

**STATE ACTIONS**  
**Resource Development Coordinating Committee**  
**Public Lands Policy Coordination Office**  
**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 September 23, 2008
<b>3. Title of proposed action:</b> Application for Permit to Drill	
<b>4. Description of Project:</b>  Oso Oil & Gas Properties, LLC proposes to drill the Centennial well (wildcat) on Fee lease UT-OSO-001, Carbon 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> 283' FSL 1470' FWL, NW/4 SW/4, Section 31, Township 12 South, Range 11 East, Carbon 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) Southeastern Utah Association of Government	
<b>10. For further information, contact:</b>   Diana Mason Phone: (801) 538-5312	<b>11. Signature and title of authorized officer</b>   Gil Hunt, Associate Director Date: September 9, 2008

**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: UT-OSO-001	6. SURFACE: Fee
1A. TYPE OF WORK: DRILL <input checked="" type="checkbox"/> REENTER <input type="checkbox"/> DEEPEN <input type="checkbox"/>			7. IF INDIAN, ALLOTTEE OR TRIBE NAME: N/A	
B. TYPE OF WELL: OIL <input type="checkbox"/> GAS <input checked="" type="checkbox"/> OTHER _____ SINGLE ZONE <input checked="" type="checkbox"/> MULTIPLE ZONE <input type="checkbox"/>			8. UNIT or CA AGREEMENT NAME: N/A	
2. NAME OF OPERATOR: Oso Oil & Gas Properties, LLC			9. WELL NAME and NUMBER: Centennial	
3. ADDRESS OF OPERATOR: 3900 S Wadsworth Blvd CITY Lakewood STATE CO ZIP 80235		PHONE NUMBER: (303) 929-6023	10. FIELD AND POOL, OR WILDCAT: Wildcat	
4. LOCATION OF WELL (FOOTAGES) AT SURFACE: 283' FSL & 1470' FWL Section 31 T12S R11E AT PROPOSED PRODUCING ZONE: 1479' FNL & 1296' FWL W. T12S R.11E <i>522763x 4397139y 39.725717 -110.734391</i> <i>522754x 4396602y 39.720879 -110.734524</i>			11. QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: NWSW 3i 12S 11E S	
14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE: 4.6 Miles NE of Kenilworth, UT			12. COUNTY: Carbon	13. STATE: UTAH
15. DISTANCE TO NEAREST PROPERTY OR LEASE LINE (FEET) 1079'	16. NUMBER OF ACRES IN LEASE: 962	17. NUMBER OF ACRES ASSIGNED TO THIS WELL: 40		
18. DISTANCE TO NEAREST WELL (DRILLING, COMPLETED, OR APPLIED FOR) ON THIS LEASE (FEET) 524'	19. PROPOSED DEPTH: 2,721	20. BOND DESCRIPTION: Single Well CD Collateral Bond		
21. ELEVATIONS (SHOW WHETHER DF, RT, GR, ETC.): 8565' GR	22. APPROXIMATE DATE WORK WILL START: 10/31/2008	23. ESTIMATED DURATION: 14 Days		

**PROPOSED CASING AND CEMENTING PROGRAM**

SIZE OF HOLE	CASING SIZE, GRADE, AND WEIGHT PER FOOT			SETTING DEPTH	CEMENT TYPE, QUANTITY, YIELD, AND SLURRY WEIGHT			
22	16	H-40	65	20	Class G	25 sx	1.18 cuft/sk	15.8
12.25	9.625	J-55	36	1,835	Class G	350 sx	1.18 cuft/sk	15.8

**ATTACHMENTS**

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

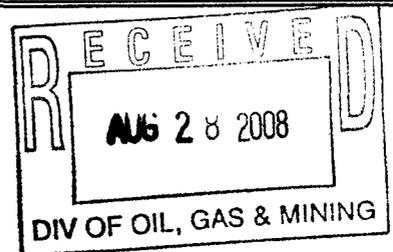
- |  |  |
|--|--|
| <input checked="" type="checkbox"/> WELL PLAT OR MAP PREPARED BY LICENSED SURVEYOR OR ENGINEER     | <input checked="" type="checkbox"/> COMPLETE DRILLING PLAN                                   |
| <input checked="" type="checkbox"/> EVIDENCE OF DIVISION OF WATER RIGHTS APPROVAL FOR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

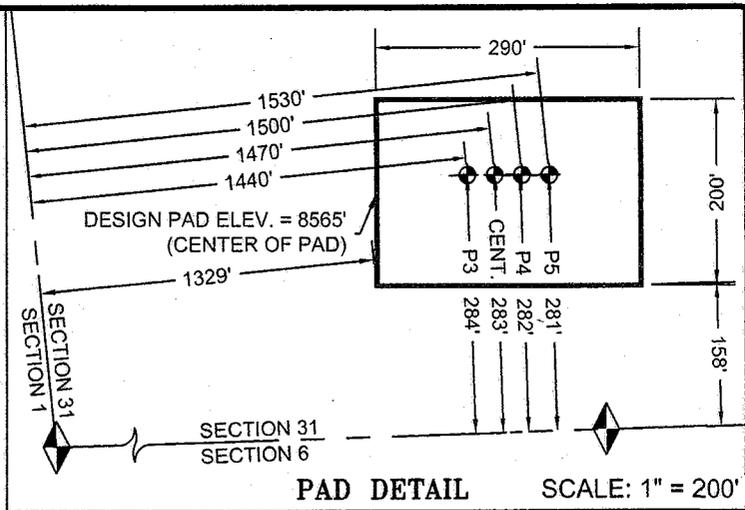
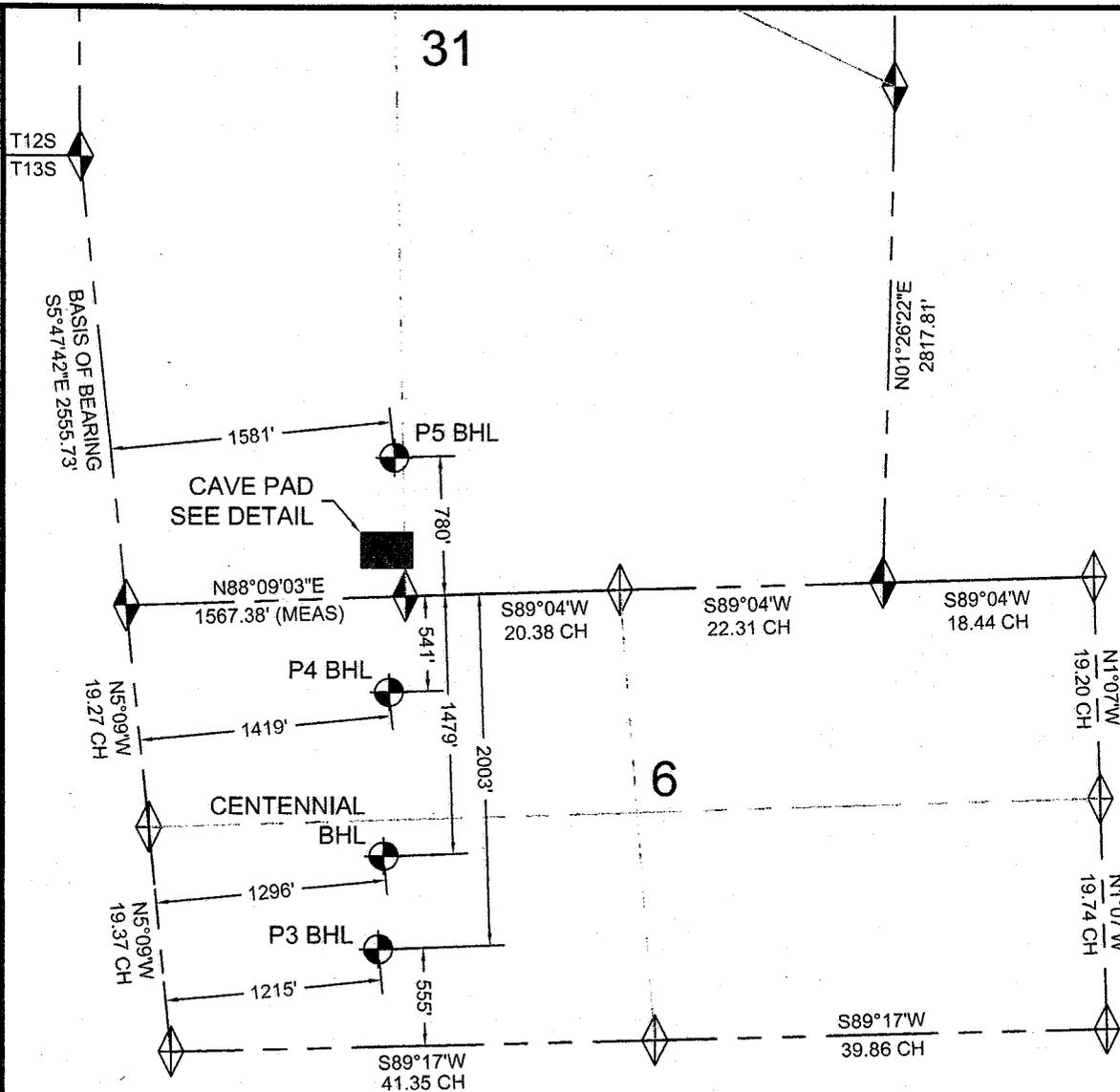
NAME (PLEASE PRINT) Mike Griffis TITLE Operations Engineer  
SIGNATURE *Mike Griffis* DATE 8/20/2008

(This space for State use only)

API NUMBER ASSIGNED: 43-007-31447

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





**NARRATIVE**

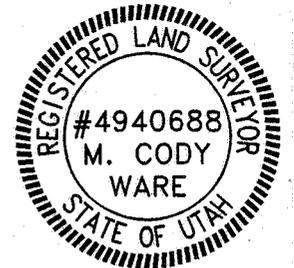
THE PURPOSE OF THIS SURVEY IS TO LOCATE AND DESCRIBE A WELL SITE FOR OSO OIL & GAS THAT IS SITUATED IN THE SOUTHWEST QUARTER OF SECTION 31, T. 12 S., R. 11 E., S.L.B.&M., CARBON COUNTY, UTAH.

THE BASIS OF BEARING USED FOR THIS SURVEY IS SOUTH 5°47'42\"/>

THE BASIS OF ELEVATION USED FOR THIS SURVEY IS 8464 FEET AT THE WEST QUARTER CORNER OF SECTION 31, TOWNSHIP 12 SOUTH, RANGE 11 EAST, SALT LAKE BASE AND MERIDIAN. THE DESIGNED PAD ELEVATION IS 8565'.

**CERTIFICATE OF SURVEY**

I, M. CODY WARE, DO HEREBY CERTIFY THAT I AM A REGISTERED LAND SURVEYOR, LICENSE NO. 4940688 AS PRESCRIBED BY THE LAWS OF THE STATE OF UTAH. I FURTHER CERTIFY THAT I HAVE MADE A SURVEY OF THE LOCATION SHOWN AND THAT IT IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE.



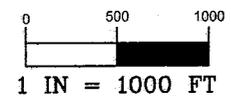
- NOTES**
- SECTION 6 DIMENSIONS ARE BASED ON THE 1967 BLM PLAT.
  - DIMENSIONS TO SECTION LINES ARE MEASURED AT RIGHT ANGLES.

**WELLHEAD POSITIONS**

WELL	SURFACE POSITION		TARGET / BHL POSITION	
	LAT. (WGS84)	LONG. (WGS84)	LAT. (WGS84)	LONG. (WGS84)
P3	39°43'32.664" N	110°44'07.160" W	39°43'10.062" N	110°44'07.399" W
CENT.	39°43'32.661" N	110°44'06.776" W	39°43'15.252" N	110°44'06.961" W
P4	39°43'32.659" N	110°44'06.392" W	39°43'24.528" N	110°44'06.479" W
P5	39°43'32.657" N	110°44'06.009" W	39°43'37.593" N	110°44'05.956" W

