

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

FORM 3

AMENDED REPORT

APPLICATION FOR PERMIT TO DRILL						1. WELL NAME and NUMBER NBU 746-31E	
2. TYPE OF WORK DRILL NEW WELL <input checked="" type="checkbox"/> REENTER P&A WELL <input type="checkbox"/> DEEPEN WELL <input type="checkbox"/>						3. FIELD OR WILDCAT NATURAL BUTTES	
4. TYPE OF WELL Gas Well Coalbed Methane Well: NO						5. UNIT or COMMUNITIZATION AGREEMENT NAME NATURAL BUTTES	
6. NAME OF OPERATOR EOG Resources, Inc.						7. OPERATOR PHONE 435 781-9111	
8. ADDRESS OF OPERATOR 1060 East Highway 40, Vernal, UT, 84078						9. OPERATOR E-MAIL kaylene_gardner@eogresources.com	
10. MINERAL LEASE NUMBER (FEDERAL, INDIAN, OR STATE) UTU01480ST			11. MINERAL OWNERSHIP FEDERAL <input type="checkbox"/> INDIAN <input type="checkbox"/> STATE <input checked="" type="checkbox"/> FEE <input type="checkbox"/>			12. SURFACE OWNERSHIP FEDERAL <input type="checkbox"/> INDIAN <input type="checkbox"/> STATE <input checked="" type="checkbox"/> FEE <input type="checkbox"/>	
13. NAME OF SURFACE OWNER (if box 12 = 'fee')						14. SURFACE OWNER PHONE (if box 12 = 'fee')	
15. ADDRESS OF SURFACE OWNER (if box 12 = 'fee')						16. SURFACE OWNER E-MAIL (if box 12 = 'fee')	
17. INDIAN ALLOTTEE OR TRIBE NAME (if box 12 = 'INDIAN')			18. INTEND TO COMMINGLE PRODUCTION FROM MULTIPLE FORMATIONS YES <input type="checkbox"/> (Submit Commingling Application) NO <input checked="" type="checkbox"/>			19. SLANT VERTICAL <input checked="" type="checkbox"/> DIRECTIONAL <input type="checkbox"/> HORIZONTAL <input type="checkbox"/>	
20. LOCATION OF WELL	FOOTAGES	QTR-QTR	SECTION	TOWNSHIP	RANGE	MERIDIAN	
LOCATION AT SURFACE	1846 FSL 2107 FEL	NWSE	31	9.0 S	21.0 E	S	
Top of Uppermost Producing Zone	1846 FSL 2107 FEL	NWSE	31	9.0 S	21.0 E	S	
At Total Depth	1846 FSL 2107 FEL	NWSE	31	9.0 S	21.0 E	S	
21. COUNTY UINTAH			22. DISTANCE TO NEAREST LEASE LINE (Feet) 189			23. NUMBER OF ACRES IN DRILLING UNIT 120	
			25. DISTANCE TO NEAREST WELL IN SAME POOL (Applied For Drilling or Completed) 950			26. PROPOSED DEPTH MD: 6949 TVD: 6949	
27. ELEVATION - GROUND LEVEL 4927			28. BOND NUMBER 6196017			29. SOURCE OF DRILLING WATER / WATER RIGHTS APPROVAL NUMBER IF APPLICABLE 49-225	
ATTACHMENTS							
VERIFY THE FOLLOWING ARE ATTACHED IN ACCORDANCE WITH THE UTAH OIL AND GAS CONSERVATION GENERAL RULES							
<input checked="" type="checkbox"/> WELL PLAT OR MAP PREPARED BY LICENSED SURVEYOR OR ENGINEER				<input checked="" type="checkbox"/> COMPLETE DRILLING PLAN			
<input type="checkbox"/> AFFIDAVIT OF STATUS OF SURFACE OWNER AGREEMENT (IF FEE SURFACE)				<input type="checkbox"/> FORM 5. IF OPERATOR IS OTHER THAN THE LEASE OWNER			
<input type="checkbox"/> DIRECTIONAL SURVEY PLAN (IF DIRECTIONALLY OR HORIZONTALLY DRILLED)				<input checked="" type="checkbox"/> TOPOGRAPHICAL MAP			
NAME Kaylene Gardner			TITLE Regulatory Administrator			PHONE 435 781-9111	
SIGNATURE			DATE 11/25/2008			EMAIL kaylene_gardner@eogresources.com	
API NUMBER ASSIGNED 43047500900000			APPROVAL  Permit Manager				

Proposed Hole, Casing, and Cement						
String	Hole Size	Casing Size	Top (MD)	Bottom (MD)		
Cond	17.5	13.375	0	60		
Pipe	Grade	Length	Weight			
	Grade H-40 ST&C	60	48.0			
	Cement Interval	Top (MD)	Bottom (MD)			
		0	60			
		Cement Description	Class	Sacks	Yield	Weight
			Class G Cement	0	0.0	0.0

Proposed Hole, Casing, and Cement						
String	Hole Size	Casing Size	Top (MD)	Bottom (MD)		
Surf	12.25	9.875	0	2300		
Pipe	Grade	Length	Weight			
	Grade J-55 ST&C	2300	36.0			
	Cement Interval	Top (MD)	Bottom (MD)			
		0	2300			
		Cement Description	Class	Sacks	Yield	Weight
			Class G Cement	185	3.82	11.0

Proposed Hole, Casing, and Cement						
String	Hole Size	Casing Size	Top (MD)	Bottom (MD)		
Prod	7.875	4.5	0	6949		
Pipe	Grade	Length	Weight			
	Grade N-80 LT&C	6949	11.6			
	Cement Interval	Top (MD)	Bottom (MD)			
		2300	6949			
		Cement Description	Class	Sacks	Yield	Weight
			Hi Lift "G"	144	3.91	11.0
			50/50 Poz	445	1.28	14.1

EIGHT POINT PLAN

NATURAL BUTTES UNIT 746-31E
NW/SE, SEC. 31, T9S, R21E, S.L.B.&M..
UINTAH COUNTY, UTAH

1. & 2. ESTIMATED TOPS & ANTICIPATED OIL, GAS, & WATER ZONES:

FORMATION	TVD-RKB (ft)	Objective	Lithology	
Green River	1,572		Shale	
Mahogany Oil Shale Bed	2,293		Shale	
Wasatch	4,884	Primary	Sandstone	Gas
Chapita Wells	5,534	Primary	Sandstone	Gas
Buck Canyon	6,228	Primary	Sandstone	Gas
North Horn	6,822	Primary	Sandstone	Gas
TD	6,949			

Estimated TD: **6,949' or 200'± below TD** **Anticipated BHP: 3,794 Psig**

- Fresh Waters may exist in the upper, approximately 1,000 ft ± of the Green River Formation, with top at about 2,000 ft ±.
- Cement isolation is installed to surface of the well isolating all zones by cement.

