATITUDE: 39.90373 LONGITUDE: -109.1226  
 UTM SURF EASTINGS: 660487 NORTHINGS: 4418550  
 FIELD NAME: WILDCAT ( 1 )

INSPECT LOCATN BY: / /		
Tech Review	Initials	Date
Engineering	DLD	9/20/06
Geology		
Surface		

LEASE TYPE: 3 - State  
 LEASE NUMBER: ML-47065  
 SURFACE OWNER: 3 - State

PROPOSED FORMATION: MVRD  
 COALBED METHANE WELL? NO

RECEIVED AND/OR REVIEWED:

- Plat
- Bond: Fed[] Ind[] Sta[] Fee[]  
(No. RLB0008031 )
- Potash (Y/N)
- Oil Shale 190-5 (B) or 190-3 or 190-13
- Water Permit  
(No. 49-222 )
- RDCC Review (Y/N)  
(Date: 08/18/2006 )
- Fee Surf Agreement (Y/N)
- Intent to Commingle (Y/N)

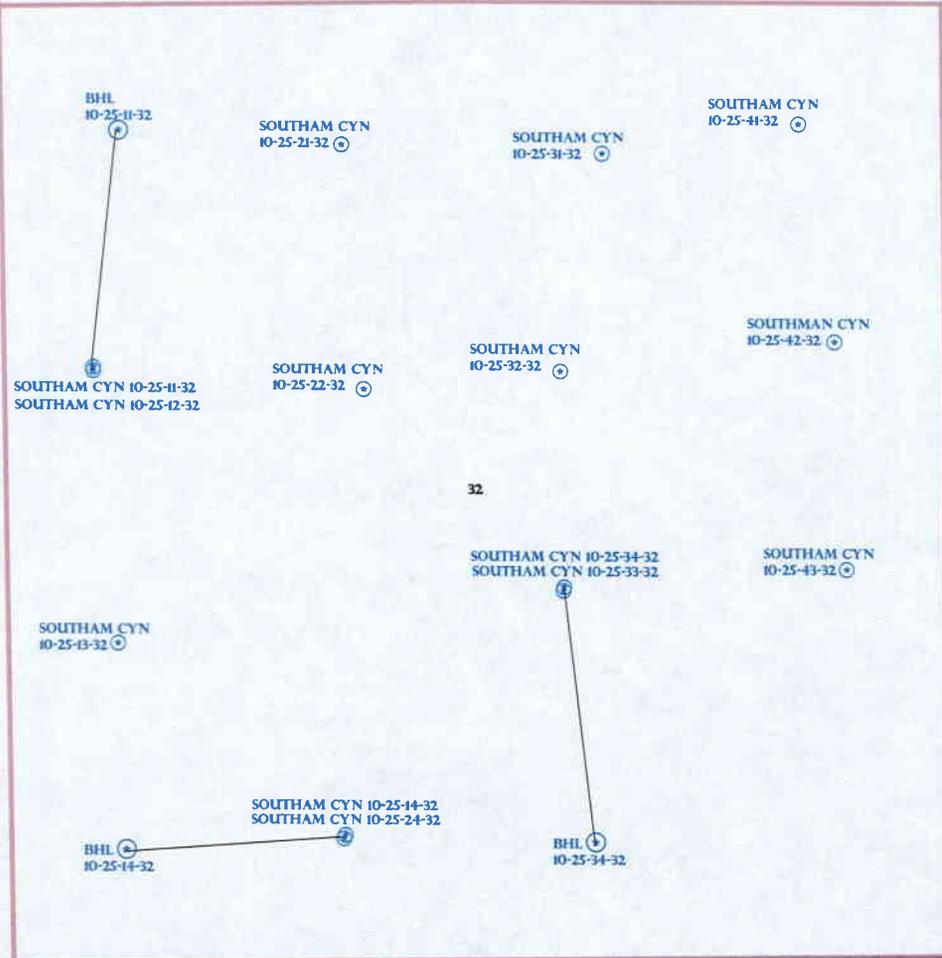
LOCATION AND SITING:

- 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 Permit (03-07-06)

STIPULATIONS: 1- Spacing Strip  
2- STATEMENT OF BASIS  
3- Surf. Csg Cont Stip

T10S R25E



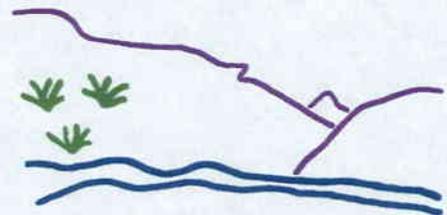
T11S R25E

OPERATOR: ENDURING RES LLC (N2750)  
 SEC: 32 T.10S R. 25E  
 FIELD: WILDCAT (001)  
 COUNTY: Uintah  
 SPACING: R649-3-11 / DIRECTIONAL DRILLING

Field Status	
	ABANDONED
	ACTIVE
	COMBINED
	INACTIVE
	PROPOSED
	STORAGE
	TERMINATED

Unit Status	
	EXPLORATORY
	GAS STORAGE
	NF PP OIL
	NF SECONDARY
	PENDING
	PI OIL
	PP GAS
	PP GEOTHERML
	PP OIL
	SECONDARY
	TERMINATED

Wells Status	
	GAS INJECTION
	GAS STORAGE
	LOCATION ABANDONED
	NEW LOCATION
	PLUGGED & ABANDONED
	PRODUCING GAS
	PRODUCING OIL
	SHUT-IN GAS
	SHUT-IN OIL
	TEMP. ABANDONED
	TEST WELL
	WATER INJECTION
	WATER SUPPLY
	WATER DISPOSAL
	DRILLING



Utah Oil Gas and Mining



PREPARED BY: DIANA WHITNEY  
 DATE: 03-AUGUST-2006

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

OPERATOR: ENDURING RESOURCES, LLC.  
WELL NAME & NUMBER: SOUTHAM CANYON 10-25-34-32  
API NUMBER: 43-047-38401  
LOCATION: 1/4,1/4 NWSE Sec: 32 TWP: 10S RNG: 25E 2049' FSL 2139' FEL

**Geology/Ground Water:**

Enduring proposes to set 2,000' of surface casing at this location. The depth to the base of the moderately saline water at this location is estimated to be at a depth of 5,900' which is below the proposed T.D. A search of Division of Water Rights records shows no water well within a 10,000 foot radius of the center of Section 32. The surface formation at this site is the Uinta-Green River Formation transition. The Uinta Formation is made up of lenticular sandstones interbedded with shales and is expected to have limited value as an aquifer. The Green river Formation should be found near the surface. The Green River Formation may contain useable aquifers but they should be adequately protected by the proposed casing and cementing program.

**Reviewer:** Brad Hill **Date:** 08-24-06

**Surface:**

The pre-drill investigation of the surface was performed on 03/07/2006. This site is on state surface, with state minerals. Due to harsh weather, Jim Davis from SITLA was not present but expressed that the pre-sites should still take place in his absence. Doug Hammond expressed willingness and desire to paint the location tanks in a color to closely match the surroundings. Ben Williams of DWR stated that this section is classified as critical deer and substantial elk winter range. Because of the critical deer classification, Mr. Williams requested that the location be closed to drilling and construction from November 15 to April 15.

**Reviewer:** Richard Powell **Date:** 03/07/2006

**Conditions of Approval/Application for Permit to Drill:**

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

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

**OPERATOR:** ENDURING RESOURCES, LLC  
**WELL NAME & NUMBER:** SOUTHAM CANYON 10-25-34-32  
**API NUMBER:** 43-047-38401  
**LEASE:** ML-47065      **FIELD/UNIT:** UNDESIGNATED  
**LOCATION:** 1/4,1/4 NWSE **Sec:** 32 **TWP:** 10S **RNG:** 25E 2049' **FSL** 2139' **FEL**  
**LEGAL WELL SITING:** 460 F **SEC. LINE;** 460 F **1/4,1/4 LINE;** 920 F **ANOTHER WELL.**  
**GPS COORD (UTM):** 4418561Y 0660499X **SURFACE OWNER:** SITLA.

**PARTICIPANTS**

Richard Powell (DOGM), Doug Hammond (Enduring Resources), Larry Rowell (Ponderosa Oilfield Service), Chris Stewart & Dustin Laub (TriState Land Surveying).

**REGIONAL/LOCAL SETTING & TOPOGRAPHY**

Location sits on top of north-south running ridge. The sides of the ridge drop steeply off to the east and west. Hills and ridges dominate the terrain of this section, with rock formations protruding from the tops of many of the slopes. The slopes of the western half of this section are much more gradual. The ridges generally seem to run from north to south. Drainage is westward to Evacuation Creek. To the east of this section, are much taller and steeper slopes. Bonanza, UT is approximately 11 miles to the north.

**SURFACE USE PLAN**

**CURRENT SURFACE USE:** Wildlife & Livestock grazing.

**PROPOSED SURFACE DISTURBANCE:** Location will be 375' by 210'. Proposed new access for this well only is 305'. The total new access is 4,785', most of this will be used to access other proposed wells in this section.

**LOCATION OF EXISTING WELLS WITHIN A 1-MILE RADIUS:** See attached map from GIS database.

**LOCATION OF PRODUCTION FACILITIES AND PIPELINES:** All production facilities will be on location and added after drilling well. Pipeline to follow access road.

**SOURCE OF CONSTRUCTION MATERIAL:** All construction material will be borrowed from site during construction of location.

**ANCILLARY FACILITIES:** None will be required.

**WILL DRILLING AT THIS LOCATION GENERATE PUBLIC INTEREST OF CONCERNS? (EXPLAIN):** Unlikely.

**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. Portable toilets, sewage holding tanks, and onsite sewage treatment equipment will be handled by commercial contractors and regulated by the appropriate health authority. Trash will be contained in trash baskets and disposed of at an approved landfill.