**LEGEND**

- FOUND MONUMENT
- CALCULATED POSITION
- TARGET - BHL
- "BHL" BOTTOM HOLE LOCATION



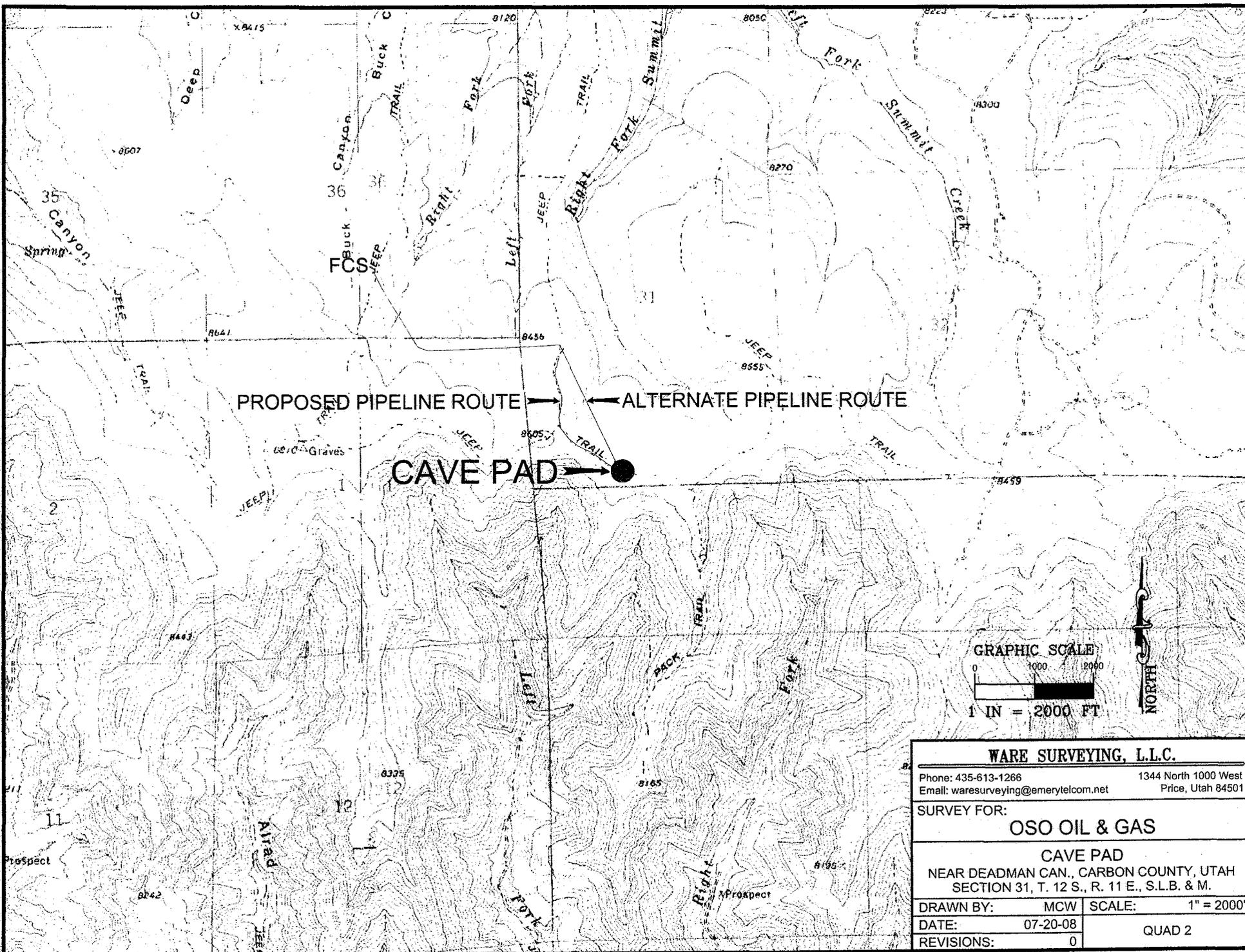
**WARE SURVEYING, L.L.C.**

Phone: 435-613-1266      1344 North 1000 West  
 Email: waresurveying@emerytelcom.net      Price, Utah 84501

SURVEY FOR: **OSO OIL & GAS**

**CAVE PAD**  
 NEAR DEADMAN CAN., CARBON COUNTY, UTAH  
 SECTION 31, T. 12 S., R. 11 E., S.L.B. & M.  
 SECTION 6, T. 13 S., R. 11 E., S.L.B. & M.

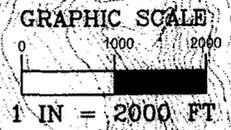
DRAWN BY: MCW      SCALE: 1" = 1000'  
 DATE: 08-13-08  
 REVISIONS: 1      P-1



PROPOSED PIPELINE ROUTE →

← ALTERNATE PIPELINE ROUTE

CAVE PAD → ●

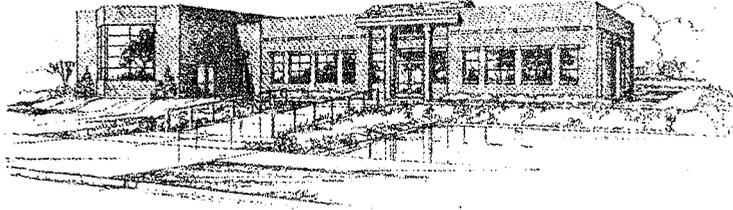


<b>WARE SURVEYING, L.L.C.</b>	
Phone: 435-613-1266	1344 North 1000 West
Email: waresurveying@emerytelcom.net	Price, Utah 84501
SURVEY FOR:	
<b>OSO OIL &amp; GAS</b>	
CAVE PAD	
NEAR DEADMAN CAN., CARBON COUNTY, UTAH	
SECTION 31, T. 12 S., R. 11 E., S.L.B. & M.	
DRAWN BY: MCW	SCALE: 1" = 2000'
DATE: 07-20-08	QUAD 2
REVISIONS: 0	

# SOUTHEASTERNUTAH ASSOCIATION OF LOCAL GOVERNMENTS

**DOUG ALLEN**  
CHAIRMAN

**WILLIAM D. HOWELL**  
EXECUTIVE DIRECTOR



375 SOUTH CARBON AVE.  
P.O. DRAWER 1106  
PRICE, UTAH 84501  
(435) 637-5444  
FAX (435) 637-5448

## AREA WIDE CLEARINGHOUSE REVIEW

Federal Action \_\_\_\_\_ State Action \_\_\_\_\_ Approved (x) Yes ( ) No  
Other (indicate) \_\_\_\_\_

### Applicant or State Agency Name/Address:

Oil, Gas & Mining

1594 West North Temple #1210

SLC, UT 84114

Name Diana Mason

Phone 801-538-5312

Title/Project Description: Application for Permit to Drill

Oso Oil and Gas proposes to drill four wildcat wells (Centennial well Fee lease UT OSO-001, P3 well Fee lease UT-OSO-001, P4 well Fee lease UT OSO-001, P5 well Fee lease UT-OSO-001) in the Emma Park area of Carbon Co.

- No Comment  
 See comment below

Comments: Favorable comment recommended.

RECEIVED

*Lorraine Benz*

SEUALG

09/18/08

DATE

SEP 25 2008

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>UT-OSO-001</b>	6. SURFACE: Fee
1A. TYPE OF WORK: DRILL <input checked="" type="checkbox"/> REENTER <input type="checkbox"/> DEEPEN <input type="checkbox"/>			7. IF INDIAN, ALLOTTEE OR TRIBE NAME: N/A	
B. TYPE OF WELL: OIL <input type="checkbox"/> GAS <input checked="" type="checkbox"/> OTHER _____ SINGLE ZONE <input checked="" type="checkbox"/> MULTIPLE ZONE <input type="checkbox"/>			8. UNIT or CA AGREEMENT NAME: N/A	
2. NAME OF OPERATOR: <b>Oso Oil &amp; Gas Properties, LLC</b>			9. WELL NAME and NUMBER: Centennial	
3. ADDRESS OF OPERATOR: <b>3900 S Wadsworth Blvd</b> CITY: <b>Lakewood</b> STATE: <b>CO</b> ZIP: <b>80235</b>		PHONE NUMBER: <b>(303) 929-6023</b>	10. FIELD AND POOL, OR WILDCAT: Wildcat	
4. LOCATION OF WELL (FOOTAGES) AT SURFACE: <b>283' FSL &amp; 1470' FWL Section 31 T12S R11E</b> AT PROPOSED PRODUCING ZONE: <b>1479' FNL &amp; 1296' FWL 6 T13S R11E</b> <b>522763X 4397139Y 39.725717 -110.734391</b> <b>522754X 4396602Y 39.720879 -110.734524</b>			11. QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: <b>NWSW 31 12S 11E S</b>	
14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE: <b>4.6 Miles NE of Kenilworth, UT</b>			12. COUNTY: Carbon	13. STATE: UTAH
15. DISTANCE TO NEAREST PROPERTY OR LEASE LINE (FEET) <b>1079'</b>		16. NUMBER OF ACRES IN LEASE: <b>962</b>	17. NUMBER OF ACRES ASSIGNED TO THIS WELL: <b>40</b>	
18. DISTANCE TO NEAREST WELL (DRILLING, COMPLETED, OR APPLIED FOR) ON THIS LEASE (FEET) <b>524'</b>		19. PROPOSED DEPTH: <b>2,721</b>	20. BOND DESCRIPTION: Single Well CD Collateral Bond	
21. ELEVATIONS (SHOW WHETHER DF, RT, GR, ETC.): <b>8565' GR</b>		22. APPROXIMATE DATE WORK WILL START: <b>10/31/2008</b>	23. ESTIMATED DURATION: <b>14 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		
22	16	H-40	65	20	Class G	25 sx	1.18 cuft/sk 15.8
12.25	9.625	J-55	36	1,835	Class G	350 sx	1.18 cuft/sk 15.8

**25. ATTACHMENTS**

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

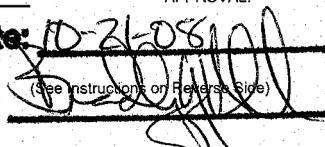
- |  |  |
|--|--|
| <input checked="" type="checkbox"/> WELL PLAT OR MAP PREPARED BY LICENSED SURVEYOR OR ENGINEER     | <input checked="" type="checkbox"/> COMPLETE DRILLING PLAN                                   |
| <input checked="" type="checkbox"/> EVIDENCE OF DIVISION OF WATER RIGHTS APPROVAL FOR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

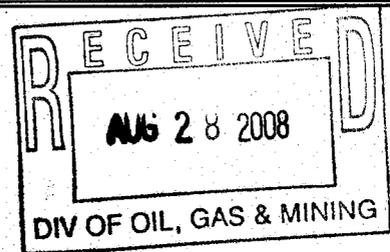
NAME (PLEASE PRINT) Mike Griffis TITLE Operations Engineer  
SIGNATURE  DATE 8/20/2008

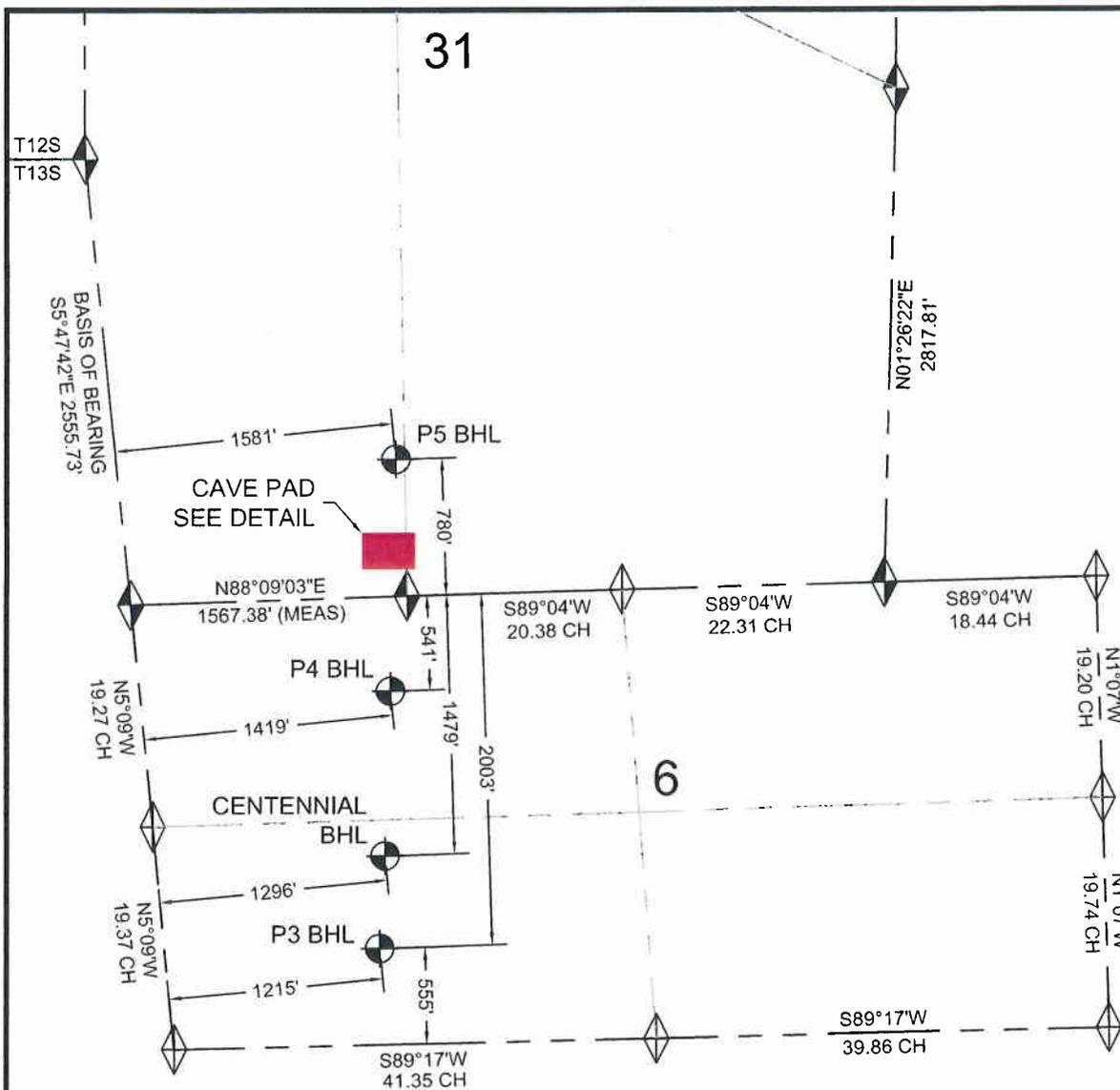
(This space for State use only)

API NUMBER ASSIGNED: 43-007-31447

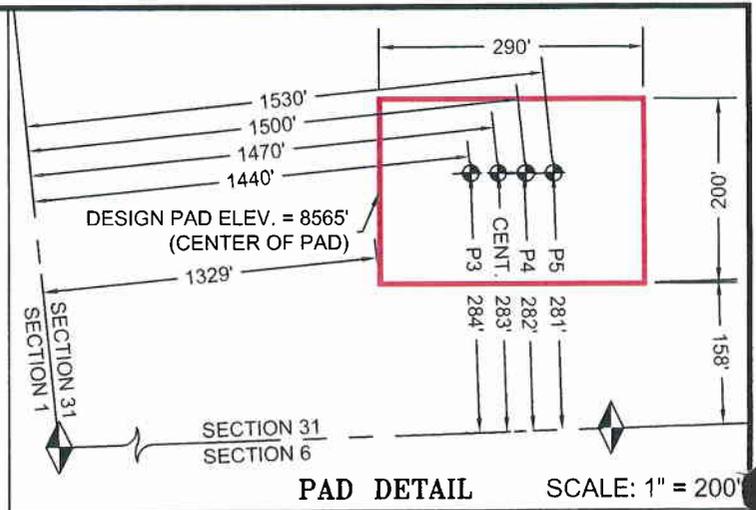
**Approved by the  
Utah Division of  
Oil, Gas and Mining**

APPROVAL:  
Date: 10-21-08  
By:   
(See Instructions on Reverse Side)





31



PAD DETAIL SCALE: 1" = 200'

**NARRATIVE**

THE PURPOSE OF THIS SURVEY IS TO LOCATE AND DESCRIBE A WELL SITE FOR OSO OIL & GAS THAT IS SITUATED IN THE SOUTHWEST QUARTER OF SECTION 31, T. 12 S., R. 11 E., S.L.B.&M., CARBON COUNTY, UTAH.