3. PRESSURE CONTROL EQUIPMENT: Production Hole – 5000 Psig
 BOP schematic diagrams attached.

4. CASING PROGRAM:

CASING	Hole Size	Length	Size	WEIGHT	Grade	Thread	Rating Collapse	Factor Burst	Tensile
Conductor	17 ½"	0 – 60'	13 ¾"	48.0#	H-40	STC	770 PSI	1730 PSI	322,000#
Surface	12 ¼"	0' – 2,300'	9-5/8"	36.0#	J-55	STC	2020 PSI	3520 Psi	394,000#
Production	7-7/8"	Surface – TD	4-½"	11.6#	N-80	LTC	6350 PSI	7780 Psi	233,000#

Note: 12-¼" surface hole will be drilled to a total depth of 200'± below the base of the Green River lost circulation zone and cased w/9-5/8" as shown to that depth. Drilled depth may be shallower or deeper than the 2300' shown above depending on the actual depth of the loss zone.

All casing will be new or inspected.

EIGHT POINT PLAN

NATURAL BUTTES UNIT 746-31E
NW/SE, SEC. 31, T9S, R21E, S.L.B.&M..
UINTAH COUNTY, UTAH

5. Float Equipment:

Surface Hole Procedure (0' - 2300'±)

Guide Shoe

Insert Float Collar (PDC drillable)

Centralizers: 1-5' above shoe, top of jts. #2 and #3 then every 5th joint to surface. (15 total)

Production Hole Procedure (2300'± - TD):

Float shoe, 1 joint casing, float collar and balance of casing to surface. 4-1/2", 11.6#, N-80 or equivalent marker collars or short casing joints to be placed at top of Price River and 400' above top of Wasatch. Centralizers to be placed 5' above shoe on joint #1, top of joint #2, and every 2nd joint to 400' above Wasatch Island top. Thread lock float shoe, top and bottom of float collar, and top of 2nd joint.

6. MUD PROGRAM

Surface Hole Procedure (Surface - 2300'±):

Air/air mist or aerated water.

Production Hole Procedure (2300'± - TD): Anticipated mud weight 9.5 – 10.5 ppg depending on actual wellbore conditions encountered while drilling.

2300'± - TD A closed mud system will be utilized. A bentonite gelled water mud system will be used to control viscosity w/PHPA polymer used for supplemental viscosity and clay encapsulation/inhibition. Water loss will be maintained at <15cc's using white starch or PAC. Bactericides will be used as needed. Anticipated pH will range from 9.0-10.0. Mud weight will be adjusted as necessary for well control. Deflocculants/thinners will be used as necessary to maintain mud quality. LCM sweeps will be utilized as necessary to control lost circulation and mud loss. CO2 contamination, if encountered, will be treated with lime and gypsum.

EIGHT POINT PLAN

NATURAL BUTTES UNIT 746-31E
NW/SE, SEC. 31, T9S, R21E, S.L.B.&M..
UINTAH COUNTY, UTAH

1. VARIANCE REQUESTS:

Reference: Onshore Oil and Gas Order No. 1
Onshore Oil and Gas Order No. 2 – Section E: Special Drilling Operations

- EOG Resources, Inc. requests a variance to regulations requiring a straight run blooie line to be 100' in length. (Where possible, a straight run blooie line will be used).
- EOG Resources, Inc. requests a variance to regulations requiring the blooie line to be 100' in length. To reduce location excavation, the blooie line will be approximately 75' in length.
- EOG Resources, Inc. requests a variance to regulations, during air drilling operations only, requiring dedusting equipment. Dust during air drilling operations is controlled by water mist.
- EOG Resources, Inc. requests a variance to regulations, during air drilling operations only, requiring an automatic igniter or continuous pilot light on the blooie line. (Not required on aerated water system).
- EOG Resources, Inc. requests a variance that compressors are located in the opposite direction from the blooie line a minimum of 100 feet from the well bore. (Air Compressors are rig mounted).

8. EVALUATION PROGRAM:

Logs: Mud log from base of surface casing to TD.
Cased-hole Logs: Cased-hole logs will be run in lieu of open-hole logs consisting of the following:
Cement Bond / Casing Collar Locator and Pulsed Neutron

EIGHT POINT PLAN

NATURAL BUTTES UNIT 746-31E
NW/SE, SEC. 31, T9S, R21E, S.L.B.&M..
UINTAH COUNTY, UTAH

9. CEMENT PROGRAM:

Surface Hole Procedure (Surface - 2300'±):

Lead: 185 sks Class "G" cement with 16% Gel, 10 #/sx Gilsonite, 3% Salt, 2% CaCl₂, 3 lb/sx GR3 ¼ #/sx Flocele mixed at 11 ppg, 3.82 ft³/sk. yield, 23 gps water.

Tail: 207 sks Class "G" cement with 2% CaCl₂, ¼#/sk Flocele mixed at 15.6 ppg, 1.18 ft³/sk., 5.2 gps water.

Top Out: As necessary with Class "G" cement with 2% CaCl₂, ¼#/sk Flocele mixed at 15.6 ppg, 1.18 ft³/sk., 5.2 gps water.

Note: Cement volumes will be calculated to bring lead cement to surface and tail cement to 500' above the casing shoe.

Production Hole Procedure (2300'± - TD)

Lead: 144 sks: Hi-Lift "G" w/12% D20 (Bentonite), 1% D79 (Extender), 5% D44 (Salt), 0.2% D46 (Antifoam), 0.25% D112 (Fluid Loss Additive), 0.25 pps D29 (cello flakes) mixed at 11.0 ppg, 3.91 ft³/sk., 24.5 gps water.