**ENVIRONMENTAL PARAMETERS**

AFFECTED FLOODPLAINS AND/OR WETLANDS: none

FLORA/FAUNA: Sagebrush, Greasewood, spiny hopsage, shadscale, cheat grass / Deer, elk, Rodents, Coyote, Songbirds, Rabbit, Bobcat, Pronghorn, Cougar.

SOIL TYPE AND CHARACTERISTICS: Light brown silty clay with scattered rock and shale.

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: Paleontology study by IPC on 3/1/06.

**RESERVE PIT**

CHARACTERISTICS: 215' BY 75' and twelve feet deep.

LINER REQUIREMENTS (Site Ranking Form attached): A liner will be required for reserve pit. Site ranking score is 25.

**SURFACE RESTORATION/RECLAMATION PLAN**

As per SITLA.

SURFACE AGREEMENT: As per SITLA.

CULTURAL RESOURCES/ARCHAEOLOGY: Archaeology study done by MOAC on 2/23/06.

**OTHER OBSERVATIONS/COMMENTS**

This location is to be shared with the Southam Canyon 10-25-33-32.

**ATTACHMENTS**

Photos of this site were taken and placed on file.

RICHARD POWELL  
DOGM REPRESENTATIVE

03/07/06 11:35 AM  
DATE/TIME

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

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

**Final Score**      25      (Level I Sensitivity)

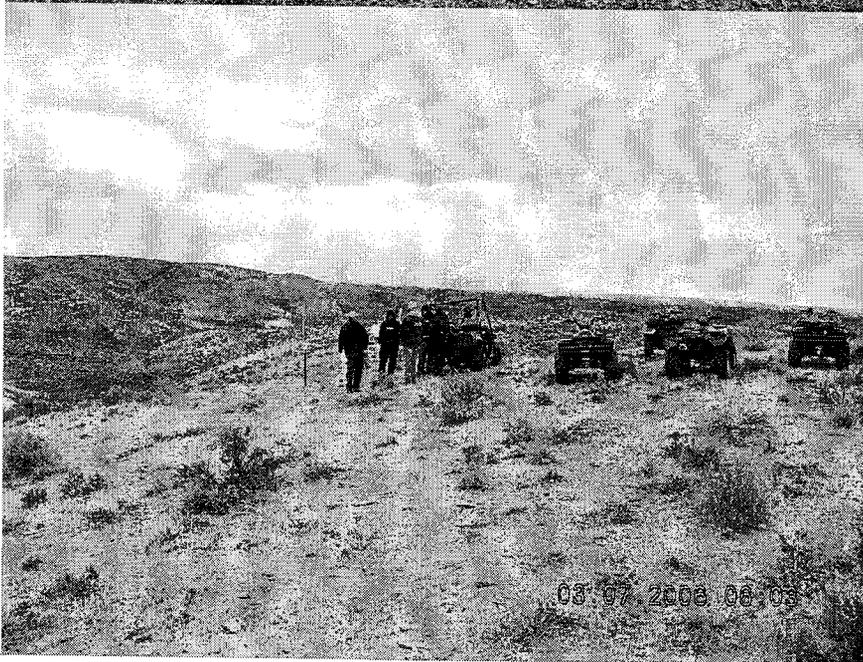
Sensitivity Level I = 20 or more: total containment is required.

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

Sensitivity Level III = below 15: no specific lining is required.



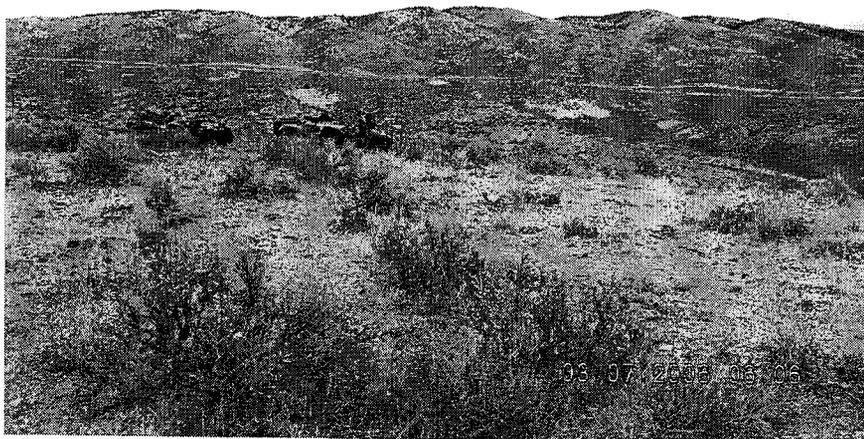
03-97-2006-06-04



03-97-2006-06-03



03 07 2005 05 05



03 07 2005 06 06

**STATE ACTIONS**  
**Resource Development Coordinating Committee**  
**Governor's Office of Planning and Budget**  
**5110 State Office Building**  
**SLC, UT 84114**  
**Phone No. 537-9230**

<b>1. State Agency</b> Oil, Gas and Mining 1594 West North Temple, Suite 1210 Salt Lake City, UT 84114-5801	<b>2. Approximate date project will start:</b>  Upon Approval or August 17, 2006
<b>3. Title of proposed action:</b> Application for Permit to Drill	
<b>4. Description of Project:</b>  Enduring Resources, LLC proposes to drill the Southam Canyon 10-25-34-32 well (wildcat) on a State lease ML-47065, Uintah County, Utah. This action is being presented to the RDCC for consideration of resource issues affecting state interests. The Division of Oil, Gas and Mining is the primary administrative agency in this action and must issue approval before operations commence.	
<b>5. Location and detailed map of land affected (site location map required, electronic GIS map preferred)</b> (include UTM coordinates where possible) <b>(indicate county)</b> 2049' FSL 2139' FEL, Bottom Location 659' FSL 1978' FEL, NW/4 SE/4, Section 32, Township 10 South, Range 25 East, Uintah County, Utah	
<b>6. Possible significant impacts likely to occur:</b> Surface impacts include up to five acres of surface disturbance during the drilling and completion phase (estimated for five weeks duration). If oil and gas in commercial quantities is discovered, the location will be reclaimed back to a net disturbance of between one and two acres – not including road, pipeline, or utility infrastructure. If no oil or gas is discovered, the location will be completely reclaimed.	
<b>7. Identify local government affected</b> a. Has the government been contacted? No. b. When? c. What was the response? d. If no response, how is the local government(s) likely to be impacted?	
<b>8. For acquisitions of land or interests in land by DWR or State Parks please identify state representative and state senator for the project area. Name and phone number of state representative, state senator near project site, if applicable:</b> a. Has the representative and senator been contacted? N/A	
<b>9. Areawide clearinghouse(s) receiving state action:</b> (to be sent out by agency in block 1) Uintah Basin Association of Governments	
<b>10. For further information, contact:</b>   Diana Whitney Phone: (801) 538-5312	<b>11. Signature and title of authorized officer</b>   Gil Hunt, Associate Director Date: August 3, 2006

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

FORM 3

AMENDED REPORT   
(highlight changes)

<b>APPLICATION FOR PERMIT TO DRILL</b>				5. MINERAL LEASE NO: <b>ML-47065</b>	6. SURFACE: <b>State</b>
1A. TYPE OF WORK:    DRILL <input checked="" type="checkbox"/> REENTER <input type="checkbox"/> DEEPEN <input type="checkbox"/>				7. IF INDIAN, ALLOTTEE OR TRIBE NAME:	
B. TYPE OF WELL:    OIL <input type="checkbox"/> GAS <input checked="" type="checkbox"/> OTHER _____    SINGLE ZONE <input type="checkbox"/> MULTIPLE ZONE <input checked="" type="checkbox"/>				8. UNIT or CA AGREEMENT NAME:	
2. NAME OF OPERATOR: <b>Enduring Resources, LLC</b>				9. WELL NAME and NUMBER: <b>Southam Canyon 10-25-34-32</b>	
3. ADDRESS OF OPERATOR: <b>475 17th St., Ste 1500</b> CITY <b>Denver</b> STATE <b>CO</b> ZIP <b>80220</b>			PHONE NUMBER: <b>(303) 350-5114</b>	10. FIELD AND POOL, OR WILDCAT: <b>Undesignated <i>Widant</i></b>	
4. LOCATION OF WELL (FOOTAGES) <b>660487 x 4418550 Y 39.903731 - 109.122615</b>				11. QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: <b>NWSE 32 10S 25E</b>	
AT SURFACE: <b>2049' FSL - 2139' FEL</b>					
AT PROPOSED PRODUCING ZONE: <b>659' FSL - 1978' FEL</b>					
14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE: <b>11 miles Southwest of Bonanza, UT</b>				12. COUNTY: <b>Uintah</b>	13. STATE: <b>UTAH</b>
15. DISTANCE TO NEAREST PROPERTY OR LEASE LINE (FEET) <b>659'</b>		16. NUMBER OF ACRES IN LEASE: <b>640</b>		17. NUMBER OF ACRES ASSIGNED TO THIS WELL: <b>40 acres</b>	
18. DISTANCE TO NEAREST WELL (DRILLING, COMPLETED, OR APPLIED FOR) ON THIS LEASE (FEET) <b>1000' +</b>		19. PROPOSED DEPTH: <b>4,990</b>		20. BOND DESCRIPTION: <b>RLB0008031</b>	
21. ELEVATIONS (SHOW WHETHER DF, RT, GR, ETC.): <b>5875'    RT-KB</b>		22. APPROXIMATE DATE WORK WILL START: <b>10/1/2006</b>		23. ESTIMATED DURATION: <b>20 days</b>	