THE BASIS OF BEARING USED FOR THIS SURVEY IS SOUTH 5°47'42" EAST BETWEEN THE WEST QUARTER CORNER AND THE SOUTHWEST CORNER OF SAID SECTION 31.

THE BASIS OF ELEVATION USED FOR THIS SURVEY IS 8464 FEET AT THE WEST QUARTER CORNER OF SECTION 31, TOWNSHIP 12 SOUTH, RANGE 11 EAST, SALT LAKE BASE AND MERIDIAN. THE DESIGNED PAD ELEVATION IS 8565'.

**CERTIFICATE OF SURVEY**

I, M. CODY WARE, DO HEREBY CERTIFY THAT I AM A REGISTERED LAND SURVEYOR, LICENSE NO. 4940688 AS PRESCRIBED BY THE LAWS OF THE STATE OF UTAH. I FURTHER CERTIFY THAT I HAVE MADE A SURVEY OF THE LOCATION SHOWN AND THAT IT IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE.



**NOTES**

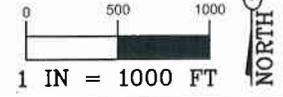
- SECTION 6 DIMENSIONS ARE BASED ON THE 1967 BLM PLAT.
- DIMENSIONS TO SECTION LINES ARE MEASURED AT RIGHT ANGLES.

**WELLHEAD POSITIONS**

	SURFACE POSITION		TARGET / BHL POSITION	
WELL	LAT. (WGS84)	LONG. (WGS84)	LAT. (WGS84)	LONG. (WGS84)
P3	39°43'32.664" N	110°44'07.160" W	39°43'10.062" N	110°44'07.399" W
CENT.	39°43'32.661" N	110°44'06.776" W	39°43'15.252" N	110°44'06.961" W
P4	39°43'32.659" N	110°44'06.392" W	39°43'24.528" N	110°44'06.479" W
P5	39°43'32.657" N	110°44'06.009" W	39°43'37.593" N	110°44'05.956" W

**LEGEND**

- FOUND MONUMENT
- CALCULATED POSITION
- TARGET - BHL
- "BHL" BOTTOM HOLE LOCATION



**WARE SURVEYING, L.L.C.**

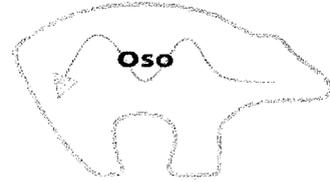
Phone: 435-613-1266 1344 North 1000 West  
 Email: waresurveying@emerytelcom.net Price, Utah 84501

SURVEY FOR: **OSO OIL & GAS**

**CAVE PAD**  
 NEAR DEADMAN CAN., CARBON COUNTY, UTAH  
 SECTION 31, T. 12 S., R. 11 E., S.L.B. & M.  
 SECTION 6, T. 13 S., R. 11 E., S.L.B. & M.

DRAWN BY: MCW SCALE: 1" = 1000'  
 DATE: 08-13-08  
 REVISIONS: 1 P-1

September 3, 2008



Ms. Diana Mason  
State of Utah  
Department of Natural Resources  
Division of Oil, Gas and Mining  
1594 West North Temple, Suite 1210  
Salt Lake City, UT 84116

Re: Directional Drilling Well: **Centennial**  
SHL: 283' FSL and 1,470' FWL Section 31 T12S R11E, SLB&M  
BHL: 1,479' FNL and 1,296' FWL Section 6 T13S R11E, SLB&M  
PBHL/TD: 2,721' MD; 1,807' TVD  
Carbon County, UT

Dear Ms. Mason,

Pursuant to the August 28, 2008 filing of Oso Oil & Gas' Form 3 Application for Permit to Drill for the referenced well, we are hereby submitting this letter in accordance with Utah's Oil & Gas Conservation Rule R649-3-11 pertaining to the reason for directionally drilling such wells.

- This well must be directionally drilled from this SHL due to topographical restrictions. In order to drill a vertical well to the desired BHL, a drilling pad would have to be constructed that would prove environmentally destructive and financially prohibitive. Please refer to the plat package submitted with the original Form 3 APD, it includes a topographical layout of the pad and the well.
- Oso Oil and Gas owns all the leases [UT-OSO-001] in the area that this will intersect and ultimately terminate.
- The BHL location of this well does not lie within 460' of any lease or property line that Oso Oil & Gas does not have legal control over. Said lease encompasses all of Section 31 T12S R11E and Section 6 T13S R11E.

Based on the facts listed above, Oso requests the drilling permits be granted pursuant to R649-3-11.

Regards,

A handwritten signature in black ink, appearing to read "Mike Griffis", with a long horizontal flourish extending to the right.

Mike Griffis  
Operations Engineer & Agent  
Oso Oil & Gas Properties, LLC  
3900 S Wadsworth Blvd, Suite 340  
Lakewood, CO 80235

15810 Park Ten Place, Suite 160  
Houston, TX 77084

To: Brad Hill  
Permit Manager  
Utah Division of Oil, Gas, and Mining  
1594 West North Temple, Suite 1210  
Salt Lake City, UT 84114-5801

From: Mike Griffis  
Oso Oil and Gas Properties, LLC  
3900 S Wadsworth Blvd, Suite 340  
Lakewood, CO 80235

RE: APD Compliance // Surface Owner Contact Information

Brad,

In compliance with UDOGM's requested APD information, here is the contact information for the surface owner on the lease which we intend to drill:

Lease: UT-OSO-001

Owner: Dave and Mildred Cave  
1220 South 530 West  
Price, UT 84501

Phone: 435-637-0387

If you have any further questions, don't hesitate to contact us.

Regards,

Mike Griffis  
Operations Engineer  
Oso Oil & Gas Properties, LLC  
720-407-8488 (o)  
303-819-7354 (c)  
[mgriffis@btoperating.com](mailto:mgriffis@btoperating.com)

## **AFFIDAVIT OF SURFACE USE AGREEMENT**

I, Gregory S. Brown, Manager of Oso Oil & Gas Properties, LLC whose address is 15810 Park Ten Place, Suite 160, Houston, Texas, 77084 do hereby swear and sayeth that;

Oso Oil & Gas Properties, LLC is the designated Lessee pursuant to that certain Oil and Gas Mining Lease executed on the 23rd day of May, 2007 and effective the 8th day of February, 2006 of the Property, as hereinafter defined, located in the County of Carbon, State of Utah and operator of those wells specifically set forth in the attached "Application For Permit To Drill" ("APD") which wells are located on the Property.

Further, this Affidavit of Surface Use Agreement is filed on behalf of Oso Oil & Gas Properties, LLC in the county records of Carbon County, Utah, to give notice that Oso Oil & Gas Properties, LLC and Mildred and Dave Cave, Judson D. and Cherie Critchlow, Norman C. and Lisa Critchlow, Jaylene Mahleres, Francine Henrie and John K. Critchlow and Paul Critchlow, Lessors, have entered into a Surface Use Agreement pursuant to which Oso Oil & Gas Properties, LLC was granted the exclusive right to access, use and otherwise enter all of the surface of the properties specifically described below for the purpose of oil and gas operations and development subject to the terms and conditions governing such access and operations set forth in the Surface Use Agreement.

### **Property Description**

All of Section 31, Township 12 South, Range 11 East, Salt Lake Meridian, consisting of approximately 642 acres, more or less and all of Section 6, Township 13 South, Range 11 East, Salt Lake Meridian, consisting of approximately 320 acres, more or less, both of which are located in the County of Carbon, State of Utah and collectively referred to herein as the "Property".

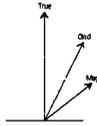


WELL <b>Centennial</b>	FIELD <b>UT, Carbon County (NAD83)</b>	STRUCTURE <b>Oso 31-12S-11E (Cave Pad)</b>
---------------------------	---	---

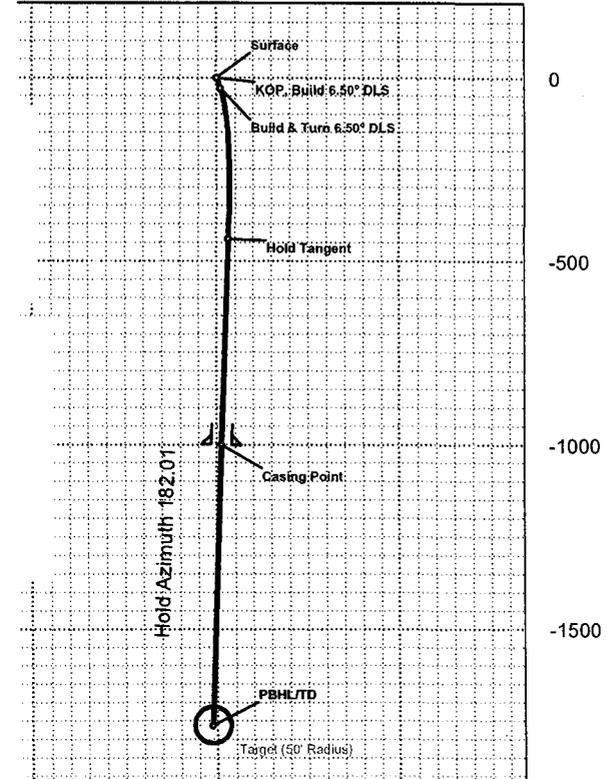
Magnetic Parameters Model: BGGM 2007 Dip: 85.451° Mag Dec: +11.904°	Date: August 13, 2008 FS: 52241.0 nT	Surface Location Lat: N39 43 32.661 Lon: W110 44 6.774	NAD83 Utah State Planes: Central Zone, US Feet 7089740.20 NUS 1855511.73 EUS Grid Conv: +0.48990455' Scale Fact: 0.9999000289	Miscellaneous Spot: Centennial Plan: Centennial R2 Jul 13 Aug 08 TVD Ref: (8569.00 ft above MSL) Srvy Date: August 14, 2008
--	---	--	---	---



True North  
Tot Corr (M->T +11.9040°)  
Mag Dec (+11.904°)  
Grid Conv (+0.48990455°)



<<< W Scale = 1(in):500(ft) E >>>  
-500 0 500



<<< S Scale = 1(in):500(ft) N >>>

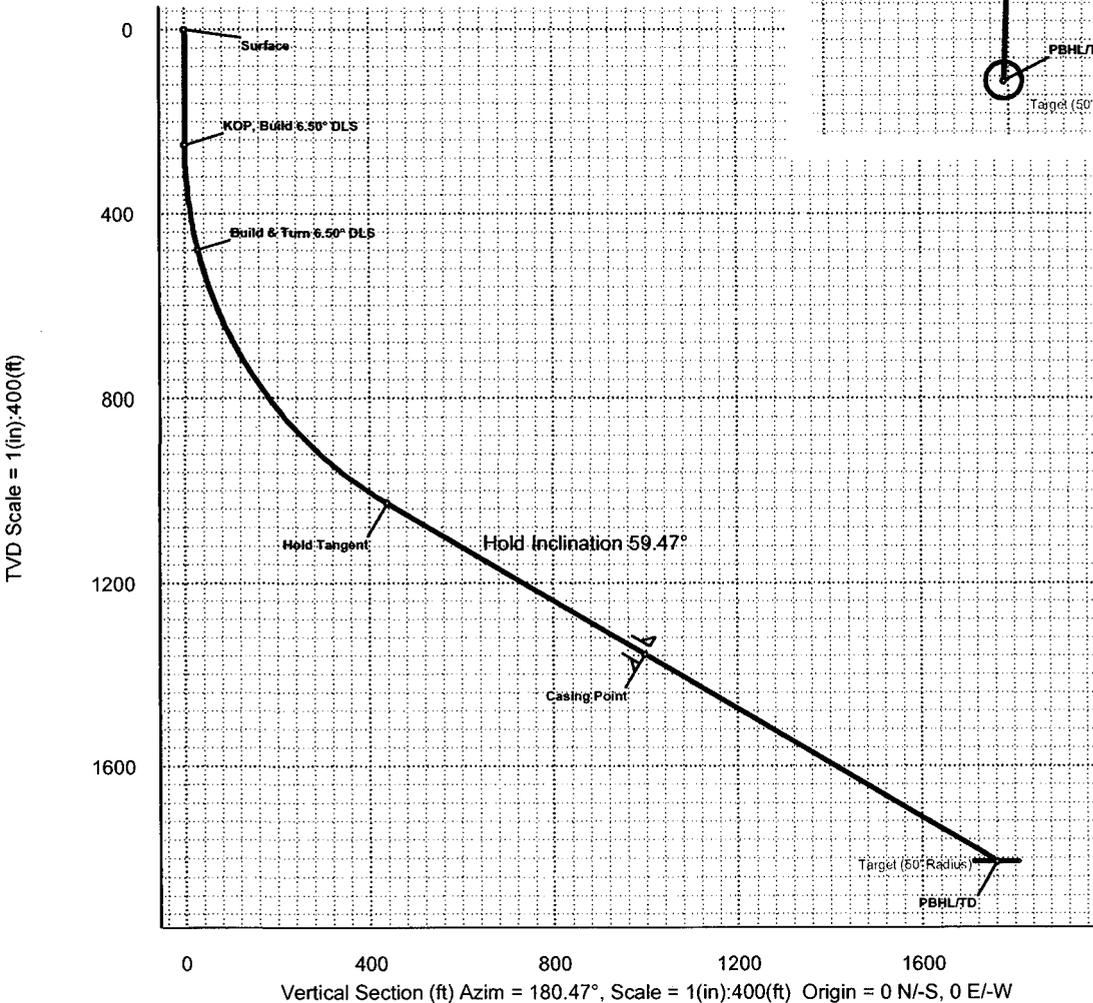
**Surface Location**

Northing: 7069746.20 ft Easting: 1855511.73 ft

Target Name	Shape	Major Axis	N(+)/S(-)	E(+)/W(-)	TVD	YSec	N(+)/S(-)	E(+)/W(-)
Centennial Target (50' Radius)	Circle	100.00	7067984.78	1855512.34	1807.00	1761.61	-1761.55	-14.46