Tail: 445 sks: 50:50 Poz "G" w/ 2% D20 (Bentonite), 0.1% D46 (Antifoam), 0.075% D13 (Retarder), 0.2% D167 (Fluid Loss Additive), 0.2% D65 (Dispersant), mixed at 14.1 ppg, 1.28 ft³/sk., 5.9gps water.

Note: The above number of sacks is based on gauge-hole calculation.
Lead volume to be calculated to bring cement to 200'± above 9-5/8" casing shoe.
Tail volume to be calculated to bring cement to 400'± above top of Wasatch.

Final Cement volumes will be based upon gauge-hole plus 45% excess.

10. ABNORMAL CONDITIONS:

Surface Hole (Surface - 2300'±):

Lost circulation

Production Hole (2300'± - TD):

Sloughing shales, lost circulation and key seat development are possible in the Wasatch Formation.

EIGHT POINT PLAN

NATURAL BUTTES UNIT 746-31E
NW/SE, SEC. 31, T9S, R21E, S.L.B.&M..
UINTAH COUNTY, UTAH

11. STANDARD REQUIRED EQUIPMENT:

- A. Choke Manifold
- B. Upper and Lower Kelly Cock
- C. Stabbing Valve
- D. Visual Mud Monitoring

12. HAZARDOUS CHEMICALS:

No chemicals subject to reporting under SARA title III in an amount equal to or greater than 10,000 pounds will be used, produced, stored, transported, or disposed of annually in association with the drilling 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 of this well.

13. Air Drilling Operations:

- 1. Main Air Compressors are 1250 CFM 350 psi with 2000 psi Boosters and are rig mounted.
- 2. Secondary Air Compressors are 1170 CFM 350 psi with 2000 psi Boosters and are rig mounted.
- 3. Minimum setting depth of conductor casing will be 60' GL or 10'± into competent formation, whichever is deeper, as determined by the EOG person in charge. Exceptions must be approved by an EOG drilling superintendent or manager.
- 4. The diameter of the diverter flow line will be a minimum of 10" to help reduce back pressure on the well bore during uncontrolled flow.
- 5. Rat and Mouse hole drilling will occur only after surface casing has been set and cemented.
- 6. EOG Resources, Inc. will use a properly maintained and lubricated stripper head.

(Attachment: BOP Schematic Diagram)

EOG RESOURCES, INC.

Well location, NBU #746-31E, located as shown in the NW 1/4 SE 1/4 of Section 31, T9S, R21E, S.L.B.&M., Uintah County, Utah.

T9S, R21E, S.L.B.&M.

BASIS OF ELEVATION

TWO WATER TRIANGULATION STATION LOCATED IN THE NW 1/4 OF SECTION 1, T10S, R21E, S.L.B.&M. TAKEN FROM THE BIG PACK MTN NE, QUADRANGLE, UTAH, UINTAH COUNTY, 7.5 MINUTE QUAD. (TOPOGRAPHIC MAP) PUBLISHED BY THE UNITED STATES DEPARTMENT OF THE INTERIOR, GEOLOGICAL SURVEY. SAID ELEVATION IS MARKED AS BEING 5238 FEET.

BASIS OF BEARINGS

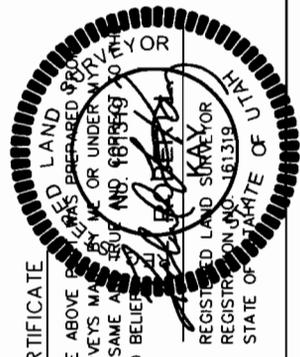
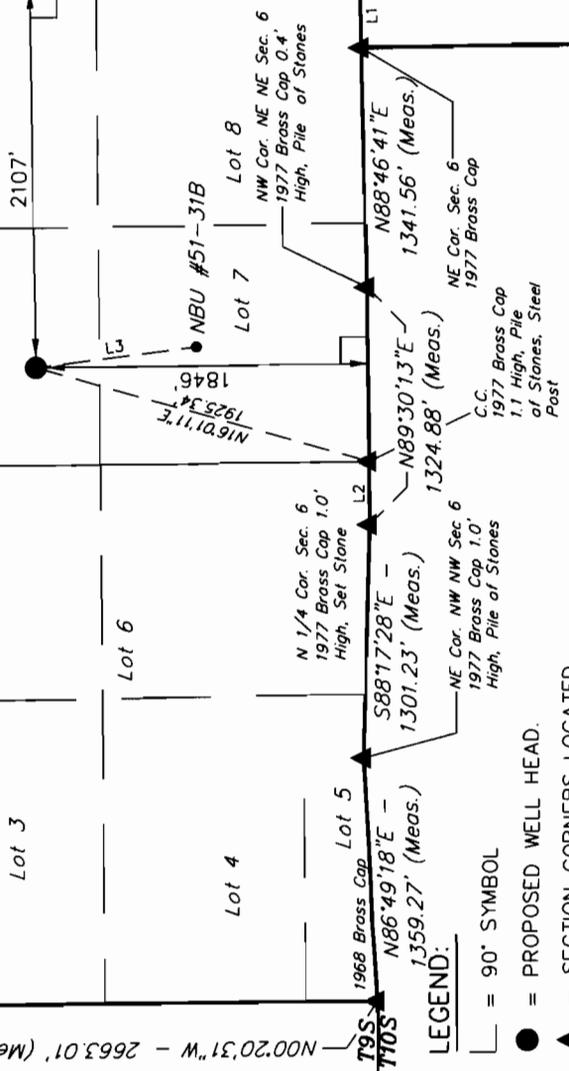
BASIS OF BEARINGS IS A G.P.S. OBSERVATION.