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			
20"	14" line pipe	40	3 yards	Ready Mix		
11"	8-5/8" J-55 24#	1,716	Premium Lead	110 sxs	3.50	11.1
			Premium Tail	183 sxs	1.15	15.8
7-7/8"	4-1/2" N-80 11.6#	4,990	Class G	33 sxs	3.3	11.0
			50/50 Poz Class G	587 sxs	1.56	14.3

25. **ATTACHMENTS**

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

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

NAME (PLEASE PRINT) Alvin R. (Al) Arlian    TITLE Landman - Regulatory Specialist

SIGNATURE *Al Arlian*    DATE 7/19/2006

(This space for State use only)

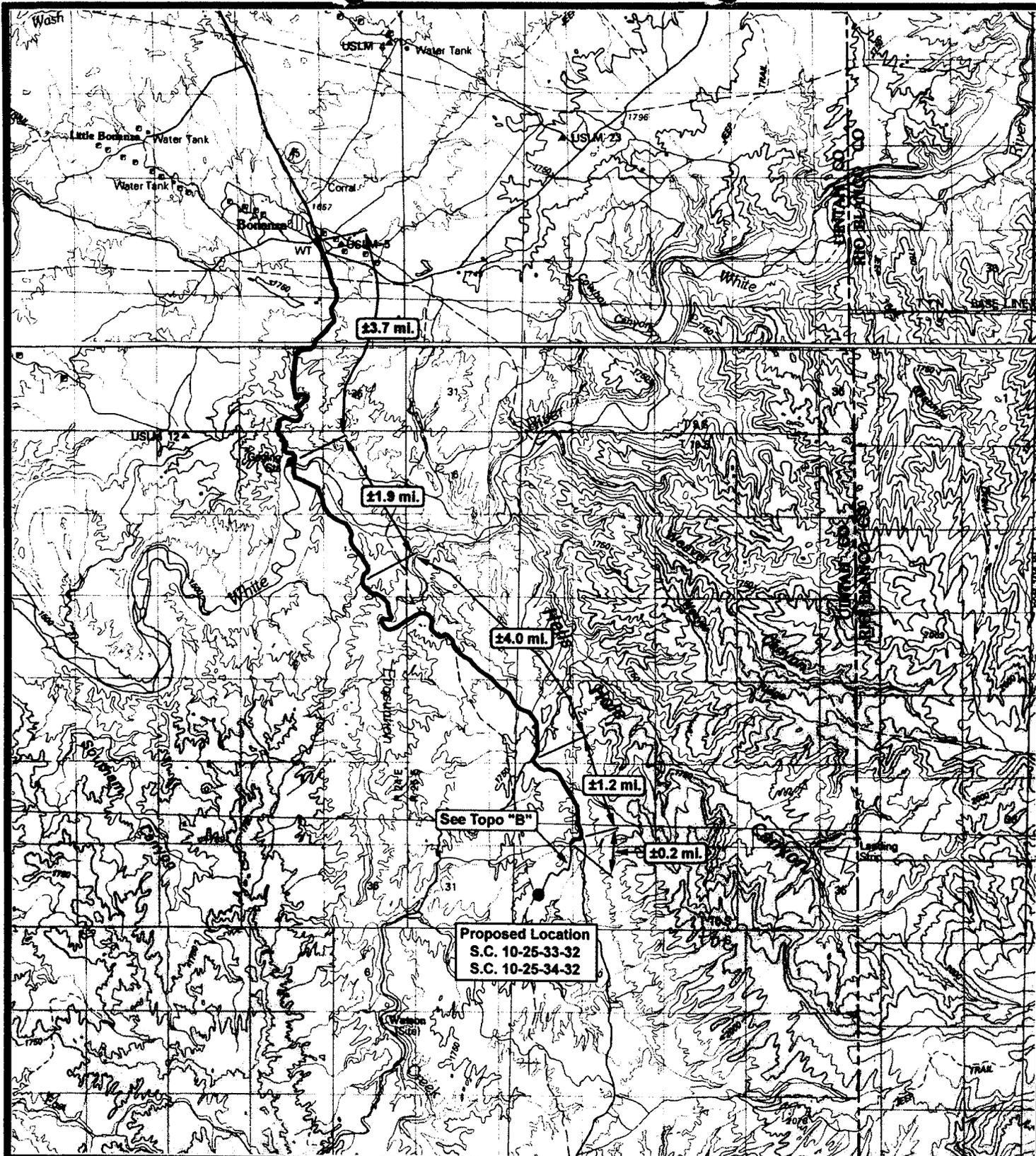
API NUMBER ASSIGNED: 43-047-38401

APPROVAL:

**RECEIVED**  
**JUL 26 2006**

DIV. OF OIL, GAS & MINING



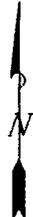


**ENDURING RESOURCES**

**Southam Canyon 10-25-33-32**

**Southam Canyon 10-25-34-32**

Pad Location: NWSE of Sec. 32, T10S, R26E, S.L.B.&M.



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

SCALE: 1 = 100,000

DRAWN BY: bgm

DATE: 07-17-2006

**Legend**

-  Existing Road
-  Proposed Access

TOPOGRAPHIC MAP

**"A"**

SHEET

**7**

OF 10

3-06 Enduring Southam Cyn -25-34-32

Casing Schematic

Surface

Uinta

BHP  
 $(0.052)(4989)(9.8) = 2542 \text{ psi}$   
 Anticipate 2837

Jas  
 $(0.12)(4989) = 599$   
 $\frac{2837}{- 599}$

MASP 2238 psi

BOPE - 3000 psi ✓

70% = 2065 psi

Max press @ csq. shoe  
 $\frac{4989}{- 1944}$   
 $(0.22)(3045) = 670 \text{ psi}$   
 $\frac{2837}{- 670}$   
 2167 psi

test to 2065 psi ✓  
 (± 1200 psi surf. press -)

8-5/8"  
 MW 8.4  
 Frac 30.

4-1/2"  
 MW 9.8

TOC @ 0.  
 90' Green River

1501' TOC tail w/4% washout  
 ✓ Surf Stop

TOC @ 1677.

2032' Surface TOC tail w/11% washout ✓  
 2016. MD  
 1944. TVD

2175' Wasatch

3066' Mesaverde

Production  
 5455. MD  
 4989. TVD

5900' BMSW

✓ Adequate Dued 9/20/06

Well name:

**08-06 Enduring Southam Cyn 10-25-34-32**

Operator: **Enduring Resources, LLC (N2750)**

String type: **Surface**

Project ID:

43-047-38401

Location: **Uintah County**

**Design parameters:**

**Collapse**

Mud weight: 8.400 ppg  
Design is based on evacuated pipe.

**Minimum design factors:**

**Collapse:**

Design factor 1.125

**Burst:**

Design factor 1.00

**Environment:**

H2S considered? No  
Surface temperature: 75 °F  
Bottom hole temperature: 102 °F  
Temperature gradient: 1.40 °F/100ft  
Minimum section length: 1,500 ft

Cement top: Surface

**Burst**

Max anticipated surface pressure: 1,941 psi  
Internal gradient: 0.120 psi/ft  
Calculated BHP 2,175 psi

No backup mud specified.

**Tension:**

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

Tension is based on buoyed weight.  
Neutral point: 1,736 ft

**Directional well information:**

Kick-off point 400 ft  
Departure at shoe: 424 ft  
Maximum dogleg: 5 °/100ft  
Inclination at shoe: 35.8 °

**Re subsequent strings:**

Next setting depth: 4,989 ft  
Next mud weight: 9.800 ppg  
Next setting BHP: 2,540 psi  
Fracture mud wt: 30.000 ppg  
Fracture depth: 1,944 ft  
Injection pressure 3,030 psi

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Internal Capacity (ft³)
1	2016	8.625	24.00	J-55	ST&C	1944	2016	7.972	97.1
Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (Kips)	Tension Strength (Kips)	Tension Design Factor
1	848	1290	1.521	2175	2950	1.36	41	244	5.98 J

Prepared by: Helen Sadik-Macdonald  
Utah Div. of Oil & Mining

Phone: 801-538-5357  
FAX: 801-359-3940

Date: August 29,2006  
Salt Lake City, Utah

**Remarks:**

Collapse is based on a vertical depth of 1944 ft, a mud weight of 8.4 ppg. The casing is considered to be evacuated for collapse purposes. Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

Collapse strength is (biaxially) derated for doglegs in directional wells by multiplying the tensile stress by the cross section area to calculate a

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

Well name:

**08-06 Enduring Southam Cyn 10-25-34-32**Operator: **Enduring Resources, LLC (N2750)**

String type: Production

Project ID:

43-047-38401

Location: Uintah County

**Design parameters:****Collapse**Mud weight: 9.800 ppg  
Design is based on evacuated pipe.**Burst**Max anticipated surface  
pressure: 1,941 psi  
Internal gradient: 0.120 psi/ft  
Calculated BHP 2,540 psi

No backup mud specified.

**Minimum design factors:****Collapse:**

Design factor 1.125

**Burst:**

Design factor 1.00

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

Tension is based on buoyed weight.