**Critical Points**

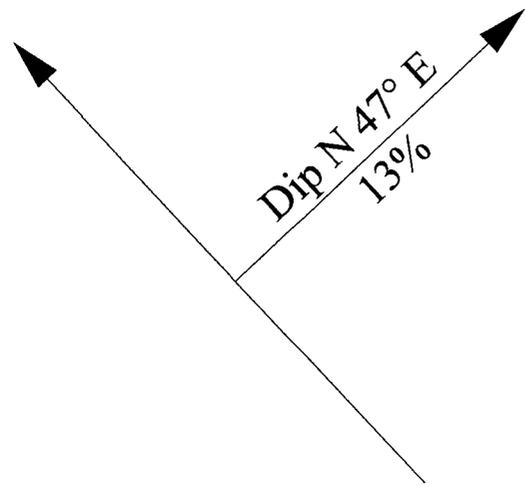
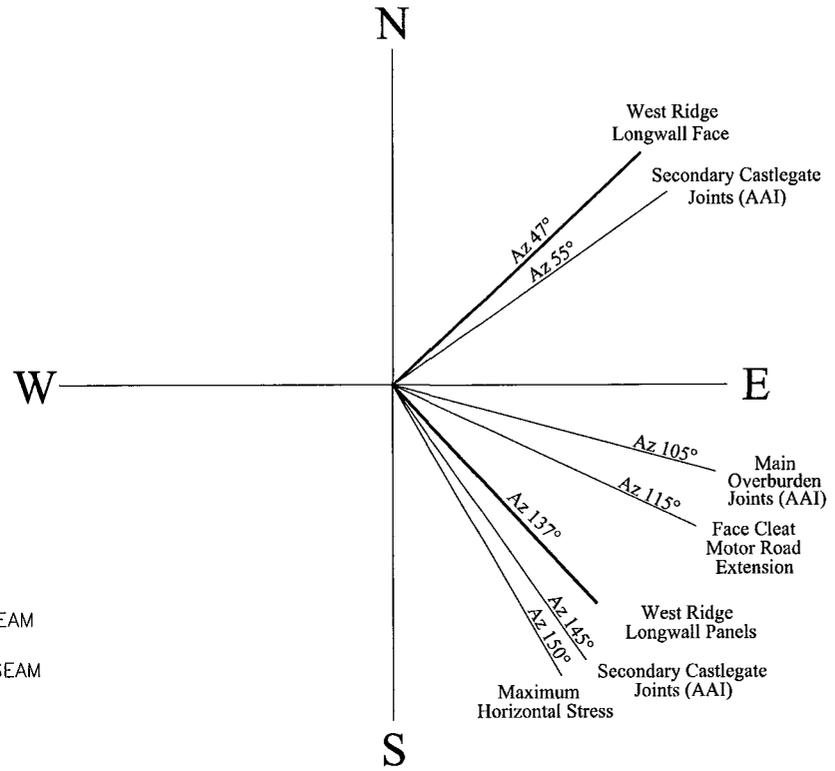
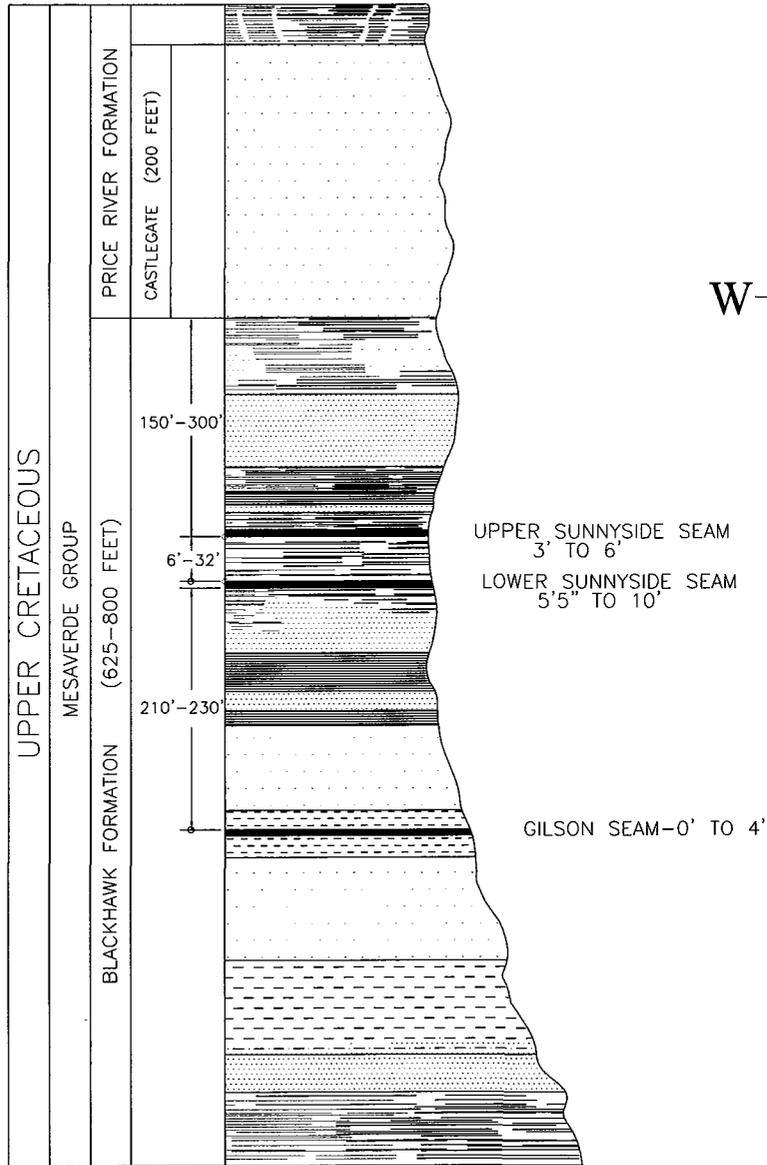
Critical Point	MD	INCL	AZIM	TVD	YSEC	N(+)/S(-)	E(+)/W(-)	DLS
Surface	0.00	0.00	160.00	0.00	0.00	0.00	0.00	0.00
KOP, Build 6.50° DLS	250.00	0.00	160.00	250.00	0.00	0.00	0.00	0.00
Build & Turn 6.50° DLS	480.77	15.00	160.00	478.14	28.14	-28.22	10.27	6.50
Hold Tangent	1185.18	59.47	182.01	1026.76	438.92	-439.19	31.97	6.50
Casing Point	1835.34	59.47	182.01	1357.00	998.75	-998.88	12.32	0.00
PBHLTD	2721.27	59.47	182.01	1807.00	1761.61	-1761.55	-14.46	0.00



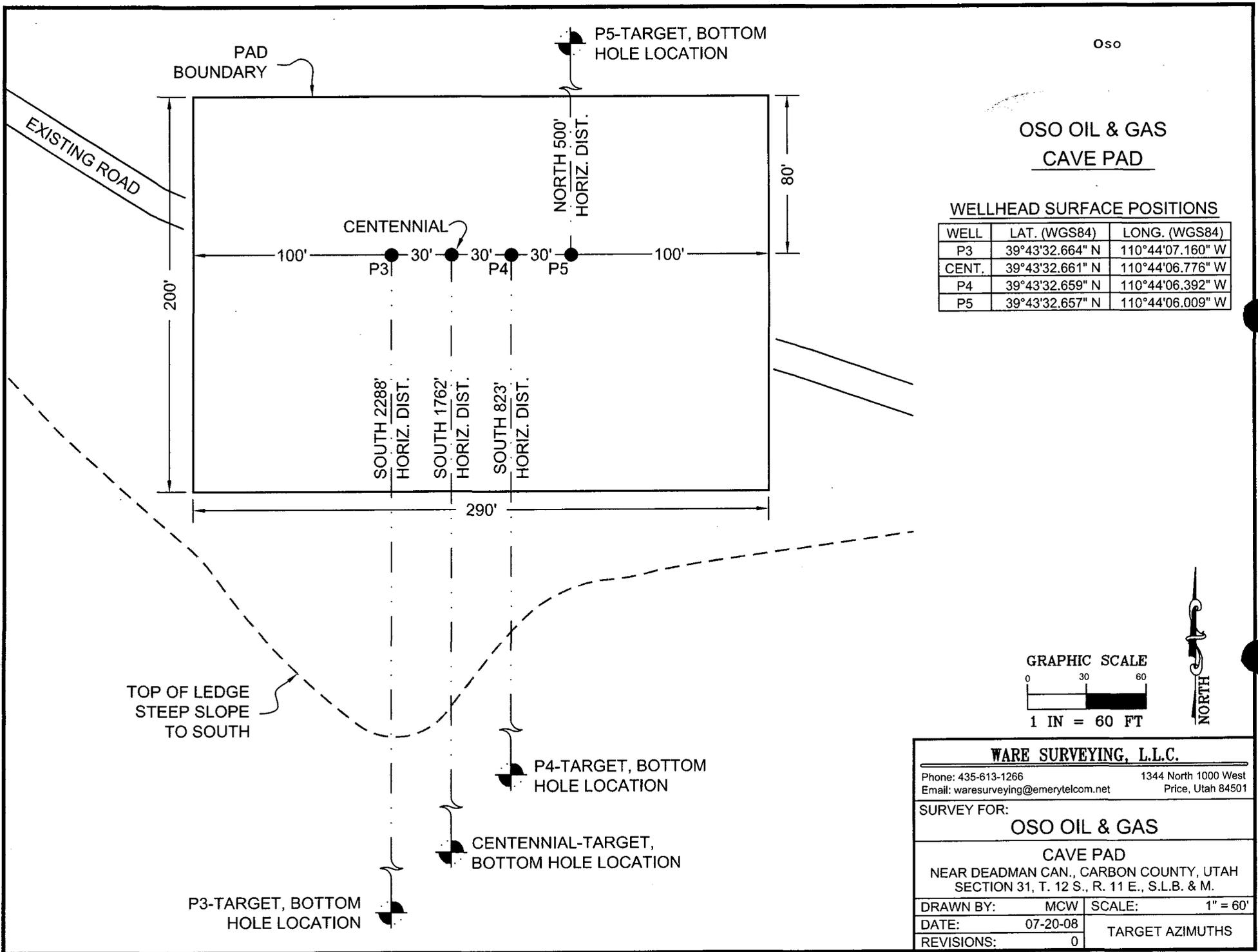
Quality Control  
Date Drawn: Tue 01:43 PM  
August 19, 2008  
Drawn by: Jackie Luther  
Checked by:  
Client OK:



LOWER SUNNYSIDE SEAM  
"C" CANYON



GENERALIZED SECTION, BLACKHAWK FORMATION  
NOT TO SCALE



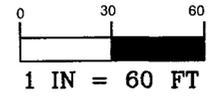
Oso

**OSO OIL & GAS  
CAVE PAD**

**WELLHEAD SURFACE POSITIONS**

WELL	LAT. (WGS84)	LONG. (WGS84)
P3	39°43'32.664" N	110°44'07.160" W
CENT.	39°43'32.661" N	110°44'06.776" W
P4	39°43'32.659" N	110°44'06.392" W
P5	39°43'32.657" N	110°44'06.009" W

**GRAPHIC SCALE**



**WARE SURVEYING, L.L.C.**

Phone: 435-613-1266 1344 North 1000 West  
 Email: waresurveying@emerytelcom.net Price, Utah 84501