LINE TABLE		
LINE	BEARING	LENGTH
L1	S89°08'58"W	350.09'
L2	N89°34'32"E	353.31'
L3	S07°12'24"E	901.27'

(NAD 83)
 LATITUDE = 39°59'21.77" (39.989381)
 LONGITUDE = 109°35'32.13" (109.592258)
 (NAD 27)
 LATITUDE = 39°59'21.90" (39.989417)
 LONGITUDE = 109°35'29.65" (109.591569)

NBU #746-31E
 Elev. Ungraded Ground = 4927'



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

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 REGISTERED LAND SURVEYOR
 REGISTRATION NO. 161319
 STATE OF UTAH

C.C. 1977 Brass Cap 1.2 High, Pile of Stones

SCALE 1" = 1000'

DATE SURVEYED: 03-24-08 DATE DRAWN: 03-31-08

PARTY D.S. E.D. C.C. REFERENCES G.L.O. PLAT

WEATHER COLD FILE EOG RESOURCES, INC.

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 85 SOUTH 200 EAST - VERNAL, UTAH 84078
 (435) 789-1017

LEGEND:
 — = 90° SYMBOL
 ● = PROPOSED WELL HEAD.
 ▲ = SECTION CORNERS LOCATED.

EOG RESOURCES, INC.

NBU #746-31E

LOCATED IN UINTAH COUNTY, UTAH

SECTION 31, T9S, R21E, S.L.B.&M.



PHOTO: VIEW FROM CORNER#5 TO LOCATION STAKE

CAMERA ANGLE: NORTHEASTERLY



PHOTO: VIEW FROM BEGINNING OF PROPOSED ACCESS

CAMERA ANGLE: NORTHERLY



UELS Uintah Engineering & Land Surveying
 85 South 200 East Vernal, Utah 84078
 435-789-1017 uels@uelsinc.com

- Since 1964 -

LOCATION PHOTOS

04	02	08
MONTH	DAY	YEAR

PHOTO

TAKEN BY: D.S.

DRAWN BY: C.C.

REVISED: 00-00-00

EOG RESOURCES, INC.
NBU #746-31E
SECTION 31, T9S, R21E, S.L.B.&M.

PROCEED IN A WESTERLY DIRECTION FROM VERNAL, UTAH ALONG U.S. HIGHWAY 40 APPROXIMATELY 14.0 MILES TO THE JUNCTION OF STATE HIGHWAY 88; EXIT LEFT AND PROCEED IN A SOUTHERLY DIRECTION APPROXIMATELY 17.0 MILES TO OURAY, UTAH; PROCEED IN A SOUTHERLY DIRECTION APPROXIMATELY 6.9 MILES ON THE SEEP RIDGE ROAD TO THE JUNCTION OF THIS ROAD AND AN EXISTING ROAD TO THE EAST; TURN LEFT AND PROCEED IN AN EASTERLY DIRECTION APPROXIMATELY 3.9 MILES TO THE JUNCTION OF THIS ROAD AND AN EXISTING ROAD TO THE SOUTHEAST; TURN RIGHT AND PROCEED IN A SOUTHEASTERLY DIRECTION APPROXIMATELY 0.4 MILES; TO THE BEGINNING OF THE PROPOSED ACCESS ROAD FOR THE #748-31E TO THE EAST; FOLLOW ROAD FLAGS IN AN EASTERLY DIRECTION APPROXIMATELY 340' TO THE #748-31E AND THE BEGINNING OF THE PROPOSED ACCESS TO THE NORTHEAST; FOLLOW ROAD FLAGS IN A NORTHEASTERLY THEN NORTHERLY DIRECTION APPROXIMATELY 0.15 MILES TO THE PROPOSED LOCATION.

TOTAL DISTANCE FROM VERNAL, UTAH TO THE PROPOSED WELL LOCATION IS APPROXIMATELY 42.4 MILES.

EOG RESOURCES, INC.

Well location, NBU #746-31E, located as shown in the NW 1/4 SE 1/4 of Section 31, T9S, R21E, S.L.B.&M., Uintah County, Utah.

T9S, R21E, S.L.B.&M.

BASIS OF ELEVATION

TWO WATER TRIANGULATION STATION LOCATED IN THE NW 1/4 OF SECTION 1, T10S, R21E, S.L.B.&M. TAKEN FROM THE BIG PACK MTN NE, QUADRANGLE, UTAH, UINTAH COUNTY, 7.5 MINUTE QUAD. (TOPOGRAPHIC MAP) PUBLISHED BY THE UNITED STATES DEPARTMENT OF THE INTERIOR, GEOLOGICAL SURVEY. SAID ELEVATION IS MARKED AS BEING 5238 FEET.

BASIS OF BEARINGS

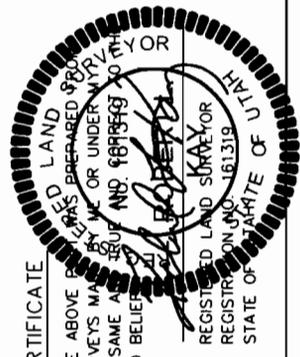
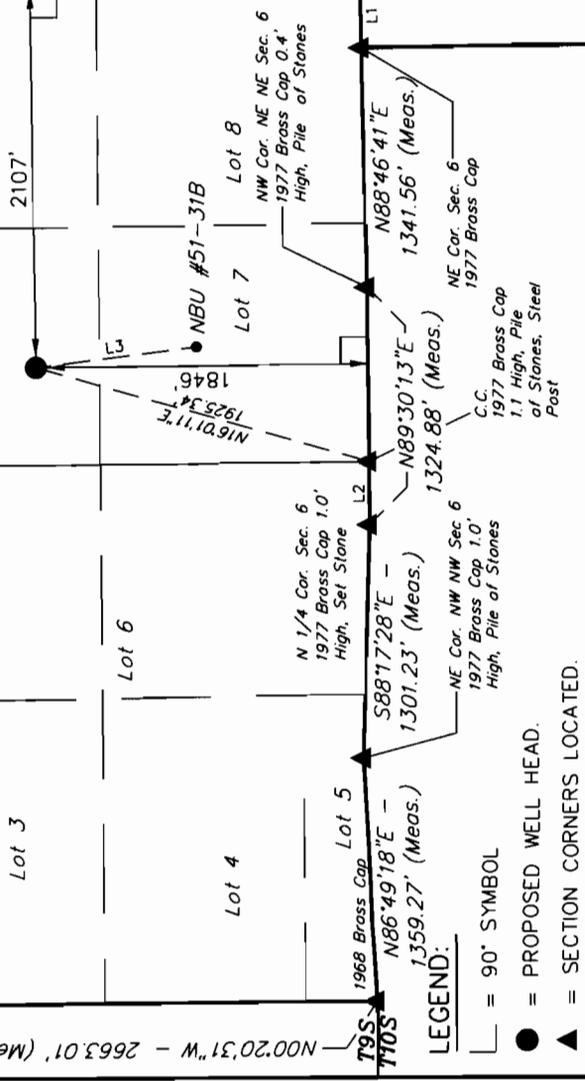
BASIS OF BEARINGS IS A G.P.S. OBSERVATION.