Neutral point: 4,724 ft

**Environment:**H2S considered? No  
Surface temperature: 75 °F  
Bottom hole temperature: 145 °F  
Temperature gradient: 1.40 °F/100ft  
Minimum section length: 1,500 ft

Cement top: 1,677 ft

**Directional well information:**Kick-off point 400 ft  
Departure at shoe: 1399 ft  
Maximum dogleg: 5 °/100ft  
Inclination at shoe: 0 °

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 <sup>3</sup> )
1	5455	4.5	11.60	N-80	LT&C	4989	5455	3.875	126.4
Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (Kips)	Tension Strength (Kips)	Tension Design Factor
1	2540	6350	2.500 ✓	2540	7780	3.06 ✓	49	223	4.51 J ✓

Prepared by: Helen Sadik-Macdonald  
Utah Div. of Oil & MiningPhone: 801-538-5357  
FAX: 801-359-3940Date: August 30, 2006  
Salt Lake City, Utah**Remarks:**

Collapse is based on a vertical depth of 4989 ft, a mud weight of 9.8 ppg. The casing is considered to be evacuated for collapse purposes. Collapse strength is based on the Westcott, Dunlop &amp; Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

Collapse strength is (biaxially) derated for doglegs in directional wells by multiplying the tensile stress by the cross section area to calculate a

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

**From:** "Evette Bissett" <ebissett@enduringresources.com>  
**To:** "Diana Whitney" <dianawhitney@utah.gov>  
**Date:** 8/4/2006 2:09:19 PM  
**Subject:** Document in Directional Ltr

Sorry for the error, here is the missing letter

---

Enduring Resources, LLC  
475 Seventeenth Street, Suite 1500  
Denver, Colorado 80202  
Office: 303-573-1222  
Facsimile: 303-573-0461

August 4, 2006

State of Utah

Division of Oil, Gas and Mining  
P.O. Box 145801  
Salt Lake City, Utah 84114-5801

Attention: Ms. Diana Whitney

RE: Southam Canyon 10-25-34-32  
659' FSL - 1978' FEL SWSE BHL  
2049' FSL - 2139' FEL NWSE Surface  
Sec. 32 T10S-R25E  
Uintah County, Utah  
Lease # ML-47065

Dear Ms. Whitney:

The above-referenced well will be directionally drilled because steep slopes and to lessen surface impact

As to the north, east and south: Enduring Resources, LLC is the only lease owner within 460 feet from the surface location and all points along the intended well bore. Therefore.

\* Enduring Resources grants itself permission to directionally drill this well.

Enduring has requested permission to drill this directional well from the leasehold owner in sections 18 and 19. If permission is not granted, Enduring will move the surface location east to locate it within a legal drilling window.

In the event there are any other outstanding matters preventing these APD's from being approved, please let me know at your earliest convenience, 303-350-5114 ( <mailto:aarlian@enduringresources.com> aarlian@enduringresources.com).

Very truly yours,

ENDURING RESOURCES, LLC

Alvin R. (Al) Arlian

Landman - Regulatory Specialist

ara

**Enduring Resources, LLC**  
475 Seventeenth Street, Suite 1500  
Denver, Colorado 80202  
Office: 303-573-1222  
Facsimile: 303-573-0461

August 4, 2006

State of Utah  
Division of Oil, Gas and Mining  
P.O. Box 145801  
Salt Lake City, Utah 84114-5801  
Attention: Ms. Diana Whitney

**RE: Southam Canyon 10-25-34-32**  
**659' FSL – 1978' FEL SWSE BHL**  
**2049' FSL – 2139' FEL NWSE Surface**  
**Sec. 32 T10S-R25E**  
**Uintah County, Utah**  
**Lease # ML-47065**

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Very truly yours,

**ENDURING RESOURCES, LLC**



Alvin R. (Al) Arlian  
Landman – Regulatory Specialist

ara

**RECEIVED**  
**AUG 09 2006**  
DIV. OF OIL, GAS & MINING

**Enduring Resources, LLC**  
475 Seventeenth Street, Suite 1500  
Denver, Colorado 80202  
Office: 303-573-1222  
Facsimile: 303-573-0461

August 4, 2006

State of Utah  
Division of Oil, Gas and Mining  
P.O. Box 145801  
Salt Lake City, Utah 84114-5801  
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**Uintah County, Utah**  
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In the event there are any other outstanding matters preventing these APD's from being approved, please let me know at your earliest convenience, 303-350-5114 ([aarlian@enduringresources.com](mailto:aarlian@enduringresources.com)).

Very truly yours,

**ENDURING RESOURCES, LLC**



Alvin R. (Al) Arlian  
Landman – Regulatory Specialist

ara

**RECEIVED**

**AUG 09 2006**

DIV. OF OIL, GAS & MINING

**From:** Robert Clark  
**To:** Whitney, Diana  
**Date:** 8/14/2006 10:34:14 AM  
**Subject:** RDCC short turn around responses

43-047-38401

The following comments are provided in response to short turn around items **RDCC #6916** through **RDCC #6921**, and **RDCC #6943**.

**RDCC #6916, Comments begin:** The proposal of Enduring Resources, LLC to drill the **Southam Canyon 10-25-34-32** wildcat well, in Uintah County, may require a permit, known as an Approval Order, from the Executive Secretary of the Air Quality Board if any compressor or pump stations are constructed at the site. If a permit is required, a permit application, known as a Notice of Intent (NOI), should be submitted to the Executive Secretary at the Utah Division of Air Quality at 150 N. 1950 West, Salt Lake City, Utah, 84116 for review according to the Utah Air Quality Rule R307-401. Permit: Notice of Intent and Approval Order. The guidelines for preparing an NOI are available on-line at <http://www.airquality.utah.gov/Permits/FORMS/NOIGuide8.pdf>. The proposed project is also subject to Utah Air Quality Rule R307-205-5, Fugitive Dust, due to the fugitive dust that is generated during the excavating phases of the project. These rules apply to construction activities that disturb an area greater than 1/4 acre in size. A permit, known as an Approval Order, is not required from the Executive Secretary of the Air Quality Board, but steps need to be taken to minimize fugitive dust, such as watering and/or chemical stabilization, providing vegetative or synthetic cover or windbreaks. A copy of the rules may be found at [www.rules.utah.gov/publicat/code/r307/r307.htm](http://www.rules.utah.gov/publicat/code/r307/r307.htm). **Comments end. RDCC #6917, Comments begin:** The proposal of Enduring Resources, LLC to drill the **Southam Canyon 10-25-14-32** wildcat well, in Uintah County, may require a permit, known as an Approval Order, from the Executive Secretary of the Air Quality Board if any compressor or pump stations are constructed at the site. If a permit is required, a permit application, known as a Notice of Intent (NOI), should be submitted to the Executive Secretary at the Utah Division of Air Quality at 150 N. 1950 West, Salt Lake City, Utah, 84116 for review according to the Utah Air Quality Rule R307-401. Permit: Notice of Intent and Approval Order. The guidelines for preparing an NOI are available on-line at <http://www.airquality.utah.gov/Permits/FORMS/NOIGuide8.pdf>. The proposed project is also subject to Utah Air Quality Rule R307-205-5, Fugitive Dust, due to the fugitive dust that is generated during the excavating phases of the project. These rules apply to construction activities that disturb an area greater than 1/4 acre in size. A permit, known as an Approval Order, is not required from the Executive Secretary of the Air Quality Board, but steps need to be taken to minimize fugitive dust, such as watering and/or chemical stabilization, providing vegetative or synthetic cover or windbreaks. A copy of the rules may be found at [www.rules.utah.gov/publicat/code/r307/r307.htm](http://www.rules.utah.gov/publicat/code/r307/r307.htm). **Comments end. RDCC #6918, Comments begin:** The proposal of Enduring Resources, LLC to drill the **Southam Canyon 10-25-11-32** wildcat well, in Uintah County, may require a permit, known as an Approval Order, from the Executive Secretary of the Air Quality Board if any compressor or pump stations are constructed at the site. If a permit is required, a permit application, known as a Notice of Intent (NOI), should be submitted to the Executive Secretary at the Utah Division of Air Quality at 150 N. 1950 West, Salt Lake City, Utah, 84116 for review according to the Utah Air Quality Rule R307-401. Permit: Notice of Intent and Approval Order. The guidelines for preparing an NOI are available on-line at <http://www.airquality.utah.gov/Permits/FORMS/NOIGuide8.pdf>. The proposed project is also subject to Utah Air Quality Rule R307-205-5, Fugitive Dust, due to the fugitive dust that is generated during the excavating phases of the project. These rules apply to construction activities that disturb an area greater than 1/4 acre in size. A permit, known as an Approval Order, is not required from the Executive Secretary of the Air Quality Board, but steps need to be taken to minimize fugitive dust, such as watering and/or chemical stabilization, providing vegetative or synthetic cover or windbreaks. A copy of the rules may be found at [www.rules.utah.gov/publicat/code/r307/r307.htm](http://www.rules.utah.gov/publicat/code/r307/r307.htm). **Comments end. RDCC #6919, Comments begin:** The proposal of the Houston Exploration Company to drill the **North Horseshoe 5-16-6-22** wildcat well, in Uintah County, may require a permit, known as an Approval Order, from the Executive Secretary of the Air Quality Board if any compressor or pump stations are constructed at the site. If a permit is required, a permit application, known as a Notice of Intent (NOI), should be submitted to the Executive Secretary at the Utah Division of Air Quality at 150 N. 1950 West, Salt Lake City, Utah, 84116 for review according to the Utah Air Quality Rule R307-401. Permit: Notice of Intent and Approval Order. The guidelines for