SURVEY FOR:  
**OSO OIL & GAS**

**CAVE PAD**  
 NEAR DEADMAN CAN., CARBON COUNTY, UTAH  
 SECTION 31, T. 12 S., R. 11 E., S.L.B. & M.

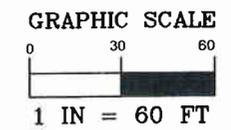
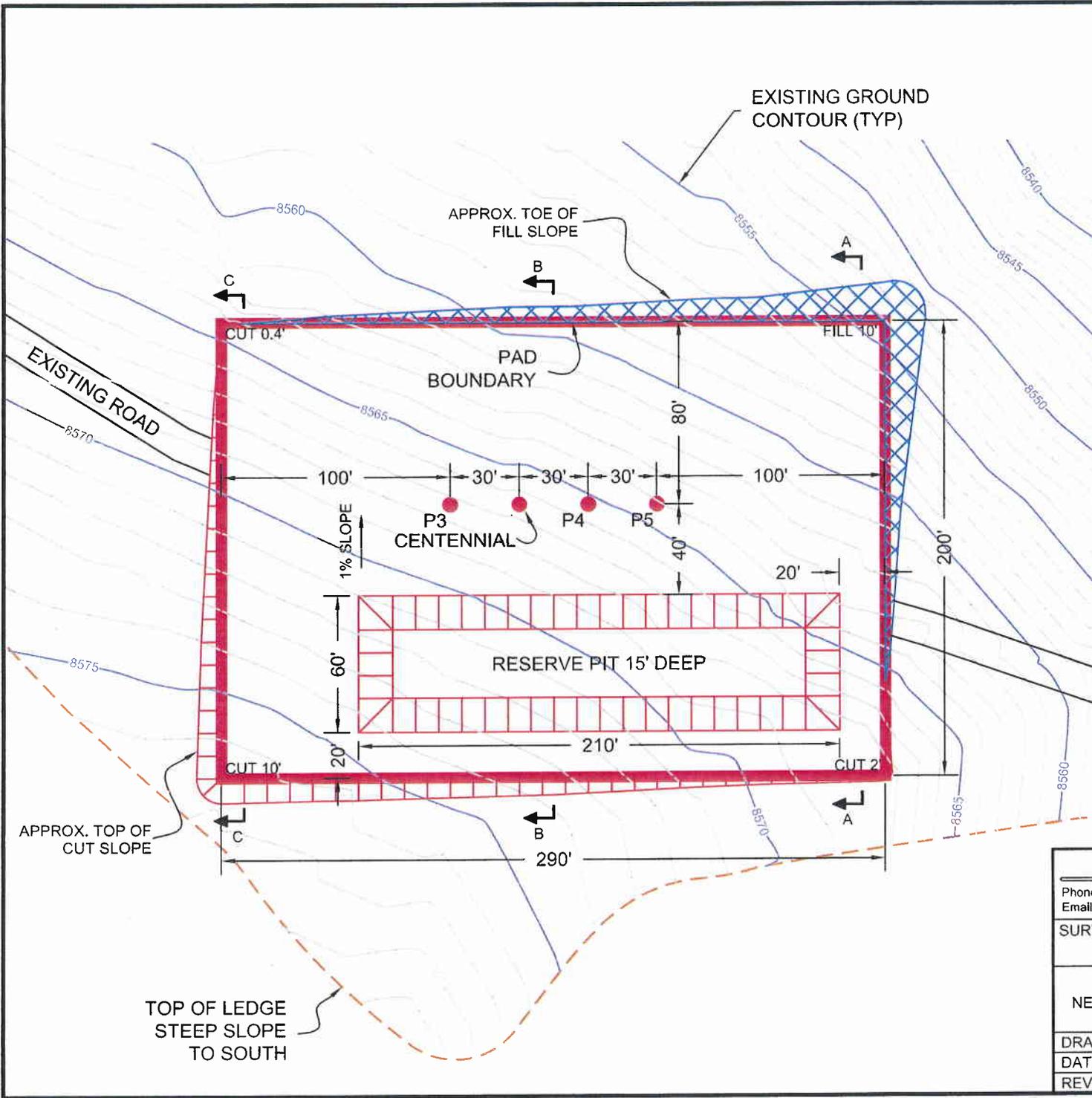
DRAWN BY:	MCW	SCALE:	1" = 60'
DATE:	07-20-08	TARGET AZIMUTHS	
REVISIONS:	0		



## OSO OIL & GAS CAVE PAD

### NOTES

- APPROXIMATE EARTHWORK VOLUMES  
 6" TOPSOIL STRIPPING = 1,100 CU. YDS.  
 PIT CUT = 4,900 CU. YDS.  
TOTAL CUT = 5,400 CU. YDS.  
TOTAL FILL = 2,900 CU. YDS.
- FILL SLOPES ARE 1½ : 1
- CUT SLOPES ARE 1 : 1
- PIT CUT SLOPES ARE 1 : 1
- PIT CAPACITY WITH 2' OF FREEBOARD IS 19,346 Bbls.
- DESIGNED PAD ELEVATION = 8565'  
 AT CENTER OF PAD



<b>WARE SURVEYING, L.L.C.</b>	
Phone: 435-613-1266	1344 North 1000 West
Email: waresurveying@emerytelcom.net	Price, Utah 84501
SURVEY FOR:	
<b>OSO OIL &amp; GAS</b>	
<b>CAVE PAD</b>	
NEAR DEADMAN CAN., CARBON COUNTY, UTAH SECTION 31, T. 12 S., R. 11 E., S.L.B. & M.	
DRAWN BY: MCW	SCALE: 1" = 60'
DATE: 08-14-08	SITE LAYOUT
REVISIONS: 1	

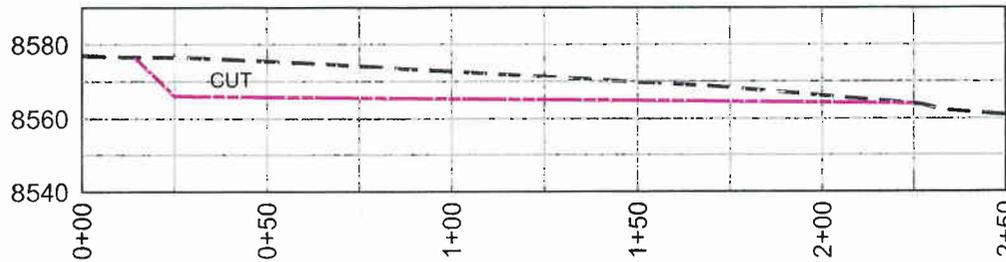


## OSO OIL & GAS CAVE PAD

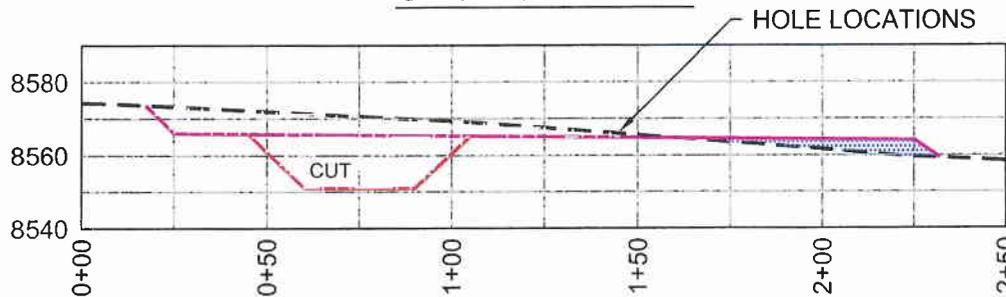
### NOTES

- APPROXIMATE EARTHWORK VOLUMES  
 6" TOPSOIL STRIPPING = 1,100 CU. YDS.  
 PIT CUT = 4,900 CU. YDS.  
TOTAL CUT = 5,400 CU. YDS.  
TOTAL FILL = 2,900 CU. YDS.
- FILL SLOPES ARE 1½ : 1
- CUT SLOPES ARE 1 : 1
- PIT CUT SLOPES ARE 1 : 1
- PIT CAPACITY WITH 2' OF FREEBOARD IS 19,346 Bbls.
- DESIGNED PAD ELEVATION = 8565' AT CENTER OF PAD

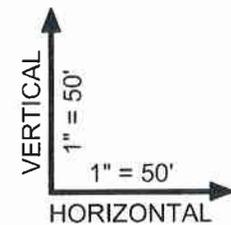
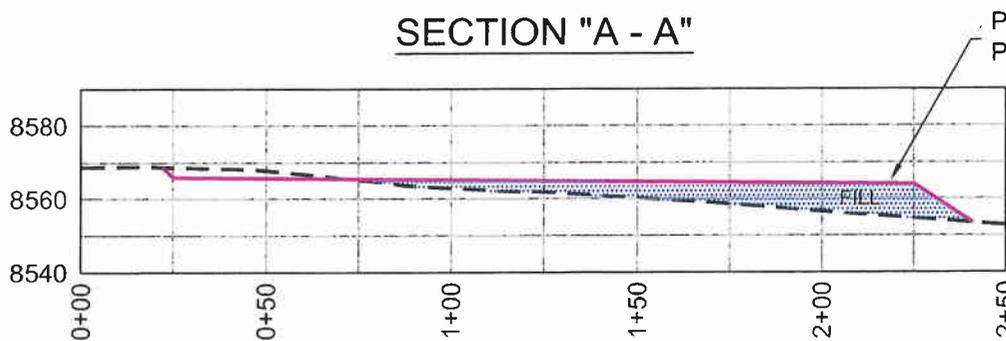
### SECTION "C - C"



### SECTION "B - B"



### SECTION "A - A"



### WARE SURVEYING, L.L.C.

Phone: 435-613-1266      1344 North 1000 West  
 Email: waresurveying@emerytelcom.net      Price, Utah 84501

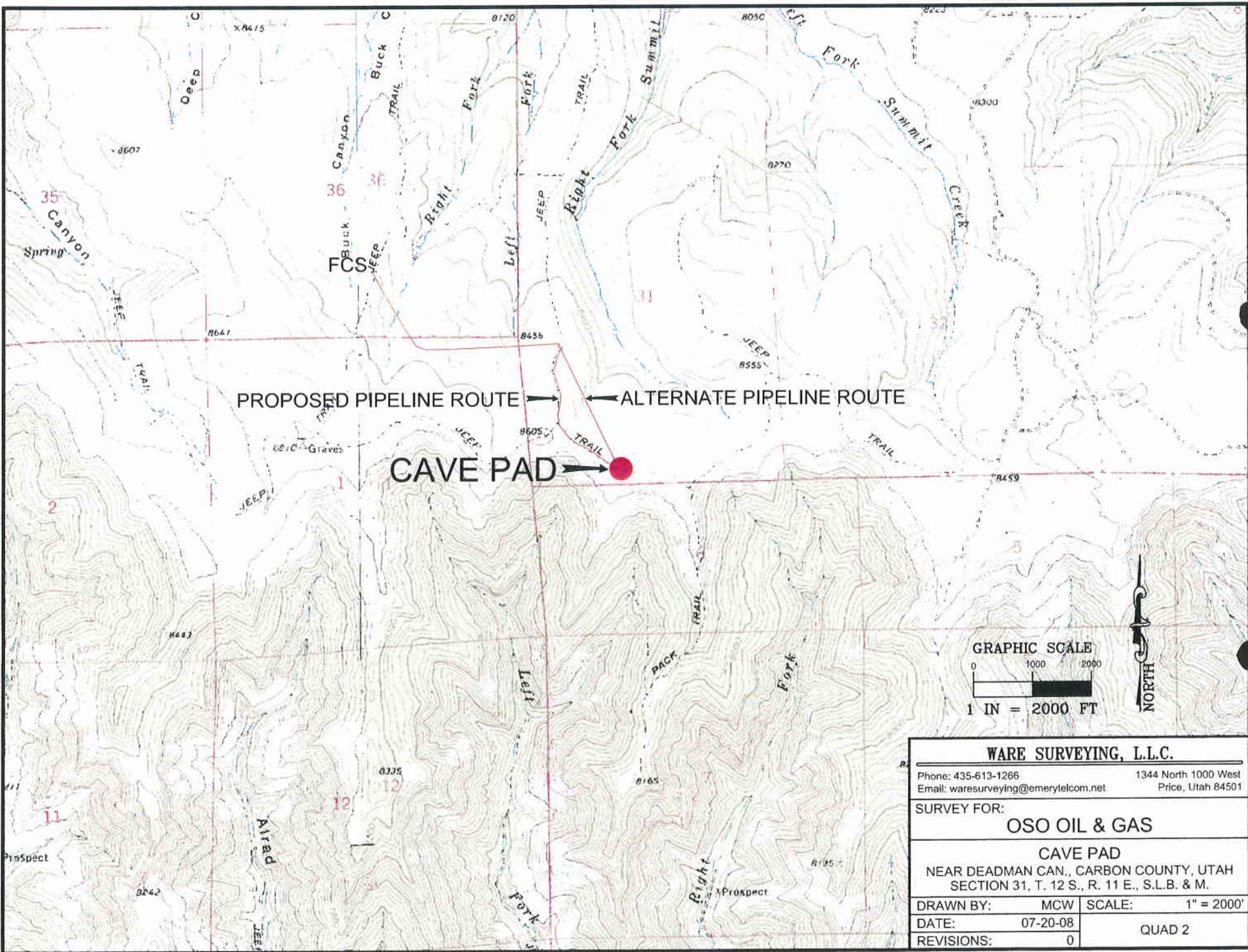
SURVEY FOR:

### OSO OIL & GAS

#### CAVE PAD

NEAR DEADMAN CAN., CARBON COUNTY, UTAH  
 SECTION 31, T. 12 S., R. 11 E., S.L.B. & M.

DRAWN BY: MCW	SCALE: 1" = 50'
DATE: 08-14-08	CROSS SECTIONS
REVISIONS: 1	

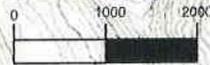


PROPOSED PIPELINE ROUTE

ALTERNATE PIPELINE ROUTE

CAVE PAD

GRAPHIC SCALE



1 IN = 2000 FT



<b>WARE SURVEYING, L.L.C.</b>		
Phone: 435-613-1266		1344 North 1000 West
Email: waresurveying@emerytelcom.net		Price, Utah 84501
SURVEY FOR:		
<b>OSO OIL &amp; GAS</b>		
<b>CAVE PAD</b>		
NEAR DEADMAN CAN., CARBON COUNTY, UTAH SECTION 31, T. 12 S., R. 11 E., S.L.B. & M.		
DRAWN BY:	MCW	SCALE: 1" = 2000'
DATE:	07-20-08	QUAD 2
REVISIONS:	0	

# CAVE PAD

NEAR DEADMAN CAN., CARBON COUNTY, UTAH  
SECTION 31, T. 12 S., R. 11 E., S.L.B. & M.



LOOKING EAST FROM PAD



LOOKING WEST FROM PAD

## WARE SURVEYING, L.L.C.

Phone: 435-613-1266  
Email: waresurveying@emerytelcom.net

1344 North 1000 West  
Price, Utah 84501



DATE: 07-18-08  
PHOTO 2

# CAVE PAD

NEAR DEADMAN CAN., CARBON COUNTY, UTAH  
SECTION 31, T. 12 S., R. 11 E., S.L.B. & M.