LINE TABLE	
LINE	BEARING
L1	S89°08'58"W
L2	N89°34'32"E
L3	S07°12'24"E
	LENGTH
	350.09'
	353.31'
	901.27'

(NAD 83)
 LATITUDE = 39°59'21.77" (39.989381)
 LONGITUDE = 109°35'32.13" (109.592258)
 (NAD 27)
 LATITUDE = 39°59'21.90" (39.989417)
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NBU #746-31E
 Elev. Ungraded Ground = 4927'



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

SCALE	1" = 1000'	DATE SURVEYED:	03-24-08	DATE DRAWN:	03-31-08
PARTY	D. S. E. D. C. C.	REFERENCES	G.L.O. PLAT		
WEATHER	COLD	FILE	EOG RESOURCES, INC.		

- LEGEND:**
- = 90° SYMBOL
 - = PROPOSED WELL HEAD.
 - ▲ = SECTION CORNERS LOCATED.

C.C. 1977 Brass Cap
 1.2 High, Pile
 of Stones

C.C. 1977 Brass Cap
 1.1 High, Pile
 of Stones, Steel
 Post

NE Cor. NW Sec. 6
 1977 Brass Cap 1.0'
 High, Pile of Stones

NE Cor. Sec. 6
 1977 Brass Cap

NW Cor. NE NE Sec. 6
 1977 Brass Cap 0.4'
 High, Pile of Stones

EOG RESOURCES, INC.

FIGURE #1

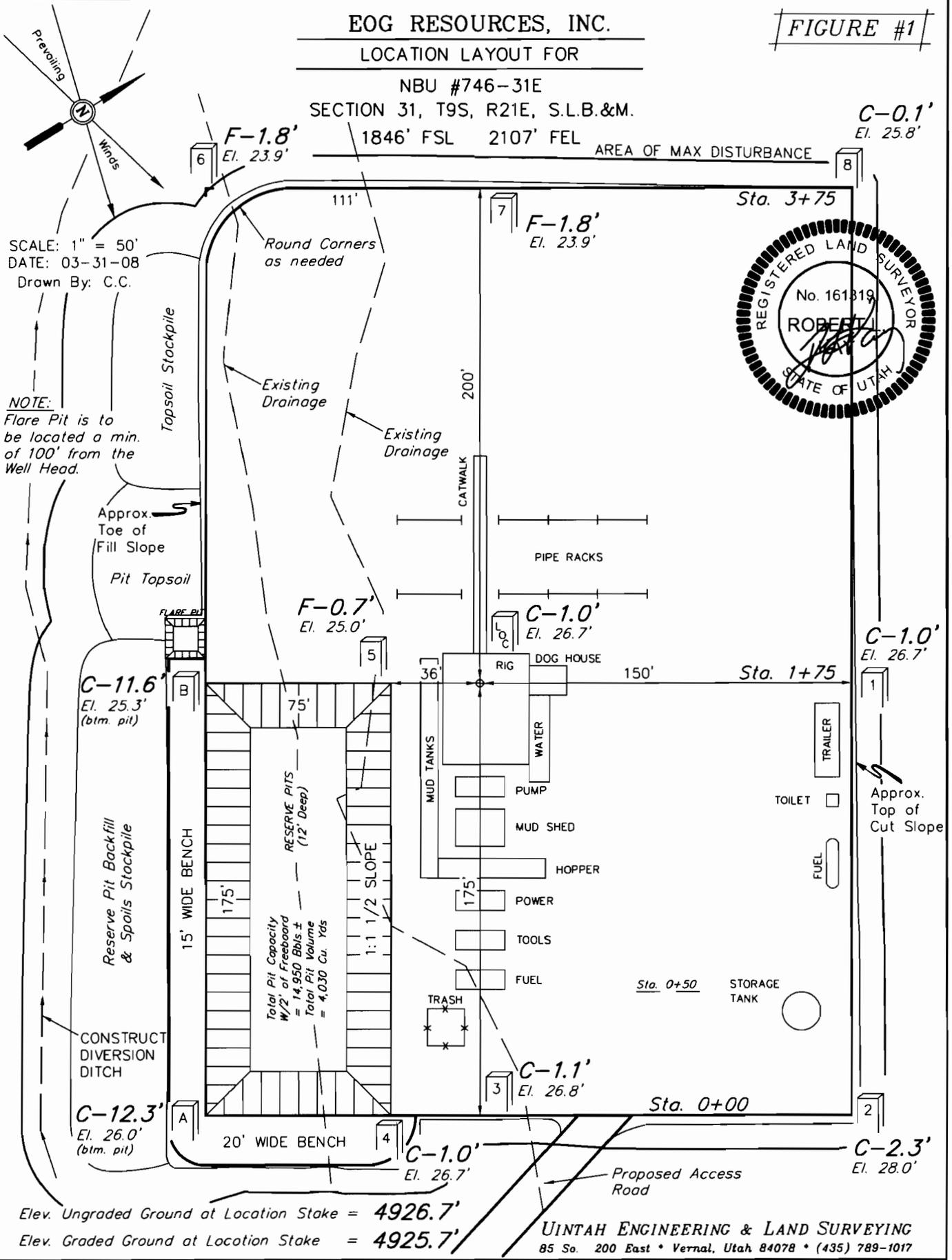
LOCATION LAYOUT FOR

NBU #746-31E
SECTION 31, T9S, R21E, S.L.B.&M.

1846' FSL 2107' FEL

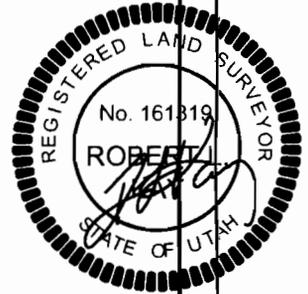
AREA OF MAX DISTURBANCE

C-0.1'
El. 25.8'



SCALE: 1" = 50'
DATE: 03-31-08
Drawn By: C.C.