preparing an NOI are available on-line at <http://www.airquality.utah.gov/Permits/FORMS/NOIGuide8.pdf>. The proposed project is also subject to Utah Air Quality Rule R307-205-5, Fugitive Dust, due to the fugitive dust that is generated during the excavating phases of the project. These rules apply to construction activities that disturb an area greater than 1/4 acre in size. A permit, known as an Approval Order, is not required from the Executive Secretary of the Air Quality Board, but steps need to be taken to minimize fugitive dust, such as watering and/or chemical stabilization, providing vegetative or synthetic cover or windbreaks. A copy of the rules may be found at [www.rules.utah.gov/publicat/code/r307/r307.htm](http://www.rules.utah.gov/publicat/code/r307/r307.htm) . **Comments end. RDCC #6920, Comments begin:** The proposal of Petro-Hunt, LLC to drill the **Vonda H. Christensen Family LP 35A-3-1** wildcat well, in Sanpete County, may require a permit, known as an Approval Order, from the Executive Secretary of the Air Quality Board if any compressor or pump stations are constructed at the site. If a permit is required, a permit application, known as a Notice of Intent (NOI), should be submitted to the Executive Secretary at the Utah Division of Air Quality at 150 N. 1950 West, Salt Lake City, Utah, 84116 for review according to the Utah Air Quality Rule R307-401. Permit: Notice of Intent and Approval Order. The guidelines for preparing an NOI are available on-line at <http://www.airquality.utah.gov/Permits/FORMS/NOIGuide8.pdf>. The proposed project is also subject to Utah Air Quality Rule R307-205-5, Fugitive Dust, due to the fugitive dust that is generated during the excavating phases of the project. These rules apply to construction activities that disturb an area greater than 1/4 acre in size. A permit, known as an Approval Order, is not required from the Executive Secretary of the Air Quality Board, but steps need to be taken to minimize fugitive dust, such as watering and/or chemical stabilization, providing vegetative or synthetic cover or windbreaks. A copy of the rules may be found at [www.rules.utah.gov/publicat/code/r307/r307.htm](http://www.rules.utah.gov/publicat/code/r307/r307.htm) . **Comments end. RDCC #6921, Comments begin:** The proposal of Petro-Hunt, LLC to drill the **Lamb Trust 31B-1-1** wildcat well, in Sanpete County, may require a permit, known as an Approval Order, from the Executive Secretary of the Air Quality Board if any compressor or pump stations are constructed at the site. If a permit is required, a permit application, known as a Notice of Intent (NOI), should be submitted to the Executive Secretary at the Utah Division of Air Quality at 150 N. 1950 West, Salt Lake City, Utah, 84116 for review according to the Utah Air Quality Rule R307-401. Permit: Notice of Intent and Approval Order. The guidelines for preparing an NOI are available on-line at <http://www.airquality.utah.gov/Permits/FORMS/NOIGuide8.pdf>. The proposed project is also subject to Utah Air Quality Rule R307-205-5, Fugitive Dust, due to the fugitive dust that is generated during the excavating phases of the project. These rules apply to construction activities that disturb an area greater than 1/4 acre in size. A permit, known as an Approval Order, is not required from the Executive Secretary of the Air Quality Board, but steps need to be taken to minimize fugitive dust, such as watering and/or chemical stabilization, providing vegetative or synthetic cover or windbreaks. A copy of the rules may be found at [www.rules.utah.gov/publicat/code/r307/r307.htm](http://www.rules.utah.gov/publicat/code/r307/r307.htm) . **Comments end. RDCC #6943, Comments begin:** The proposal of Enduring Resources, LLC to drill the **Long Draw 12-24-31-26** wildcat well, in Uintah County, may require a permit, known as an Approval Order, from the Executive Secretary of the Air Quality Board if any compressor or pump stations are constructed at the site. If a permit is required, a permit application, known as a Notice of Intent (NOI), should be submitted to the Executive Secretary at the Utah Division of Air Quality at 150 N. 1950 West, Salt Lake City, Utah, 84116 for review according to the Utah Air Quality Rule R307-401. Permit: Notice of Intent and Approval Order. The guidelines for preparing an NOI are available on-line at <http://www.airquality.utah.gov/Permits/FORMS/NOIGuide8.pdf>. The proposed project is also subject to Utah Air Quality Rule R307-205-5, Fugitive Dust, due to the fugitive dust that is generated during the excavating phases of the project. These rules apply to construction activities that disturb an area greater than 1/4 acre in size. A permit, known as an Approval Order, is not required from the Executive Secretary of the Air Quality Board, but steps need to be taken to minimize fugitive dust, such as watering and/or chemical stabilization, providing vegetative or synthetic cover or windbreaks. A copy of the rules may be found at [www.rules.utah.gov/publicat/code/r307/r307.htm](http://www.rules.utah.gov/publicat/code/r307/r307.htm) . **Comments end.** Robert Clark  
Division of Air Quality 536-4435

CC: Mcneill, Dave; Wright, Carolyn

*Enduring  
43-047-3 8401*

MEMORANDUM

DATE: August 15, 2006

TO: Utah Division of Oil, Gas and Mining, Forestry, Fire, and State Lands, and Resource Development Coordinating Committee

FROM: Utah Geological Survey, Ground Water and Paleontology Program

SUBJECT: UGS comments on RDCC items 6916, 6917, 6918, 6919, 6920, 6921, 6922, and 6943.

6916. Division of Oil, Gas and Mining # ML-47065  
 Short Turn Around; Sec. 32, T10S, R2SE  
 Uintah Co.  
 Application for Permit to Drill - proposal to drill a wildcat well the Southam Canyon 10-25-34-32 on a State lease ML-47065

Although there are no paleontological localities recorded in our files in this project area, it is mapped as T3 (Eocene Uinta and Duchesne River Formations) on the Utah State Geological Map. The Uinta and Duchesne River Formations are among the most paleontological sensitive rock units in Utah and have a strong potential for yielding significant vertebrate fossil localities. The office of the State paleontologist therefore recommends that a paleontological survey be conducted for this project and its easements.

6917. Division of Oil, Gas and Mining  
 Short Turn Around;; Sec. 32, T10S, R2SE  
 Uintah Co.  
 Application for Permit to Drill - proposal to drill a wildcat well the Southam Canyon 10-25-14-32 on a State lease ML-47065

Although there are no paleontological localities recorded in our files in this project area, it is mapped as T3 (Eocene Uinta and Duchesne River Formations) on the Utah State Geological Map. The Uinta and Duchesne River Formations are among the most paleontological sensitive rock units in Utah and have a strong potential for yielding significant vertebrate fossil localities. The office of the State paleontologist therefore recommends that a paleontological survey be conducted for this project and its easements.

6918. Division of Oil, Gas and Mining  
 Short Turn Around; Sec. 32, T10S, R2SE  
 Uintah Co.  
 Application for Permit to Drill - proposal to drill the Southam Canyon 10-25-11-32 on a State lease ML-47065

Although there are no paleontological localities recorded in our files in this project area, it is mapped as T3 (Eocene Uinta and Duchesne River Formations) on the Utah State Geological Map. The Uinta and Duchesne River Formations are among the most paleontological sensitive rock units in Utah and have a strong potential for yielding significant vertebrate fossil localities. The office of the State paleontologist therefore recommends that a paleontological survey be conducted for this project and its easements.

6919. Division of Oil, Gas and Mining  
Short Turn Around; Sec. 16, T6S, R22E  
Uintah Co.

Application for Permit to Drill - proposal to drill a wildcat well the North Horseshoe 5-16-6-22 on a State lease ML-47969

Although there are no paleontological localities recorded in our files in this project area, it is mapped as T3 (Eocene Uinta and Duchesne River Formations) on the Utah State Geological Map. The Uinta and Duchesne River Formations are among the most paleontological sensitive rock units in Utah and have a strong potential for yielding significant vertebrate fossil localities. The office of the State paleontologist therefore recommends that a paleontological survey be conducted for this project and its easements.

6920. Division of Oil, Gas and Mining  
Short Turn Around; Sec. 35, T16S, R2E  
Sanpete Co.

Application for Permit to Drill - proposal to drill a wildcat well the Vonda H. Christ. Fam. 35A-3-1 on a Fee lease

Although there are no paleontological localities recorded in our files in this project area, it is mapped as T3 (Eocene Uinta and Duchesne River Formations) on the Utah State Geological Map. The Uinta and Duchesne River Formations are among the most paleontological sensitive rock units in Utah and have a strong potential for yielding significant vertebrate fossil localities. The office of the State paleontologist therefore recommends that a paleontological survey be conducted for this project and its easements.

6921. Division of Oil, Gas and Mining  
Short Turn Around; Sec. 31, T15S, R3E  
Sanpete Co.

Application for Permit to Drill - proposal to drill a wildcat well the Lamb Trust 31B-1-1 on a Fee lease Fee

Although there are no paleontological localities recorded in our files in this project area, it is mapped as T3 (Eocene Uinta and Duchesne River Formations) on the Utah State Geological Map. The Uinta and Duchesne River Formations are among the most paleontological sensitive rock units in Utah and have a strong potential for yielding significant vertebrate fossil localities. The office of the State paleontologist therefore recommends that a paleontological survey be conducted for this project and its

easements..

6922. Trust Lands Administration  
Other Proposed Actions; State Land Proposals  
Sec. 16, T10S, R18E; Uintah Co; Easement #1124

Two paleontological localities with vertebrate fossils, Utah Paleontological Localities Un 1699 and Un 1700, are recorded in our files in this project area. The project is mapped as T3 (Eocene Uinta and Duchesne River Formations) on the Utah State Geological Map. The Uinta and Duchesne River Formations are among the most paleontological sensitive rock units in Utah and have a strong potential for yielding significant vertebrate fossil localities. The office of the State paleontologist therefore recommends that a paleontological survey be conducted for this project and its easements and, if these known critical fossil localities are to be impacted, they should be mitigated by a permitted paleontologist.

6943. Division of Forestry, Fire and State Lands  
Short Turn Around; Drilling Permits; Sec. 26, T12S, R24E  
Uintah Co.  
Application for Permit to Drill - proposal to drill a wildcat well the Long Draw 12-24-31-26 on a State lease ML-47090

Although there are no paleontological localities recorded in our files in this project area, it is mapped as T3 (Eocene Uinta and Duchesne River Formations) on the Utah State Geological Map. The Uinta and Duchesne River Formations are among the most paleontological sensitive rock units in Utah and have a strong potential for yielding significant vertebrate fossil localities. The office of the State paleontologist therefore recommends that a paleontological survey be conducted for this project and its easements.