LOOKING NORTH FROM PAD



LOOKING SOUTH FROM PAD

## WARE SURVEYING, L.L.C.

Phone: 435-613-1266  
Email: [waresurveying@emerytelcom.net](mailto:waresurveying@emerytelcom.net)

1344 North 1000 West  
Price, Utah 84501



DATE: 07-18-08  
PHOTO 1

**WORKSHEET  
APPLICATION FOR PERMIT TO DRILL**

APD RECEIVED: 08/28/2008

API NO. ASSIGNED: 43-007-31447

WELL NAME: CENTENNIAL

OPERATOR: OSO OIL & GAS ( N3515 )

PHONE NUMBER: 303-929-6023

CONTACT: MIKE GRIFFIS

PROPOSED LOCATION:

NWSW 31 120S 110E  
 SURFACE: 0283 FSL 1470 FWL  
 BOTTOM: 1479 FNL 1296 FWL Sec 6 T13S  
 COUNTY: CARBON  
 LATITUDE: 39.72572 LONGITUDE: -110.7344  
 UTM SURF EASTINGS: 522763 NORTHINGS: 4397139  
 FIELD NAME: WILDCAT ( 1 )

INSPECT LOCATN BY: / /		
Tech Review	Initials	Date
Engineering	DKD	10/20/08
Geology		
Surface		

LEASE TYPE: 4 - Fee  
 LEASE NUMBER: UT-OSO-001  
 SURFACE OWNER: 4 - Fee

PROPOSED FORMATION: BLKHK  
 COALBED METHANE WELL? NO

RECEIVED AND/OR REVIEWED:

- Plat
- Bond: Fed[] Ind[] Sta[] Fee[]  
(No. 868378354 )
- Potash (Y/N)
- Oil Shale 190-5 (B) or 190-3 or 190-13
- Water Permit  
(No. MUNICIPAL )
- RDCC Review (Y/N)  
(Date: 09/24/2008 )
- 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:

Needs Permit (09-30-08)

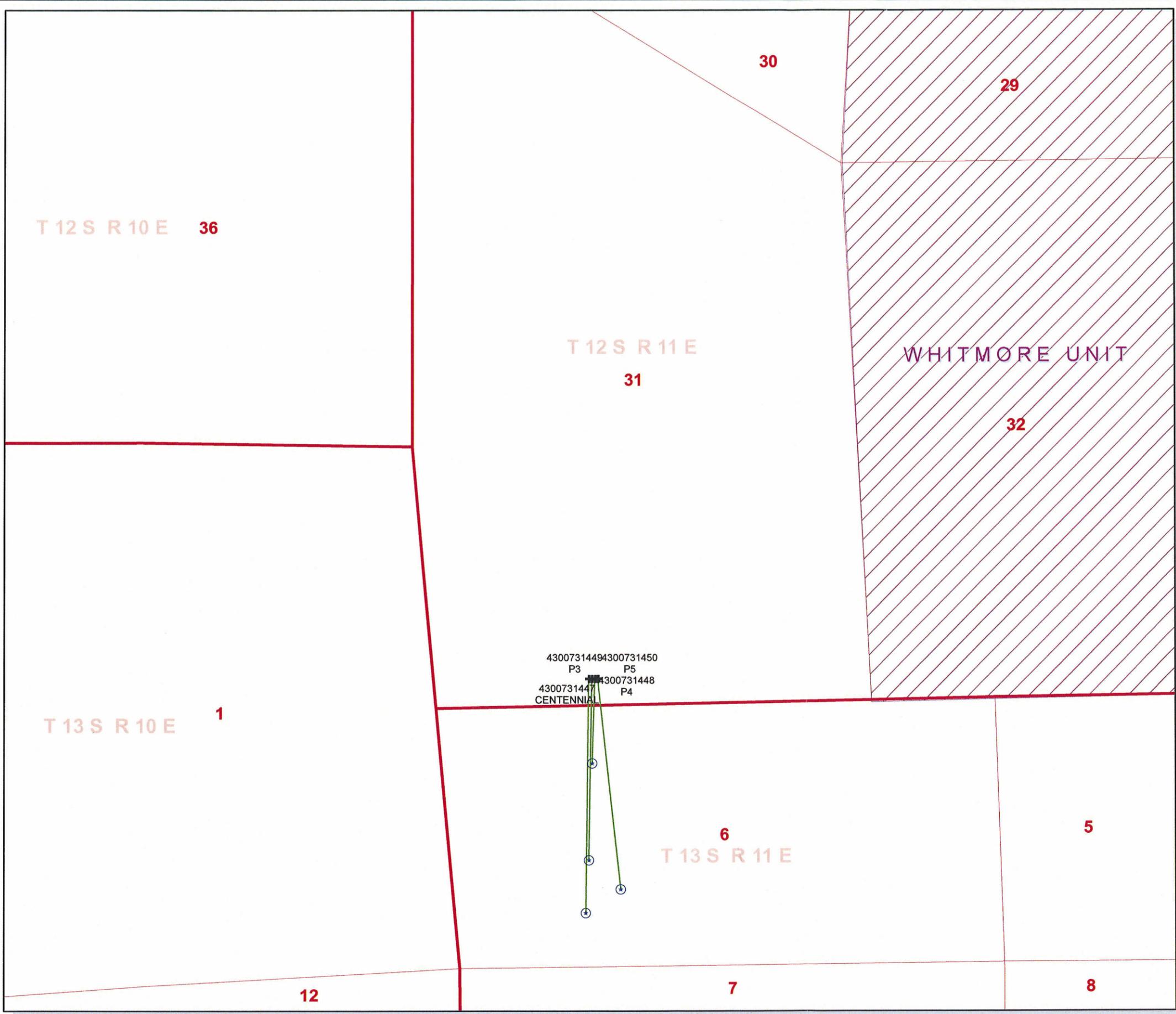
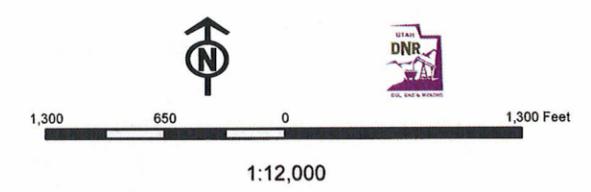
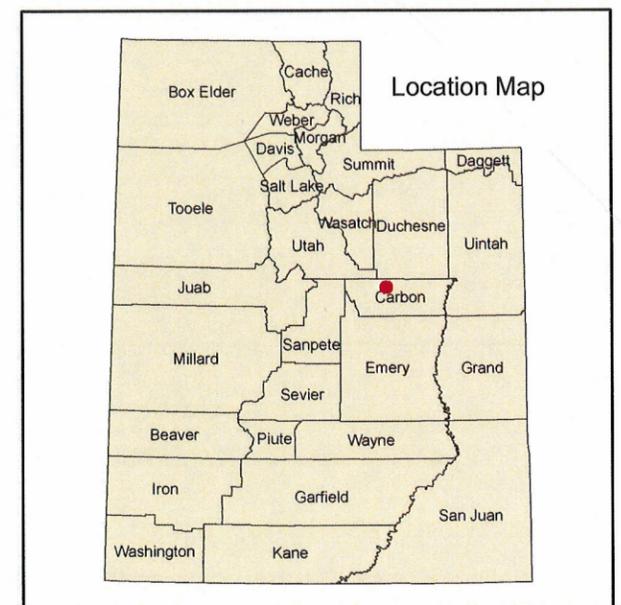
STIPULATIONS:

- 1 - Spacing Stip
- 2 - STATEMENT OF BASIS
- 3 - Cement Stip # 7 (9 5/8")

**API Number: 4300731447**  
**Well Name: CENTENNIAL**  
 Township 12.0 S Range 11.0 E Section 31  
**Meridian: SLBM**  
 Operator: OSO OIL & GAS PROPERTIES LLC

Map Prepared:  
 Map Produced by Diana Mason

- | Units         | Wells Query Events     |
|---------------|------------------------|
| STATUS        | ✕ <all other values>   |
| ACTIVE        | GIS_STAT_TYPE          |
| EXPLORATORY   | <Null>                 |
| GAS STORAGE   | ◆ APD                  |
| NF PP OIL     | ⊙ DRL                  |
| NF SECONDARY  | ⊙ GI                   |
| PI OIL        | ⊙ GS                   |
| PP GAS        | ⊙ LA                   |
| PP GEOTHERML  | ⊙ NEW                  |
| PP OIL        | ⊙ OPS                  |
| SECONDARY     | ⊙ PA                   |
| TERMINATED    | ⊙ PGW                  |
| <b>Fields</b> | ⊙ POW                  |
| STATUS        | ⊙ RET                  |
| ACTIVE        | ⊙ SGW                  |
| COMBINED      | ⊙ SOW                  |
| Sections      | ⊙ TA                   |
| Township      | ⊙ TW                   |
|               | ⊙ WD                   |
|               | ⊙ WI                   |
|               | ⊙ WS                   |
|               | ⊙ Bottom Hole Location |



# Application for Permit to Drill

## Statement of Basis

10/21/2008

Utah Division of Oil, Gas and Mining

Page 1

<b>APD No</b>	<b>API WellNo</b>	<b>Status</b>	<b>Well Type</b>	<b>Surf Ownr</b>	<b>CBM</b>
1011	43-007-31447-00-00		GW	P	No
<b>Operator</b>	OSO OIL & GAS PROPERTIES LLC		<b>Surface Owner-APD</b>		
<b>Well Name</b>	CENTENNIAL		<b>Unit</b>		
<b>Field</b>	WILDCAT		<b>Type of Work</b>		
<b>Location</b>	NWSW 31 12S 11E S 283 FSL 1470 FWL GPS Coord (UTM) 522763E 4397139N				

### Geologic Statement of Basis

A well drilled at this location will likely spud into a permeable soil developed on the Tertiary/Cretaceous-age Undivided Flagstaff Limestone/North Horn Formation. It is likely that considerable volumes of fresh water may be encountered in permeable Tertiary Flagstaff Limestone and Cretaceous-age North Horn and Mesa Verde Group strata. The nearest mapping of the base of moderately saline ground water in the area (~14 miles northeast) implies that it may be as much as 5,500' below the surface. No underground water rights have been filed within a mile of the location. Drainage is to the north into the Right Fork of Summit Creek, which drainage feeds to the Price River. The proposed casing and cementing program (if cemented to surface) and the air/mist/foam fresh water-based drilling fluid system will adequately protect the ground water resource. The surface casing likely primarily protect the Flagstaff Limestone and North Horn Formation. A prodigious column of permeable sands in the Cretaceous is exposed during drilling below the surface casing but the drilling fluid system is benign.

Chris Kierst  
APD Evaluator

10/20/2008  
Date / Time

### Surface Statement of Basis

Staked location lies approximately 10 air miles northeast of Price, Carbon County, Utah. Located on the ridge line overlooking the Castle Valley and Price to the south with Emma Park sloping off to the north. Topography drops both to the south and north, however is more dramatic to the south looking into the Left Fork of Deadman Creek. Most of the location will drain to the north into the Right Fork of Summit Creek, Willow Creek, and eventually the Price River.

Access will be along existing roads. The reserve pit will be lined and fenced. Traffic will be re-routed around wellpad during drilling. Access will be provided through the well pad after drilling has been completed.

Onsite evaluation conducted September 30, 2008. In attendance: Mark Jones (UDOGM), Scott Berggren, Phil Basham, Rick Hudspeth (Oso), Bud Critchlow, Dave and Mildred Cave (surface owners). A signed surface use agreement is in place.

Mark Jones  
Onsite Evaluator

9/30/2008  
Date / Time

### Conditions of Approval / Application for Permit to Drill

Category	Condition
Pits	A synthetic liner with a minimum thickness of 12 mils shall be properly installed and maintained in the reserve pit.
Surface	The reserve pit shall be fenced to protect livestock and wildlife.

# ON-SITE PREDRILL EVALUATION

Utah Division of Oil, Gas and Mining

**Operator** OSO OIL & GAS PROPERTIES LLC  
**Well Name** CENTENNIAL  
**API Number** 43-007-31447-0      **APD No** 1011      **Field/Unit** WILDCAT  
**Location:** 1/4,1/4 NWSW      **Sec** 31      **Tw** 12S      **Rng** 11E      283 FSL 1470 FWL  
**GPS Coord (UTM)** 522757      4397149      **Surface Owner**

## Participants

M. Jones (UDOGM), Scott Berggren, Phil Basham, Rick Hudspeth (Oso), Bud Critchlow, Dave and Mildred Cave (surface owners).

## Regional/Local Setting & Topography

Staked location lies approximately 10 air miles northeast of Price, Carbon County, Utah. Located on the ridge line overlooking the Castle Valley and Price to the south with Emma Park sloping off to the north. Topography drops both to the south and north, however is more dramatic to the south looking into the Left Fork of Deadman Creek. Most of the location will drain to the north into the Right Fork of Summit Creek, Willow Creek, and eventually the Price River.

## Surface Use Plan

### **Current Surface Use**

Grazing

### **New Road**

<b>Miles</b>	<b>Well Pad</b>		<b>Src Const Material</b>	<b>Surface Formation</b>
0	<b>Width</b> 200	<b>Length</b> 290	Onsite	

### **Ancillary Facilities**

## Waste Management Plan Adequate?

## Environmental Parameters

**Affected Floodplains and/or Wetland** N

### **Flora / Fauna**

grasses, sagebrush, and other shrubs.

### **Soil Type and Characteristics**

rocky clay loam

**Erosion Issues** N

**Sedimentation Issues** N

**Site Stability Issues** N

**Drainage Diversion Required** N

**Berm Required?** N

**Erosion Sedimentation Control Required?** N

Paleo Survey Run?

Paleo Potential Observed?

Cultural Survey Run?

Cultural Resources?