NOTE:
Flare Pit is to be located a min. of 100' from the Well Head.



Elev. Ungraded Ground at Location Stake = 4926.7'
Elev. Graded Ground at Location Stake = 4925.7'

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

EOG RESOURCES, INC.

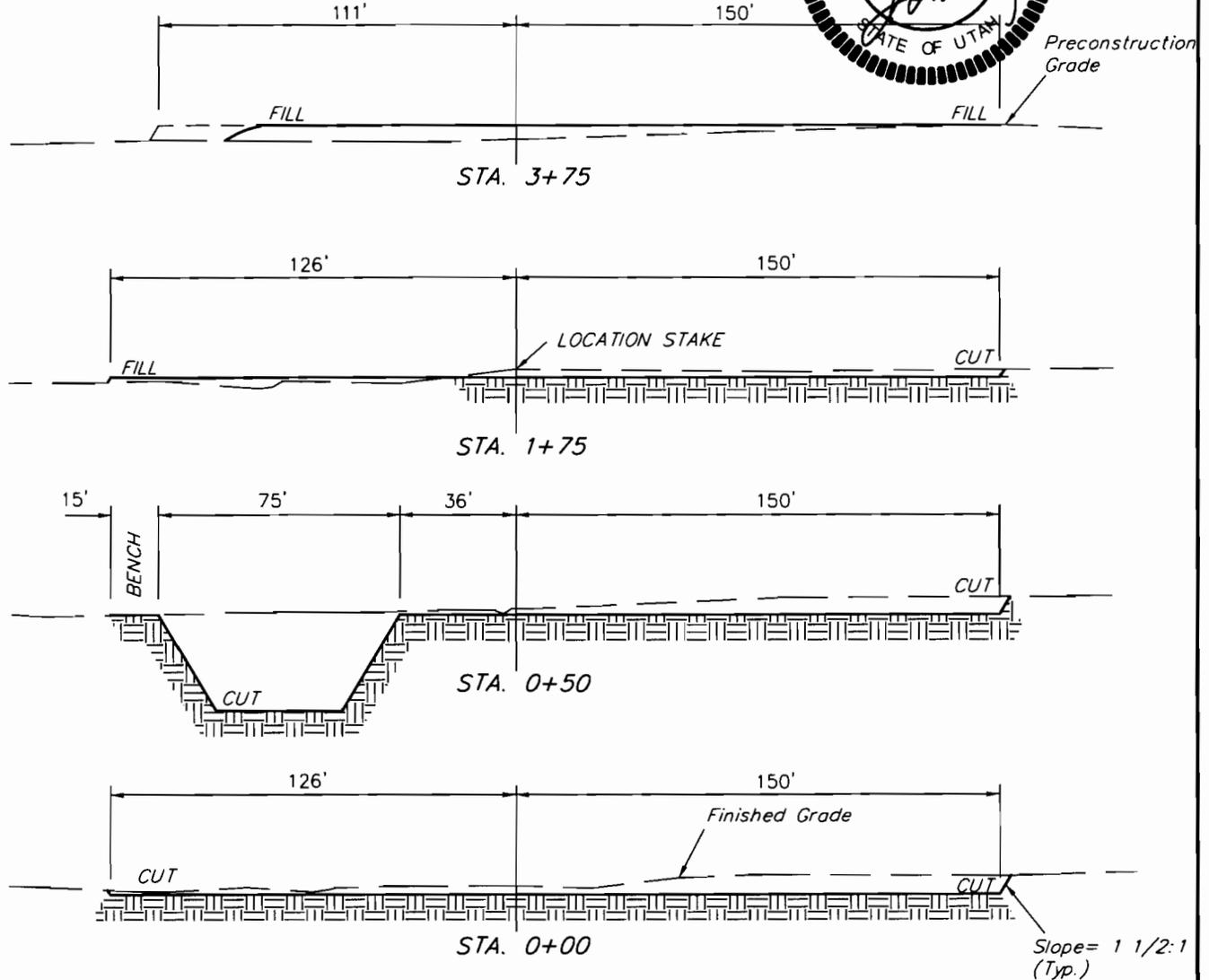
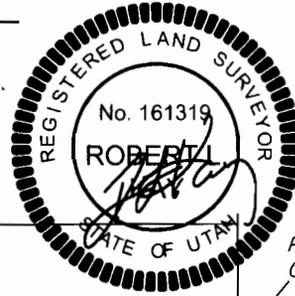
FIGURE #2

TYPICAL CROSS SECTIONS FOR

NBU #746-31E
SECTION 31, T9S, R21E, S.L.B.&M.
1846' FSL 2107' FEL

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

DATE: 03-31-08
Drawn By: C.C.



APPROXIMATE ACREAGES

NOTE:

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

WELL SITE DISTURBANCE = ± 2.722 ACRES
PIPELINE DISTURBANCE = ± 1.063 ACRES
ACCESS ROAD DISTURBANCE = ± 0.556 ACRES
TOTAL = ± 4.341 ACRES

* NOTE:

FILL QUANTITY INCLUDES 5% FOR COMPACTION

APPROXIMATE YARDAGES

(6") Topsoil Stripping = 1,980 Cu. Yds.
Remaining Location = 4,610 Cu. Yds.