**From:** Carolyn Wright  
**To:** Whitney, Diana  
**Date:** 8/17/2006 10:34:36 AM  
**Subject:** Fwd: comments

43-047-38401

FYI

>>> Shelly Quick 08/15/06 12:47 PM >>>

Project Number: 6918, 6917 and 6916

Sponsor: Division of Oil, Gas and Mining

SLB&M: Sec. 32, T10S, R25E

Counties Affected: Uintah

Description: Application for Permit to Drill - proposal to drill the Southam Canyon 10-25-11-32 on a State lease ML-47065

Comments Due to Sponsor 08/22/2006

Comments:

Well must be sited, drilled, and managed to prevent degradation of water quality through measures to limit erosion, limit stormwater runoff, and limit pollutant loading to runoff. 1- Wellpad placement or expansion disturbs soils. Vegetative and/or structural measures to control erosion should be implemented within 60 days of initial soil disturbance to prevent erosion leaving the site from exceeding the tolerable rate as determined by the local office of USDA/NRCS. Such erosion control shall be maintained for the duration of the lease and shall remain in functional operation when the lease or permit is terminated. 2- If vegetation surrounding the wellpad does not provide at least 60% ground cover within 60 days of creating the wellpad, engineering practices should be implemented within those 60 days to control erosion. Such engineering measures may include mulching, use of fiber mats, cross slope trenching, contour furrows, rock dams, terracing or such other erosion control practices as are required to prevent erosion from exceeding the tolerable rate. 3- No disturbance or degradation to or of surrounding or nearby soils, native or beneficial vegetation, or riparian areas should be permitted outside of the area defined in the permit. 4- No spills nor runoff of chemicals including hydrocarbons, lubricants, salt water, antifreeze, or other potentially damaging materials should be permitted. 5- Before wellpad use is discontinued, permit holder shall restore the site to prevent stormwater runoff from exceeding water quality standards. Erosion from the site shall not exceed the tolerable rate as established by the local office of USDA / NRCS either while the wellpad site is in use, or when it is no longer in active use. No petrochemicals, salt, pesticides, nor other introduced potential pollutants shall be left such that they might be eroded, dissolved, blown, or otherwise carried away to become potential pollutant loads. 6- Employing structural BMPS for access roadways to capture sediment in runoff before it would enter intermittent or perennial streams, washes, or gullies.

**From:** Carolyn Wright  
**To:** Whitney, Diana  
**Date:** 8/21/2006 9:20:40 AM  
**Subject:** Fwd: comments

43047-38401

>>> Shelly Quick 8/15/2006 12:47 PM >>>

Project Number: 6918, 6917 and 6916

Sponsor: Division of Oil, Gas and Mining

SLB&M: Sec. 32, T10S, R25E

Counties Affected: Uintah

Description: Application for Permit to Drill - proposal to drill the Southam Canyon 10-25-11-32 on a State lease ML-47065

Comments Due to Sponsor 08/22/2006

Comments:

Well must be sited, drilled, and managed to prevent degradation of water quality through measures to limit erosion, limit stormwater runoff, and limit pollutant loading to runoff. 1- Wellpad placement or expansion disturbs soils. Vegetative and/or structural measures to control erosion should be implemented within 60 days of initial soil disturbance to prevent erosion leaving the site from exceeding the tolerable rate as determined by the local office of USDA/NRCS. Such erosion control shall be maintained for the duration of the lease and shall remain in functional operation when the lease or permit is terminated. 2- If vegetation surrounding the wellpad does not provide at least 60% ground cover within 60 days of creating the wellpad, engineering practices should be implemented within those 60 days to control erosion. Such engineering measures may include mulching, use of fiber mats, cross slope trenching, contour furrows, rock dams, terracing or such other erosion control practices as are required to prevent erosion from exceeding the tolerable rate. 3- No disturbance or degradation to or of surrounding or nearby soils, native or beneficial vegetation, or riparian areas should be permitted outside of the area defined in the permit. 4- No spills nor runoff of chemicals including hydrocarbons, lubricants, salt water, antifreeze, or other potentially damaging materials should be permitted. 5- Before wellpad use is discontinued, permit holder shall restore the site to prevent stormwater runoff from exceeding water quality standards. Erosion from the site shall not exceed the tolerable rate as established by the local office of USDA / NRCS either while the wellpad site is in use, or when it is no longer in active use. No petrochemicals, salt, pesticides, nor other introduced potential pollutants shall be left such that they might be eroded, dissolved, blown, or otherwise carried away to become potential pollutant loads. 6- Employing structural BMPS for access roadways to capture sediment in runoff before it would enter intermittent or perennial streams, washes, or gullies.

**From:** Carolyn Wright  
**To:** Whitney, Diana  
**Date:** 8/21/2006 9:19:50 AM  
**Subject:** Fwd: RDCC short turn around responses

FYI

>>> Robert Clark 8/14/2006 10:33 AM >>>

The following comments are provided in response to short turn around items **RDCC #6916** through **RDCC #6921**, and **RDCC #6943**.

**RDCC #6916, Comments begin:** The proposal of Enduring Resources, LLC to drill the **Southam Canyon 10-25-34-32** wildcat well, in Uintah County, may require a permit, known as an Approval Order, from the Executive Secretary of the Air Quality Board if any compressor or pump stations are constructed at the site. If a permit is required, a permit application, known as a Notice of Intent (NOI), should be submitted to the Executive Secretary at the Utah Division of Air Quality at 150 N. 1950 West, Salt Lake City, Utah, 84116 for review according to the Utah Air Quality Rule R307-401. Permit: Notice of Intent and Approval Order. The guidelines for preparing an NOI are available on-line at <http://www.airquality.utah.gov/Permits/FORMS/NOIGuide8.pdf>. The proposed project is also subject to Utah Air Quality Rule R307-205-5, Fugitive Dust, due to the fugitive dust that is generated during the excavating phases of the project. These rules apply to construction activities that disturb an area greater than 1/4 acre in size. A permit, known as an Approval Order, is not required from the Executive Secretary of the Air Quality Board, but steps need to be taken to minimize fugitive dust, such as watering and/or chemical stabilization, providing vegetative or synthetic cover or windbreaks. A copy of the rules may be found at [www.rules.utah.gov/publicat/code/r307/r307.htm](http://www.rules.utah.gov/publicat/code/r307/r307.htm). **Comments end. RDCC #6917, Comments begin:** The proposal of Enduring Resources, LLC to drill the **Southam Canyon 10-25-14-32** wildcat well, in Uintah County, may require a permit, known as an Approval Order, from the Executive Secretary of the Air Quality Board if any compressor or pump stations are constructed at the site. If a permit is required, a permit application, known as a Notice of Intent (NOI), should be submitted to the Executive Secretary at the Utah Division of Air Quality at 150 N. 1950 West, Salt Lake City, Utah, 84116 for review according to the Utah Air Quality Rule R307-401. Permit: Notice of Intent and Approval Order. The guidelines for preparing an NOI are available on-line at <http://www.airquality.utah.gov/Permits/FORMS/NOIGuide8.pdf>. The proposed project is also subject to Utah Air Quality Rule R307-205-5, Fugitive Dust, due to the fugitive dust that is generated during the excavating phases of the project. These rules apply to construction activities that disturb an area greater than 1/4 acre in size. A permit, known as an Approval Order, is not required from the Executive Secretary of the Air Quality Board, but steps need to be taken to minimize fugitive dust, such as watering and/or chemical stabilization, providing vegetative or synthetic cover or windbreaks. A copy of the rules may be found at [www.rules.utah.gov/publicat/code/r307/r307.htm](http://www.rules.utah.gov/publicat/code/r307/r307.htm). **Comments end. RDCC #6918, Comments begin:** The proposal of Enduring Resources, LLC to drill the **Southam Canyon 10-25-11-32** wildcat well, in Uintah County, may require a permit, known as an Approval Order, from the Executive Secretary of the Air Quality Board if any compressor or pump stations are constructed at the site. If a permit is required, a permit application, known as a Notice of Intent (NOI), should be submitted to the Executive Secretary at the Utah Division of Air Quality at 150 N. 1950 West, Salt Lake City, Utah, 84116 for review according to the Utah Air Quality Rule R307-401. Permit: Notice of Intent and Approval Order. The guidelines for preparing an NOI are available on-line at <http://www.airquality.utah.gov/Permits/FORMS/NOIGuide8.pdf>. The proposed project is also subject to Utah Air Quality Rule R307-205-5, Fugitive Dust, due to the fugitive dust that is generated during the excavating phases of the project. These rules apply to construction activities that disturb an area greater than 1/4 acre in size. A permit, known as an Approval Order, is not required from the Executive Secretary of the Air Quality Board, but steps need to be taken to minimize fugitive dust, such as watering and/or chemical stabilization, providing vegetative or synthetic cover or windbreaks. A copy of the rules may be found at [www.rules.utah.gov/publicat/code/r307/r307.htm](http://www.rules.utah.gov/publicat/code/r307/r307.htm). **Comments end. RDCC #6919, Comments begin:** The proposal of the Houston Exploration Company to drill the **North Horseshoe 5-16-6-22** wildcat well, in Uintah County, may require a permit, known as an Approval Order, from the Executive Secretary of the Air Quality Board if any compressor or pump stations are constructed at the site. If a permit is required, a