Reserve Pit

**Site-Specific Factors**

**Site Ranking**

<b>Distance to Groundwater (feet)</b>	>200		0
<b>Distance to Surface Water (feet)</b>	>1000		0
<b>Dist. Nearest Municipal Well (ft)</b>	>5280		0
<b>Distance to Other Wells (feet)</b>	<300		20
<b>Native Soil Type</b>	High permeability		20
<b>Fluid Type</b>	Air/mist		0
<b>Drill Cuttings</b>	Normal Rock		0
<b>Annual Precipitation (inches)</b>	>20		10
<b>Affected Populations</b>	<10		0
<b>Presence Nearby Utility Conduits</b>	Not Present		0
		<b>Final Score</b>	50
			1 Sensitivity Level

**Characteristics / Requirements**

**Closed Loop Mud Required?** N    **Liner Required?** Y    **Liner Thickness** 12    **Pit Underlayment Required?** N

Other Observations / Comments

Mark Jones  
Evaluator

9/30/2008  
Date / Time



Online Services

Agency List

Business

Search

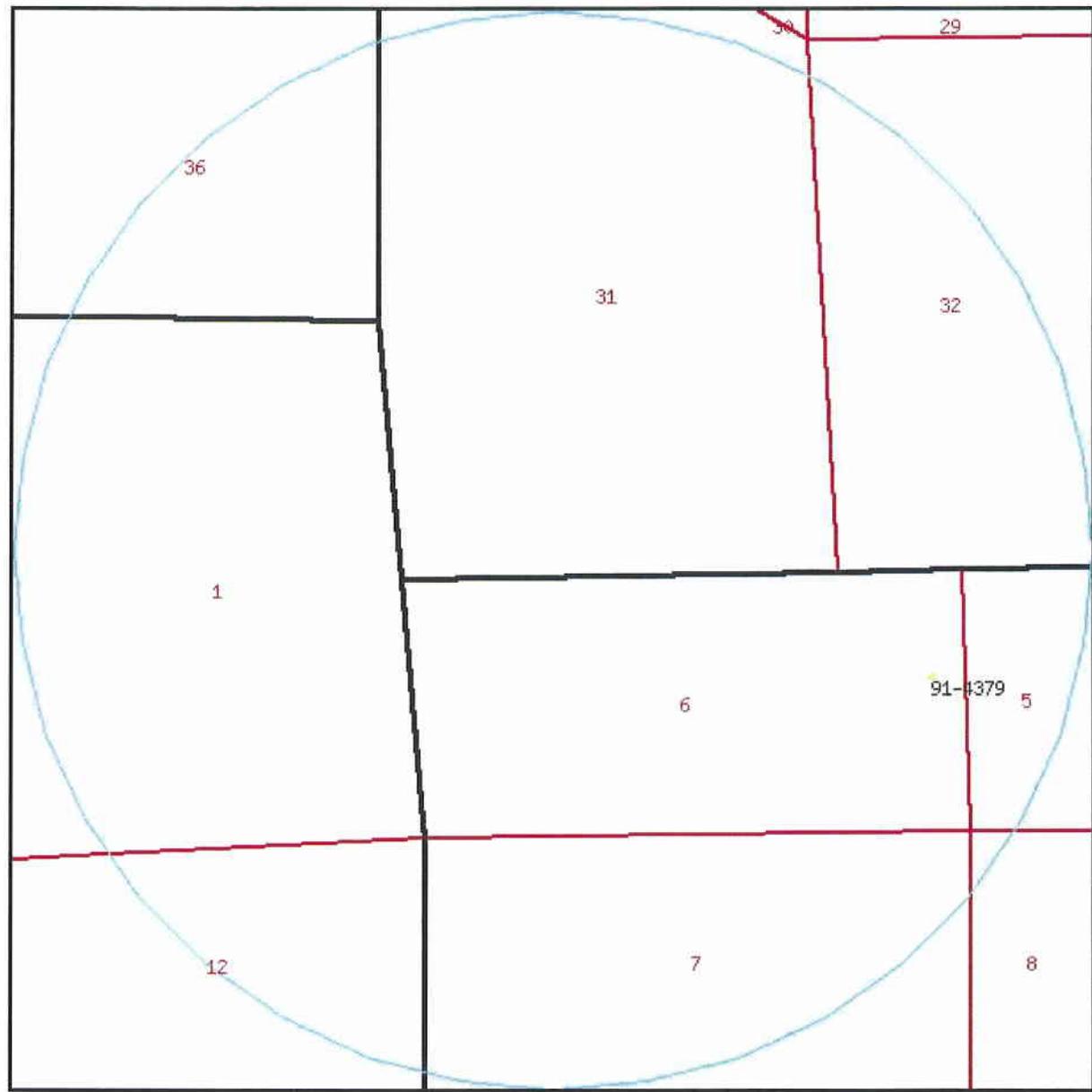


# Utah Division of Water Rights

## WRPLAT Program Output Listing

Version: 2007.04.13.01      Rundate: 10/20/2008 03:42 PM

Radius search of 5280 feet from a point N282 E1500 from the SW corner, section 31, Township 12S, Range 11E, SL b&m Criteria:wrtypes=W,C,E podtypes=S,U,Sp status=U,A,P usetypes=all



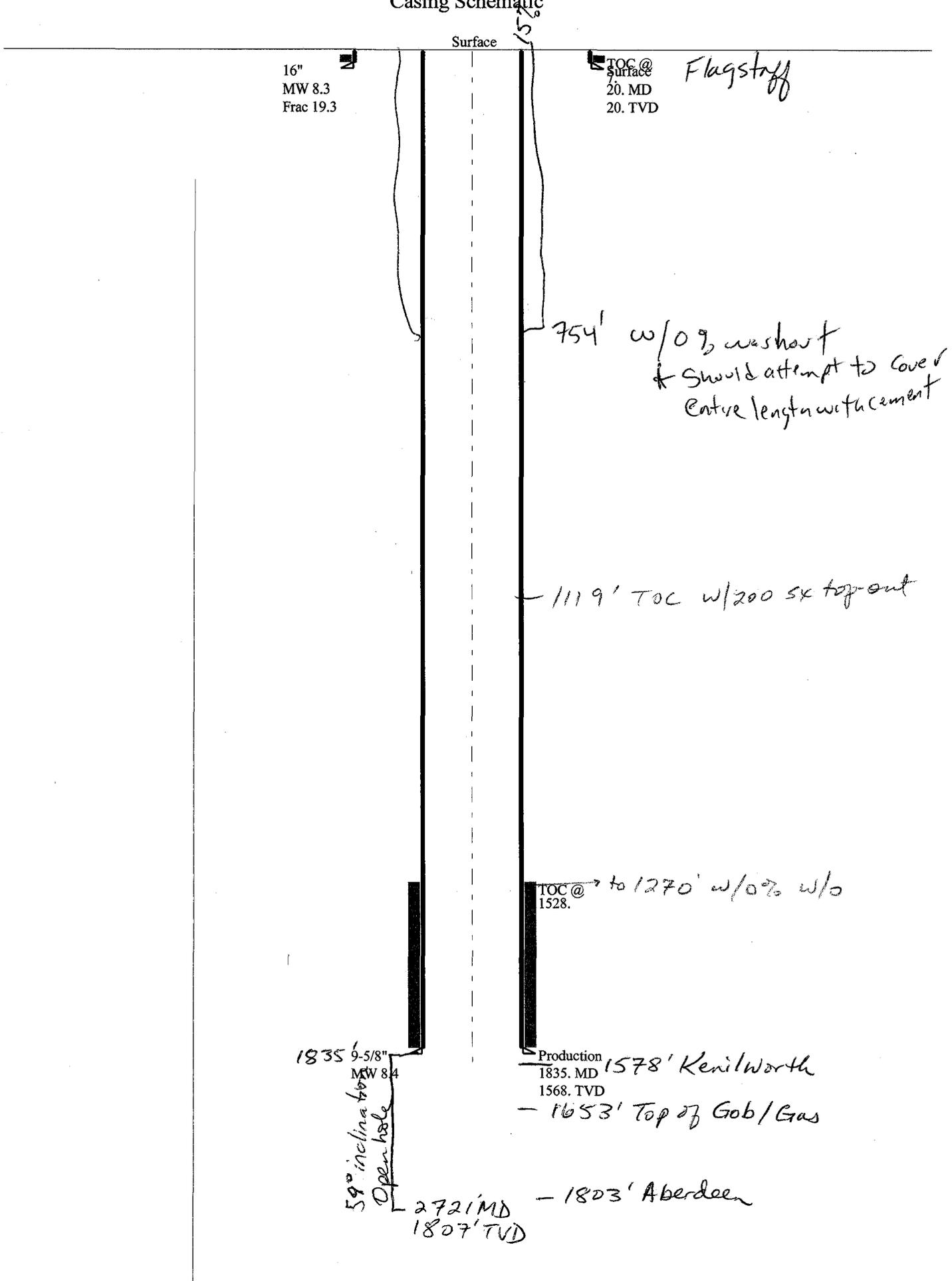
**Water Rights**

<b>WR Number</b>	<b>Diversion Type/Location</b>	<b>Well Log</b>	<b>Status</b>	<b>Priority</b>	<b>Uses</b>	<b>CFS</b>	<b>ACFT</b>	<b>Owner Name</b>
<u>91-4379</u>	Surface S1060 W300 NE 06 13S 11E SL		P	18690000	S	0.015	0.000	MILDRED CAVE SUNNYSIDE STAR ROUTE

Utah Division of Water Rights | 1594 West North Temple Suite 220, P.O. Box 146300, Salt Lake City, Utah 84114-6300 | 801-538-7240  
[Natural Resources](#) | [Contact](#) | [Disclaimer](#) | [Privacy Policy](#) | [Accessibility Policy](#)

43007314470000 Centennial

Casing Schematic



16"  
MW 8.3  
Frac 19.3

Surface

TOC @  
Surface  
20. MD  
20. TVD

Flagstaff

754' w/0% washout  
\* Should attempt to cover  
entire length with cement

1119' TOC w/200 SX top out

TOC @ 1528. to 1270' w/0% w/o

1835 9-5/8"  
MW 84

59° inclina to  
Open hole

Production  
1835. MD 1578' Kenilworth  
1568. TVD

- 1653' Top of Gob/ Gas

2721 MD - 1803' Aberdeen  
1807' TVD

Well name:

**4300731447000 Centennial**

Operator: **Oso Oil & Gas Properties, LLC**

String type: **Surface**

Project ID:

**43-007-31447-0000**

Location: **Carbon County**

**Design parameters:**

**Collapse**

Mud weight: 8.330 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: 65 °F  
Bottom hole temperature: 65 °F  
Temperature gradient: 1.40 °F/100ft  
Minimum section length: 20 ft  
Cement top: 7 ft

**Burst**

Max anticipated surface pressure: 18 psi  
Internal gradient: 0.120 psi/ft  
Calculated BHP 20 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 air weight.  
Neutral point: 18 ft

**Non-directional string.**

**Re subsequent strings:**

Next setting depth: 1,568 ft  
Next mud weight: 8.400 ppg  
Next setting BHP: 684 psi  
Fracture mud wt: 19.250 ppg  
Fracture depth: 20 ft  
Injection pressure: 20 psi

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Internal Capacity (ft <sup>3</sup> )
1	20	16	65.00	H-40	ST&C	20	20	15.125	25.4
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	9	630	72.794	20	1640	82.00	1	439	99.99 J

Prepared by: Helen Sadik-Macdonald  
Div of Oil, Gas & Minerals

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

Date: October 15, 2008  
Salt Lake City, Utah

**ENGINEERING STIPULATIONS:**

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

Burst strength is not adjusted for tension.

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

Well name:

**43007314470000 Centennial**

Operator: **Oso Oil & Gas Properties, LLC**

String type: Production

Project ID:

43-007-31447-0000

Location: Carbon 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: 65 °F  
Bottom hole temperature: 87 °F  
Temperature gradient: 1.40 °F/100ft  
Minimum section length: 368 ft

Cement top: 1,528 ft

**Burst**

Max anticipated surface pressure: 496 psi  
Internal gradient: 0.120 psi/ft  
Calculated BHP 684 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 air weight.

Neutral point: 1,583 ft

**Directional well information:**

Kick-off point 250 ft  
Departure at shoe: 820 ft  
Maximum dogleg: 6.5 °/100ft  
Inclination at shoe: 39.24 °

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	1835	9.625	36.00	J-55	LT&C	1568	1835	8.796	796.5
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	684	2020	2.953	684	3520	5.15	56	453	8.03 J

Prepared by: Helen Sadik-Macdonald  
Div of Oil, Gas & Minerals

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

Date: October 15, 2008  
Salt Lake City, Utah

**ENGINEERING STIPULATIONS:**

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.*

**BOPE REVIEW**

**Oso Oil & Gas**

**Centennial**

**43-007-31447-0000**

**INPUT**

Well Name

Oso Oil & Gas	Centennial	43-007-31447-0000
String 1	String 2	
16	9 5/8	
20	1807	
0	20	
8.4	8.4	
0	500	
1640	3520	
361	3.8 ppg	

Casing Size (")

Setting Depth (TVD)

Previous Shoe Setting Depth (TVD)

Max Mud Weight (ppg)

BOPE Proposed (psi)

Casing Internal Yield (psi)

Operators Max Anticipated Pressure (psi)

**Calculations**

**String 1 16 "**

Max BHP [psi]	$.052 * \text{Setting Depth} * \text{MW} =$	9	
			<b>BOPE Adequate For Drilling And Setting Casing at Depth?</b>
MASP (Gas) [psi]	$\text{Max BHP} - (0.12 * \text{Setting Depth}) =$	6	NO
MASP (Gas/Mud) [psi]	$\text{Max BHP} - (0.22 * \text{Setting Depth}) =$	4	NO
			<b>*Can Full Expected Pressure Be Held At Previous Shoe?</b>
Pressure At Previous Shoe	$\text{Max BHP} - .22 * (\text{Setting Depth} - \text{Previous Shoe Depth}) =$	4	NO
Required Casing/BOPE Test Pressure		20 psi	
*Max Pressure Allowed @ Previous Casing Shoe =		0 psi	*Assumes 1psi/ft frac gradient

**Calculations**

**String 2 9 5/8 "**

Max BHP [psi]	$.052 * \text{Setting Depth} * \text{MW} =$	789	
			<b>BOPE Adequate For Drilling And Setting Casing at Depth?</b>
MASP (Gas) [psi]	$\text{Max BHP} - (0.12 * \text{Setting Depth}) =$	572	NO - <i>OK - common in area (vent holes) no known pressures</i>
MASP (Gas/Mud) [psi]	$\text{Max BHP} - (0.22 * \text{Setting Depth}) =$	392	YES
			<b>*Can Full Expected Pressure Be Held At Previous Shoe?</b>
Pressure At Previous Shoe	$\text{Max BHP} - .22 * (\text{Setting Depth} - \text{Previous Shoe Depth}) =$	396	NO
Required Casing/BOPE Test Pressure		500 psi	
*Max Pressure Allowed @ Previous Casing Shoe =		20 psi	*Assumes 1psi/ft frac gradient

**From:** Robert Clark  
**To:** Mason, Diana  
**Date:** 9/15/2008 8:40 AM  
**Subject:** RDCC short turn-around comments.