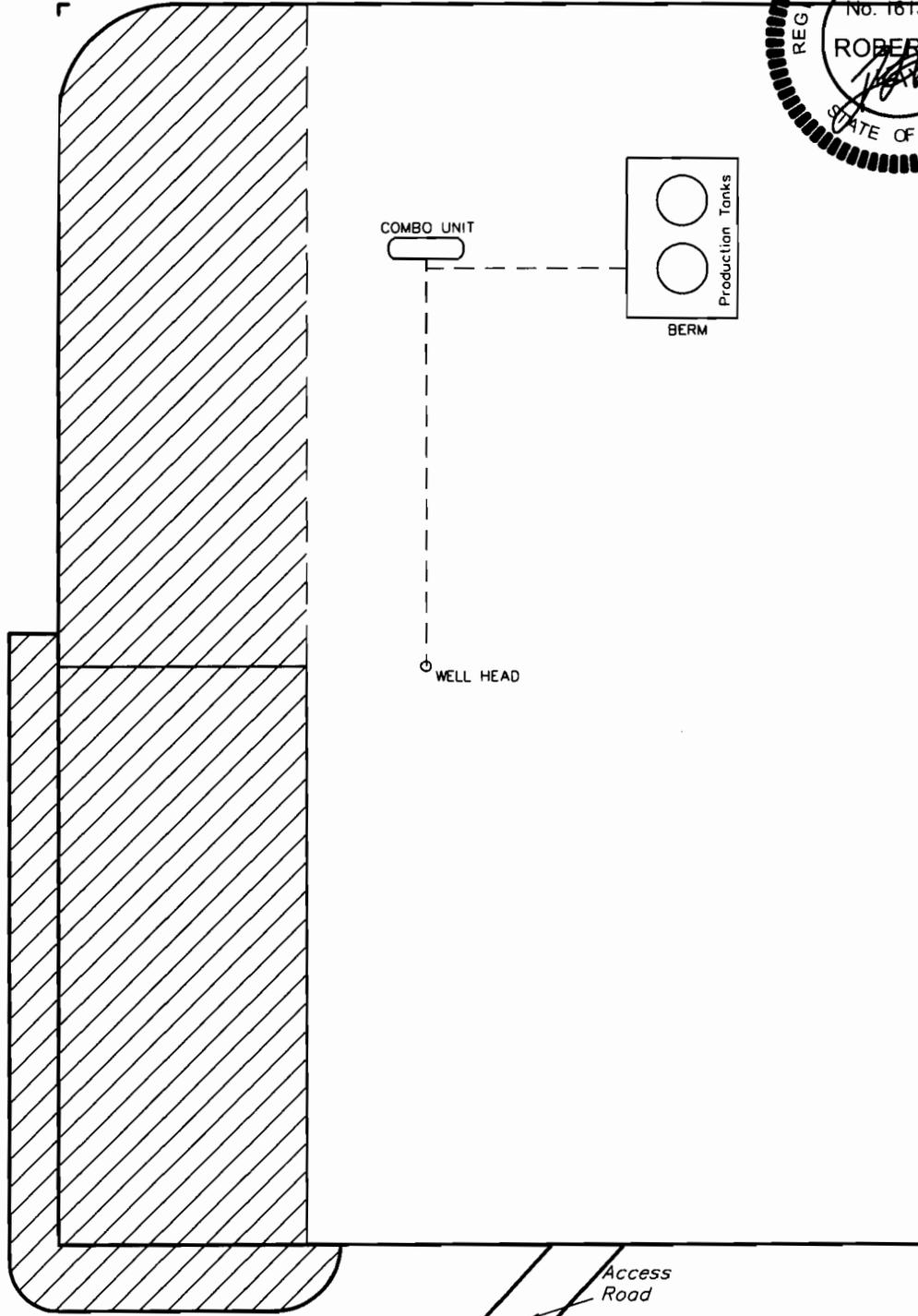
TOTAL CUT = 6,590 CU. YDS.
FILL = 2,590 CU. YDS.

EXCESS MATERIAL = 4,000 Cu. Yds.
Topsoil & Pit Backfill = 4,000 Cu. Yds.
(1/2 Pit Vol.)
EXCESS UNBALANCE = 0 Cu. Yds.
(After Interim Rehabilitation)