permit application, known as a Notice of Intent (NOI), should be submitted to the Executive Secretary at the Utah Division of Air Quality at 150 N. 1950 West, Salt Lake City, Utah, 84116 for review according to the Utah Air Quality Rule R307-401. Permit: Notice of Intent and Approval Order. The guidelines for preparing an NOI are available on-line at <http://www.airquality.utah.gov/Permits/FORMS/NOIGuide8.pdf>. The proposed project is also subject to Utah Air Quality Rule R307-205-5, Fugitive Dust, due to the fugitive dust that is generated during the excavating phases of the project. These rules apply to construction activities that disturb an area greater than 1/4 acre in size. A permit, known as an Approval Order, is not required from the Executive Secretary of the Air Quality Board, but steps need to be taken to minimize fugitive dust, such as watering and/or chemical stabilization, providing vegetative or synthetic cover or windbreaks. A copy of the rules may be found at [www.rules.utah.gov/publicat/code/r307/r307.htm](http://www.rules.utah.gov/publicat/code/r307/r307.htm). **Comments end. RDCC #6920, Comments begin:** The proposal of Petro-Hunt, LLC to drill the **Vonda H. Christensen Family LP 35A-3-1** wildcat well, in Sanpete County, may require a permit, known as an Approval Order, from the Executive Secretary of the Air Quality Board if any compressor or pump stations are constructed at the site. If a permit is required, a permit application, known as a Notice of Intent (NOI), should be submitted to the Executive Secretary at the Utah Division of Air Quality at 150 N. 1950 West, Salt Lake City, Utah, 84116 for review according to the Utah Air Quality Rule R307-401. Permit: Notice of Intent and Approval Order. The guidelines for preparing an NOI are available on-line at <http://www.airquality.utah.gov/Permits/FORMS/NOIGuide8.pdf>. 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If a permit is required, a permit application, known as a Notice of Intent (NOI), should be submitted to the Executive Secretary at the Utah Division of Air Quality at 150 N. 1950 West, Salt Lake City, Utah, 84116 for review according to the Utah Air Quality Rule R307-401. Permit: Notice of Intent and Approval Order. The guidelines for preparing an NOI are available on-line at <http://www.airquality.utah.gov/Permits/FORMS/NOIGuide8.pdf>. The proposed project is also subject to Utah Air Quality Rule R307-205-5, Fugitive Dust, due to the fugitive dust that is generated during the excavating phases of the project. These rules apply to construction activities that disturb an area greater than 1/4 acre in size. A permit, known as an Approval Order, is not required from the Executive Secretary of the Air Quality Board, but steps need to be taken to minimize fugitive dust, such as watering and/or chemical stabilization, providing vegetative or synthetic cover or windbreaks. A copy of the rules may be found at [www.rules.utah.gov/publicat/code/r307/r307.htm](http://www.rules.utah.gov/publicat/code/r307/r307.htm). **Comments end. RDCC #6943, Comments begin:** The proposal of Enduring Resources, LLC to drill the **Long Draw 12-24-31-26** wildcat well, in Uintah County, may require a permit, known as an Approval Order, from the Executive Secretary of the Air Quality Board if any compressor or pump stations are constructed at the site. If a permit is required, a permit application, known as a Notice of Intent (NOI), should be submitted to the Executive Secretary at the Utah Division of Air Quality at 150 N. 1950 West, Salt Lake City, Utah, 84116 for review according to the Utah Air Quality Rule R307-401. Permit: Notice of Intent and Approval Order. The guidelines for preparing an NOI are available on-line at <http://www.airquality.utah.gov/Permits/FORMS/NOIGuide8.pdf>. 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475 17<sup>th</sup> Street, Suite 1500  
Denver, CO 80202  
(303) 573-1222  
(303) 573-0461

**Enduring Resources**

# Fax

<b>To:</b> Helen Sadik-Macdonald	<b>From:</b> Evette Bissett
<b>Fax:</b> 801-359-3940	<b>Pages:</b> 7
<b>Phone:</b>	<b>Date:</b> 8/30/2006
<b>Re:</b> Southam Canyon 10-25-34-32	<b>cc:</b>

**Urgent**                       **For Review**                       **Please Comment**  
 **Please Reply**                       **Please Recycle**

● **Comments**

Corrected cover page and drilling plan

RECEIVED

AUG 30 2006

DIV. OF OIL, GAS & MINING

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

FORM 3

AMENDED REPORT   
(highlight changes)

<b>APPLICATION FOR PERMIT TO DRILL</b>			5. MINERAL LEASE NO: ML-47065	6. SURFACE: State
1A. TYPE OF WORK: DRILL <input checked="" type="checkbox"/> REENTER <input type="checkbox"/> DEEPEN <input type="checkbox"/>			7. IF INDIAN, ALLOTTEE OR TRIBE NAME:	
B. TYPE OF WELL: OIL <input type="checkbox"/> GAS <input checked="" type="checkbox"/> OTHER _____ SINGLE ZONE <input type="checkbox"/> MULTIPLE ZONE <input checked="" type="checkbox"/>			8. UNIT or CA AGREEMENT NAME:	
2. NAME OF OPERATOR: Enduring Resources, LLC			9. WELL NAME and NUMBER: Southam Canyon 10-25-34-32	
3. ADDRESS OF OPERATOR: 475 17th St., Ste 1500 CITY Denver STATE CO ZIP 80220			PHONE NUMBER: (303) 350-5114	10. FIELD AND POOL, OR WILDCAT: Undesignated
4. LOCATION OF WELL (FOOTAGES) AT SURFACE: 2049' FSL - 2139' FEL AT PROPOSED PRODUCING ZONE: 659' FSL - 1978' FEL			11. QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: NWSE 32 10S 25E	
14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE: 11 miles Southwest of Bonanza, UT			12. COUNTY: Uintah	13. STATE: UTAH
15. DISTANCE TO NEAREST PROPERTY OR LEASE LINE (FEET) 659'	16. NUMBER OF ACRES IN LEASE: 640	17. NUMBER OF ACRES ASSIGNED TO THIS WELL: 40 acres		
18. DISTANCE TO NEAREST WELL (DRILLING, COMPLETED, OR APPLIED FOR) ON THIS LEASE (FEET) 1000' +	19. PROPOSED DEPTH: 5,456	20. BOND DESCRIPTION: RLB0008031		
21. ELEVATIONS (SHOW WHETHER DF, RT, GR, ETC.): 5875' RT-KB	22. APPROXIMATE DATE WORK WILL START: 10/1/2006	23. ESTIMATED DURATION: 20 days		

24. **PROPOSED CASING AND CEMENTING PROGRAM**

SIZE OF HOLE	CASING SIZE, GRADE, AND WEIGHT PER FOOT	SETTING DEPTH	CEMENT TYPE, QUANTITY, YIELD, AND SLURRY WEIGHT			
20"	14" line pipe	40	3 yards	Ready Mix		
11"	8-5/8" J-55 24#	1,716	Premium Lead	110 sxs	3.50	11.1
			Premium Tail	183 sxs	1.15	15.8
7-7/8"	4-1/2" N-80 11.6#	5,456	Class G	33 sxs	3.3	11.0
			50/50 Poz Class G	672 sxs	1.56	14.3

25. **ATTACHMENTS**

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

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

NAME (PLEASE PRINT) Alvin R. (Al) Arlian TITLE Landman - Regulatory Specialist

SIGNATURE *Al Arlian* DATE 7/19/2006

(This space for State use only)

API NUMBER ASSIGNED: \_\_\_\_\_

APPROVAL: \_\_\_\_\_

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DIV. OF OIL, GAS & MINING

**Enduring Resources, LLC  
Soutam Canyon 10-25-34-32  
SW-SE 32-10S-25E (Bottom hole Location)  
NW-SE 32-10S-25E (Surface Location)  
Uintah County, Utah  
State Lease: ML-47065**

**ONSHORE ORDER 1 - DRILLING PLAN**

**1. Estimated Tops of Geological Markers:**

Formation	Depth (K.B.)
Uinta	Surface
Green River	90
Wasatch	2175
Mesaverde	3066

**2. Estimated Depths of Anticipated Water, Oil, Gas or Other Minerals:**

Substance	Formation	Depth (K.B.)
	KB-Uinta Elevation: 5875'	
Oil / Gas	Green River	90
Oil / Gas	Wasatch	2175
Oil / Gas	Mesaverde	3066
	Estimated TD	5455

An 11" hole will be drilled to approximately 1,716 feet. The depth will be determined by the depth that the Birds Nest zone is encountered. The hole will be drilled 400 feet beyond the top of the Birds Nest zone and surface casing will be set.

**3. Pressure Control Equipment: (3000 psi schematic attached)**

- A. Type: Eleven (11) inch double gate hydraulic BOP with eleven (11) inch annular preventer on 3,000 psi casinghead, with 3,000 psi choke manifold equipped per the attached diagram. BOPE as specified in *Onshore Oil & Gas Order Number 2*. A PVT, stroke counter and flow sensor will be installed to check for flow and monitor pit volume.
- B. Pressure Rating: 3,000 psi BOPE
- C. Kelly will be equipped with upper and lower Kelly valves.
- D. Testing Procedure: Annular Preventer

At a minimum, the annular preventer will be pressure tested to 50% of the stack rated working pressure for a period of ten (10) minutes or until provisions of the test are met, whichever is longer.

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At a minimum, the above pressure test will be performed:

1. When the annular preventer is initially installed;
2. Whenever any seal subject to test pressure is broken;
3. Following related repairs; and
4. At thirty (30) day intervals.

In addition to the above, the annular preventer will be functionally operated at least weekly.

### Blow-Out Preventer

At a minimum, the BOP, choke manifold, and related equipment will be pressure tested to the approved working pressure of the BOP stack (if isolated from the surface casing by a test plug) or to 70% of the internal yield strength of the surface casing (if the BOP is not isolated from the casing by a test plug). Pressure will be maintained for a period of at least ten (10) minutes or until the requirements of the test are met, whichever is longer.

At a minimum, the above pressure test will be performed:

1. When the BOP is initially installed;
2. Whenever any seal subject to test pressure is broken;
3. Following related repairs; and
4. At thirty (30) day intervals.

In addition to the above, the pipe and blind rams will be activated each trip, but not more than once each day. All BOP drills and tests will be recorded in the IADC driller's log.