**CC:** Anderson, Tad; McNeill, Dave; Wright, Carolyn  
The following comments are in response to short turn-around items **RDCC #9739 and RDCC #9743 - 9747.**

**RDCC #9739, Comments begin:** The DJ Simmons, INC proposal to drill the State 1-2 wildcat well, in San Juan 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, 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 R307-401: Permit: Notice of Intent and Approval Order, of the Utah Air Quality Rules. A copy of the rules is found at [www.rules.utah.gov/publicat/code/r307/r307.htm](http://www.rules.utah.gov/publicat/code/r307/r307.htm).

The proposed project, in San Juan County, is subject to R307-205-5: Fugitive Dust, of the Utah Air Quality Rules, 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 #9743, Comments begin:** The Questar E & P proposal to drill the FR-6P-16-14-19 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, 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 R307-401: Permit: Notice of Intent and Approval Order, of the Utah Air Quality Rules. A copy of the rules is found at [www.rules.utah.gov/publicat/code/r307/r307.htm](http://www.rules.utah.gov/publicat/code/r307/r307.htm).

The proposed project, in Uintah County, is subject to R307-205-5: Fugitive Dust, of the Utah Air Quality Rules, 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 #9744, Comments begin:** The Oso Oil & Gas Properties, LLC proposal to drill the Centennial wildcat well, in Carbon 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, 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 R307-401: Permit: Notice of Intent and Approval Order, of the Utah Air Quality Rules. A copy of the rules is found at [www.rules.utah.gov/publicat/code/r307/r307.htm](http://www.rules.utah.gov/publicat/code/r307/r307.htm).

The proposed project, in Carbon County, is subject to R307-205-5: Fugitive Dust, of the Utah Air Quality Rules, 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 #9745, Comments begin:** The Oso Oil & Gas Properties, LLC proposal to drill the P3 wildcat well, in Carbon 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, 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 R307-401: Permit: Notice of Intent and Approval Order, of the Utah Air Quality Rules. A copy of the rules is found at [www.rules.utah.gov/publicat/code/r307/r307.htm](http://www.rules.utah.gov/publicat/code/r307/r307.htm).

The proposed project, in Carbon County, is subject to R307-205-5: Fugitive Dust, of the Utah Air Quality Rules, 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 #9746, Comments begin:** The Oso Oil & Gas Properties, LLC proposal to drill the P4 wildcat well, in Carbon 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, 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 R307-401: Permit: Notice of Intent and Approval Order, of the Utah Air Quality Rules. A copy of the rules is found at [www.rules.utah.gov/publicat/code/r307/r307.htm](http://www.rules.utah.gov/publicat/code/r307/r307.htm).

The proposed project, in Carbon County, is subject to R307-205-5: Fugitive Dust, of the Utah Air Quality Rules, 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 #9747, Comments begin:** The Oso Oil & Gas Properties, LLC proposal to drill the P5 wildcat well, in Carbon 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, 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 R307-401: Permit: Notice of Intent and Approval Order, of the Utah Air Quality Rules. A copy of the rules is found at [www.rules.utah.gov/publicat/code/r307/r307.htm](http://www.rules.utah.gov/publicat/code/r307/r307.htm).

The proposed project, in Carbon County, is subject to R307-205-5: Fugitive Dust, of the Utah Air Quality Rules, 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  
801-536-4435



JON M. HUNTSMAN, JR.  
Governor

GARY R. HERBERT  
Lieutenant Governor

# State of Utah

## DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER  
Executive Director

### Division of Oil Gas and Mining

JOHN R. BAZA  
Division Director

October 21, 2008

OSO Oil & Gas Properties, LLC  
3900 S Wadsworth Blvd.  
Lakewood, CO 80235

Re: Centennial Well, 283' FSL, 1470' FWL, NW SW, Sec. 31, T. 12 South, R. 11 East,  
Bottom Location 1479' FNL, 1296' FWL, SW NW, Sec. 6, T. 13 South, R. 11 East,  
Carbon County, Utah

Gentlemen:

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

This approval shall expire one year from the above date unless substantial and continuous operation is underway, or a request for extension is made prior to the expiration date. The API identification number assigned to this well is 43-007-31447.

Sincerely,

Gil Hunt  
Associate Director

pab  
Enclosures

cc: Carbon County Assessor

Operator: OSO Oil & Gas Properties, LLC

Well Name & Number Centennial

API Number: 43-007-31447

Lease: UT-OSO-001

Location: NW SW Sec. 31 T. 12 South R. 11 East

Bottom Location: SW NW Sec. 6 T. 13 South R. 11 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 action during drilling of this well:

- 24 hours prior to cementing or testing casing – contact Dan Jarvis
- 24 hours prior to testing blowout prevention equipment – contact Dan Jarvis
- 24 hours prior to spudding the well – contact Carol Daniels
- Within 24 hours of any emergency changes made to the approved drilling program – contact Dustin Doucet
- Prior to commencing operations to plug and abandon the well – contact Dan Jarvis

The operator is required to get approval from the Division of Oil, Gas and Mining before performing any of the following actions during the drilling of this well:

- Plugging and abandonment or significant plug back of this well – contact Dustin Doucet
- Any changes to the approved drilling plan – contact Dustin Doucet

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

- Dan Jarvis at: (801) 538-5338 office (801) 942-0871 home
- Carol Daniels at: (801) 538-5284 office
- Dustin Doucet at: (801) 538-5281 office (801) 733-0983 home

#### 3. Reporting Requirements:

All required reports, forms and submittals will be promptly filed with the Division, including but not limited to the Entity Action Form (Form 6), Report of Water Encountered During Drilling (Form 7), Weekly Progress Reports for drilling and completion operations, and Sundry Notices and Reports on Wells requesting approval of change of plans or other operational actions.

4. Compliance with the Conditions of Approval/Application for Permit to Drill outlined in the Statement of Basis. (Copy Attached)
5. 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.
6. This proposed well is located in an area for which drilling units (well spacing patterns) have not been established through an order of the Board of Oil, Gas and Mining (the "Board"). In order to avoid the possibility of waste or injury to correlative rights, the operator is requested, once the well has been drilled, completed, and has produced, to analyze geological and engineering data generated therefrom, as well as any similar data from surrounding areas if available. As soon as is practicable after completion of its analysis, and if the analysis suggests an area larger than the quarter-quarter section upon which the well is located is being drained, the operator is requested to seek an appropriate order from the Board establishing drilling and spacing units in conformance with such analysis by filing a Request for Agency Action with the Board.
7. The cement volumes for 9 5/8" casing shall be determined from actual hole conditions and the setting depth of the casing in order to place cement from the pipe setting depth back to the surface.
8. The Application for Permit to Drill has been forwarded to the Resource Development Coordinating Committee for review of this action. You will be required to comply with any applicable recommendations resulting from this review.

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

FORM 9

**SUNDRY NOTICES AND REPORTS ON WELLS**

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

<b>1. TYPE OF WELL</b> OIL WELL <input type="checkbox"/> GAS WELL <input checked="" type="checkbox"/> OTHER _____		5. LEASE DESIGNATION AND SERIAL NUMBER: UT-OSO-001
<b>2. NAME OF OPERATOR:</b> Oso Oil & Gas Properties, LLC		6. IF INDIAN, ALLOTTEE OR TRIBE NAME: N/A
<b>3. ADDRESS OF OPERATOR:</b> 3900 S Wadsworth Blvd, Ste _____ CITY Lakewood STATE CO ZIP 80235		7. UNIT or CA AGREEMENT NAME: N/A
PHONE NUMBER: (303) 979-6023		8. WELL NAME and NUMBER: Centennial
<b>4. LOCATION OF WELL</b> FOOTAGES AT SURFACE: 283' FSL 1470' FWL / 522763x 4397139y / 39.725717 -110.734394		9. API NUMBER: 4300731447
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: <u>NESW</u> 31 12S 11E S		10. FIELD AND POOL, OR WILDCAT: Wildcat
COUNTY: Carbon		STATE: UTAH

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

TYPE OF SUBMISSION	TYPE OF ACTION		
<input checked="" type="checkbox"/> <b>NOTICE OF INTENT</b> (Submit in Duplicate)  Approximate date work will start: <u>8/15/2010</u>  <input type="checkbox"/> <b>SUBSEQUENT REPORT</b> (Submit Original Form Only)  Date of work completion: _____	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> REPERFORATE CURRENT FORMATION
	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> SIDETRACK TO REPAIR WELL
	<input type="checkbox"/> CASING REPAIR	<input type="checkbox"/> NEW CONSTRUCTION	<input type="checkbox"/> TEMPORARILY ABANDON
	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> TUBING REPAIR
	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> VENT OR FLARE
	<input type="checkbox"/> CHANGE WELL NAME	<input type="checkbox"/> PLUG BACK	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> PRODUCTION (START/RESUME)	<input type="checkbox"/> WATER SHUT-OFF
	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input checked="" type="checkbox"/> OTHER: <u>APD Extension</u>
	<input type="checkbox"/> CONVERT WELL TYPE	<input type="checkbox"/> RECOMPLETE - DIFFERENT FORMATION	

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

Extend the expiration date of this permit to October 26, 2010, which is one year from its original expiration date.

Approved by the  
Utah Division of  
Oil, Gas and Mining

**COPY SENT TO OPERATOR**

Date: 11.12.2009

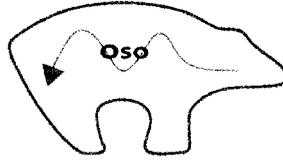
Initials: KS

Date: 11-12-09  
By: [Signature]

NAME (PLEASE PRINT) <u>Mike Griffis</u>	TITLE <u>Project Engineer</u>
SIGNATURE <u>[Signature]</u>	DATE <u>11/3/2009</u>

(This space for State use only)

**RECEIVED**  
**NOV 09 2009**  
**DIV. OF OIL, GAS & MINING**



To: Diana Mason  
Utah Division of Oil, Gas, and Mining  
1594 West North Temple, Suite 1210  
Box 145801  
Salt Lake City, UT 84114-5801

From: Mike Griffis  
Oso Oil & Gas Properties, LLC  
3900 S Wadsworth Blvd, Suite 340  
Lakewood, CO 80235

Re: APD Extension Request

---

Diana,

Business development plans at Oso have changed over the past year, which has delayed our drilling program. Oso Oil & Gas Properties, LLC is hereby requesting a one-year extension on our existing APD for the Centennial well in Carbon County, Utah. Any assistance or guidance that you could provide regarding this matter will be greatly appreciated. Please find the enclosed Forms 9 (two copies) and Extension Validation forms.

API#: 43-007-31447  
SHL: 283' FSL & 1470' FWL Sec 31 T12S R11E SLB&M

Thank you for your time and consideration.

Sincerely,

Mike Griffis  
Project Engineer  
Oso Oil & Gas Properties, LLC  
720-407-8488

Enclosures: UDOGM Form 9 (2), Application for Permit to Drill Request for Permit Extension Validation

CC: Mike Cerelli, Denver File

**RECEIVED**

**NOV 09 2009**

**DIV. OF OIL, GAS & MINING**

---

3900 S Wadsworth Blvd, Suite 340  
Lakewood, CO 80235

Ph: 303-979-6023  
Fax: 303-932-8409



GARY R. HERBERT  
Governor

GREGORY S. BELL  
Lieutenant Governor

# State of Utah

DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER  
*Executive Director*

Division of Oil, Gas and Mining

JOHN R. BAZA  
*Division Director*

November 3, 2010

CJ Pomeroy  
OSO Oil & Gas Properties, LLC  
9787 Cypress Point Circle  
Lone Tree, CO 80124

Re: APD Rescinded – Centennial, Sec.31, T.12S, R.11E  
Carbon County, Utah API No. 43-007-31447

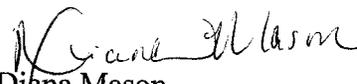
Dear Mr. Pomeroy:

The Application for Permit to Drill (APD) for the subject well was approved by the Division of Oil, Gas and Mining (Division) on October 21, 2008. On November 12, 2009, the Division granted a one-year APD extension. On November 2, 2010 you requested that the division rescind the state approved APD. No drilling activity at this location has been reported to the division. Therefore, approval to drill the well is hereby rescinded, effective November 2, 2010.

A new APD must be filed with this office for approval prior to the commencement of any future work on the subject location.

If any previously unreported operations have been performed on this well location, it is imperative that you notify the Division immediately.

Sincerely,

  
Diana Mason  
Environmental Scientist

cc: Well File  
Brad Hill, Technical Service Manager