#### E. Miscellaneous Information:

The blowout preventer and related pressure control equipment will be installed, tested and maintained in compliance with the specifications in and requirements of *Onshore Oil & Gas Order Number 2*.

#### 4. Proposed Casing & Cementing Program:

##### A. Casing Program: All New

Hole Size	Casing Size	Wt./Ft.	Grade	Joint	Depth Set (MD)
20"	14" O.D.				40' (GL)
11"	8-5/8"	24#	J-55	ST&C	0 - 1,716' (KB) est.
7-7/8"	4-1/2"	11.6#	N-80	LT&C	0 - 5455' (KB)

The surface casing will have guide shoe, 1 joint, insert float collar. Centralize the shoe joint with bowspring centralizers in the middle and top of the joint and the next 16 joints with bowspring centralizers on every other collar (8 centralizers total). Thread lock guide shoe.

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**Enduring Resources, LLC Southam Canyon 10-25-34-32 Page - 3 -**

Casing string(s) will be pressure tested to 0.22 psi/foot of casing string length or 1500 psi, whichever is greater (not to exceed 70% of the internal yield strength of the casing), after cementing and prior to drilling out from under the casing shoe.

**B. Casing Design Parameters:**

Depth (MD)	Casing	Collapse(psi)/SF	Burst (psi)/SF	Tension(mlbs)/SF
40' (GL)	14" OD			
2016' (KB)	8-5/8", 24#/ft, J55, STC	1370/1.52(a)	2950/3.28(b)	244/5.81(c)
5455' (KB)	4-1/2", 11.6#/ft, N-80, LTC	6350/2.24(d)	7780/2.98(e)	223/4.10(f)

- (a.) based on full evacuation of pipe with 8.6 ppg fluid on annulus
- (b.) based on 8.6 ppg gradient with no fluid on annulus
- (c.) based on casing string weight in 8.6 ppg mud
- (d.) based on full evacuation of pipe with 10.0 ppg fluid on annulus
- (e.) based on 9.2 ppg gradient, gas to surface, with no fluid on annulus, no gas gradient
- (f.) based on casing string weight in 9.2 ppg mud

**PROPOSED CEMENTING PROGRAM****Surface Casing (if well will circulate)-Cemented to surface**

CASING	SLURRY	FT. of FILL	CEMENT TYPE	SXS	EXCESS (%)	WEIGHT (ppg)	YIELD (ft <sup>3</sup> /sx)
8-5/8"	Lead	1516	Premium cement + 16% gel + 0.25 pps celloflake	138	25%	11.1	3.50
8-5/8"	Tail	500	Premium cement + 2% CaCl <sub>2</sub> + 0.25 pps celloflake	138	25%	15.8	1.15

A cement top job is required if cement fallback is greater than 10' below ground level. Top job (weight 15.8 ppg, yield 1.15 ft<sup>3</sup>/sx) cement will be premium cement w/ 3% CaCl<sub>2</sub> + 0.25 pps celloflake. Volume as required

**Surface Casing (if well will not circulate) - Cemented to surface**

CASING	SLURRY	FT. of FILL	CEMENT TYPE	SXS	EXCESS (%)	WEIGHT (ppg)	YIELD (ft <sup>3</sup> /sx)
8-5/8"	Lead	500	Premium cement + 2% CaCl <sub>2</sub> + 0.25 pps celloflake	138	25	15.8	1.15
8-5/8"	Top job	As req.	Premium cement + 3% CaCl <sub>2</sub> + 0.25 pps celloflake	As Req.		15.8	1.15

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**Production Casing and Liner - Cemented TD to 300' above base of surface casing**

CASING	SLURRY	FT. of FILL	CEMENT TYPE	SXS	EXCESS (%)	WEIGHT (ppg)	YIELD (ft <sup>3</sup> /sx)
4-1/2"	Lead	359	Class "G" + 5% NaCl + 12% Gel + 0.25 pps celloflake + 0.2% antifoam + 0.25% fluid loss + 1% extender	33	25	11.0	3.3
4-1/2"	Tail	3680	50/50 POZ Class G + 2% gel + 1% CaCl <sub>2</sub> + 0.2% dispersant + 0.2% fluid loss + 0.1% antifoam	672	25	14.3	1.56

Cement volumes for the 4-1/2" Production Casing will be calculated to provide a top of cement to 300' above base of surface casing. Cement volumes are approximate and were calculated under the assumption that a gauge hole will be achieved. Actual cement volumes may vary due to variations in the actual hole size and will be determined by running a caliper log on the drilled hole. Actual cement types may vary due to hole conditions and cement contractor used.

All waiting on cement (WOC) times will be adequate to achieve a minimum of 500 psi compressive strength at the casing shoe prior to drilling out.

5. **Drilling Fluids (mud) Program:**

Interval (MD)	Mud Weight	Fluid Loss	Viscosity	Mud Type
0' - 1716' (KB)		No cntrl		Air/mist
1716'-3000' (KB)	8.4-8.6	No cntrl	28-36	Water
3000'-5455' (KB)	8.8-9.8	8 - 10 ml	32-42	Water/Gel

Sufficient mud material(s) to maintain mud properties, control lost circulation and contain a blowout will be available at the well site during drilling operations.

6. **Evaluation Program:**

Tests: No tests are currently planned.

Coring: No cores are currently planned.

Samples: No sampling is currently planned.

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Logging

- Dual Induction – SFL /Gamma Ray/Caliper/SP/TDLT/CNL/ML  
TD to Base Surface Casing
- Cement Bond Log / Gamma Ray:  
TD to Base of Surface Casing or Top of Cement if below Base of Surface Casing

Stimulation: A stimulation or frac treatment will be designed for completion of this well based on openhole log analysis. The drill site, as approved, will be sufficient size to accommodate all completion activities.

**7. Abnormal Conditions:**

No abnormal temperatures or pressures are anticipated. No H<sub>2</sub>S has been encountered or known to exist from previous wells drilled to similar depths in the general area.

Maximum anticipated bottom hole pressure equals approximately 2837 psi (calculated at 0.52psi/foot of hole) and maximum anticipated surface pressure equals approximately 1637 psi (anticipated bottom hole pressure minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot of hole).

**8. Anticipated Starting Dates:**

- Anticipated Commencement Date- Within one year of APD issue.
- Drilling Days- Approximately 10 days
- Completion Days - Approximately 10 days
- Anticipate location construction within 30 days of permit issue.

**9. Variances:**

None anticipated

**10. Other:**

A Cultural Resource Inventory and Paleontology reconnaissance shall be conducted for the well location, access route and pipeline. The reports shall be submitted to the Division of Oil, Gas and Mining and the School and Institutional Trust lands Administration upon their receipt.

Single Shot directional surveys will be dropped every 2000 feet to monitor hole angle.

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**From:** Ed Bonner  
**To:** Whitney, Diana  
**Date:** 9/12/2006 2:43:10 PM  
**Subject:** Well Clearance

The following wells have been given cultural resource clearance by the Trust Lands Cultural Resources Group:

Cochrane Resources, Inc  
Divide 32-32 (API 43 019 31487)

Enduring Resources, LLC  
Southam Canyon 10-25-11-32 (API 43 047 38395)  
Southam Canyon 10-25-14-32 (API 43 047 38396)  
Southam Canyon 10-25-34-32 (API 43 047 38401)  
Rock House 10-23-34-32 (API 43 047 38470)  
East Bench 11-22-31-32 (API 43 047 38273)  
Sand Wash 12-22-23-32 (API 43 047 38285)  
Sand Wash 12-22-44-32 (API 43 047 38286)  
Buck Camp 12-22-23-2 (API 43 047 38483)  
Buck Camp 12-22-14-2 (API 43 047 38482)

The Houston Exploration Company  
North Horseshoe 5-16-6-22 (API 43 047 38406)

Newfield Production Company  
Horseshoe Bend State 4-28-6-21 (API 43 047 38366)

XTO Energy, Inc  
State of Utah 17-8-19-11D (API 43 015 30695)  
State of Utah 17-8-20-13 (API 43 015 30698)

If you have any questions regarding this matter please give me a call.

**CC:** Davis, Jim; Garrison, LaVonne; Hill, Brad; Hunt, Gil



**State of Utah**

**Department of  
Natural Resources**

MICHAEL R. STYLER  
*Executive Director*

**Division of  
Oil, Gas & Mining**

JOHN R. BAZA  
*Division Director*

JON M. HUNTSMAN, JR.  
*Governor*

GARY R. HERBERT  
*Lieutenant Governor*

September 21, 2006

Enduring Resources, LLC  
475 17th St., Ste. 1500  
Denver, CO 80202

Re: Southam Canyon 10-25-34-32 Well, 2049' FSL, 2139' FEL, NW SE, Sec. 32, T. 10 South, R. 25 East, Bottom Location 659' FSL, 1978' FEL, SW SE, Sec. 32, T. 10 South, R. 25 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 43-047-38401.

Sincerely,

Gil Hunt  
Associate Director

pab  
Enclosures

cc: Uintah County Assessor  
SITLA

**Operator:** Enduring Resources, LLC  
**Well Name & Number** Southam Canyon 10-25-34-32  
**API Number:** 43-047-38401  
**Lease:** ML-47065

**Location:** NW SE                      **Sec.** 32                      **T.** 10 South                      **R.** 25 East  
**Bottom Location:** SW SE                      **Sec.** 32                      **T.** 10 South                      **R.** 25 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. In accordance with Utah Admin. R.649-3-11, Directional Drilling, the operator shall submit a complete angular deviation and directional survey report to the Division within 30 days following completion of the well.

5. 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.

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

7. 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.
8. Surface casing shall be cemented to the surface.
9. Operator shall comply with applicable recommendations resulting from Resource Development Coordinating Committee review. Statements attached.