EOG RESOURCES, INC.
 PRODUCTION FACILITY LAYOUT FOR
 NBU #746-31E
 SECTION 31, T9S, R21E, S.L.B.&M.
 1846' FSL 2107' FEL

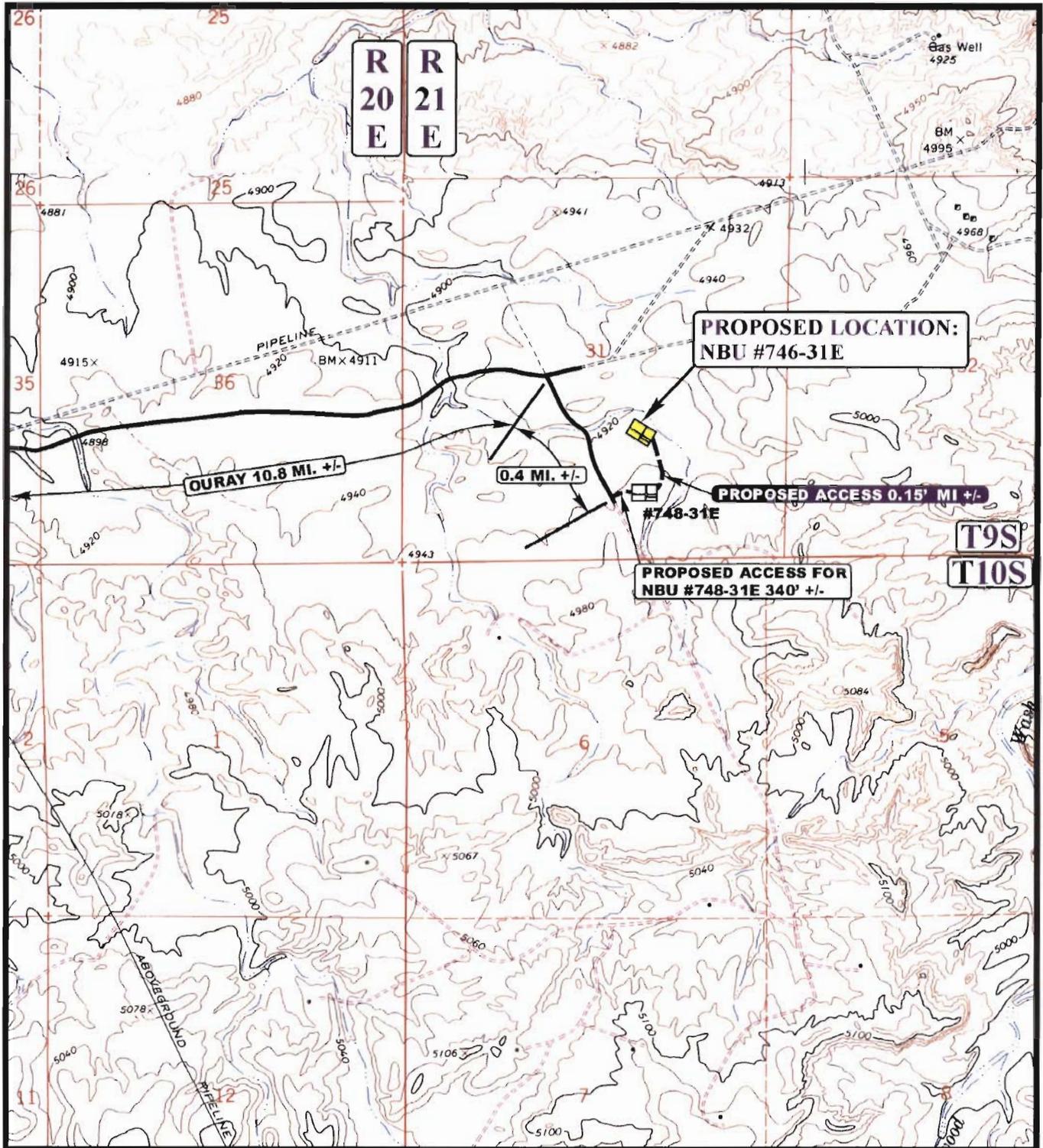
FIGURE #3

SCALE: 1" = 50'
DATE: 03-31-08
Drawn By: C.C.



 RE-HABED AREA

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



LEGEND:

-  EXISTING ROAD
-  PROPOSED ACCESS ROAD



EOG RESOURCES, INC.

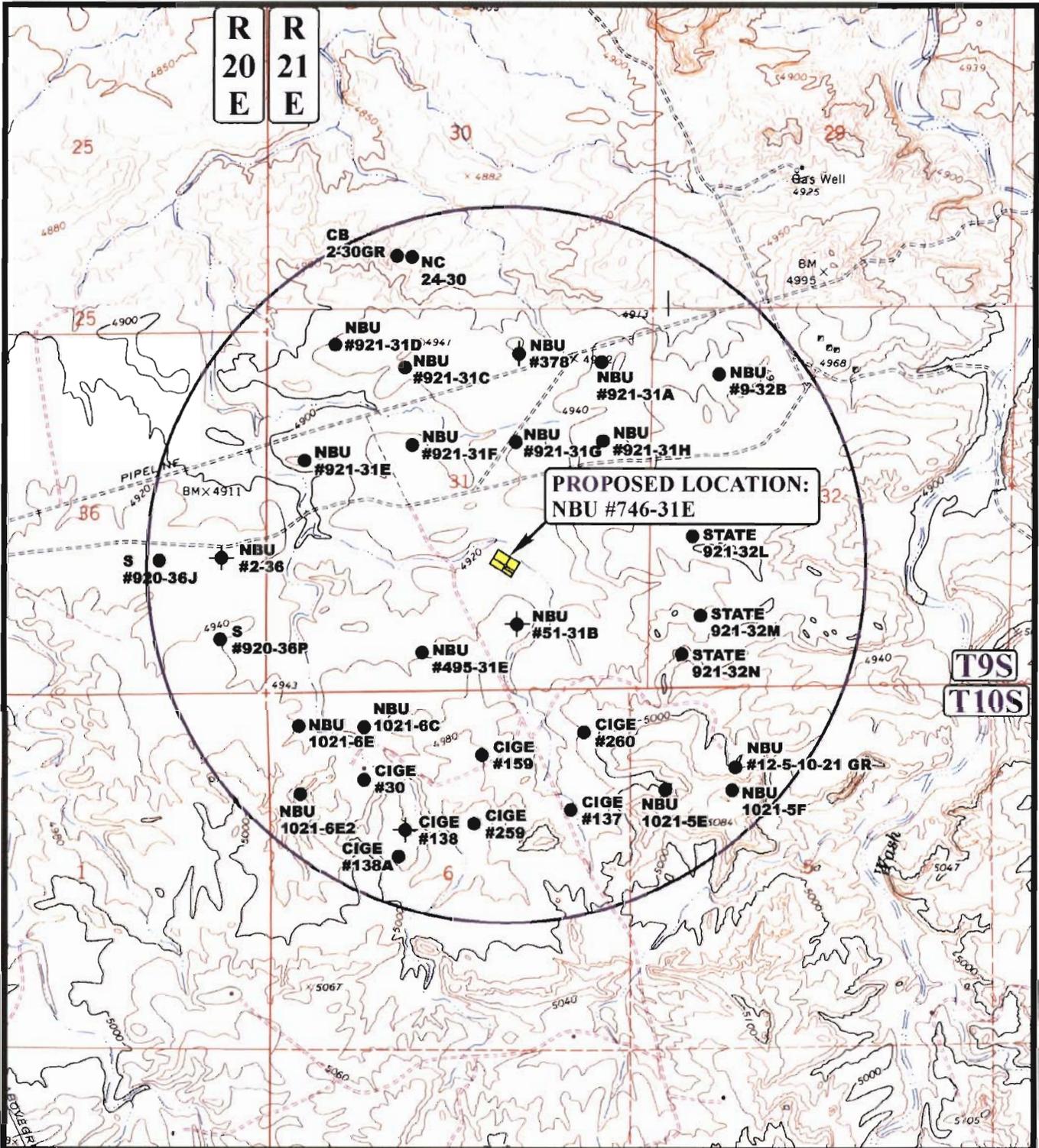
NBU #746-31E
 SECTION 31, T9S, R21E, S.L.B.&M.
 1846' FSL 2107' FEL

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

TOPOGRAPHIC MAP **04 02 08**
 MONTH DAY YEAR

SCALE: 1" = 2000' DRAWN BY: C.C. REVISED: 00-00-00

B
 TOPO



LEGEND:

- ⊗ DISPOSAL WELLS
- PRODUCING WELLS
- SHUT IN WELLS
- ⊗ WATER WELLS
- ABANDONED WELLS
- TEMPORARILY ABANDONED

EOG RESOURCES, INC.

NBU #746-31E
SECTION 31, T9S, R21E, S.L.B.&M.
1846' FSL 2107 FEL



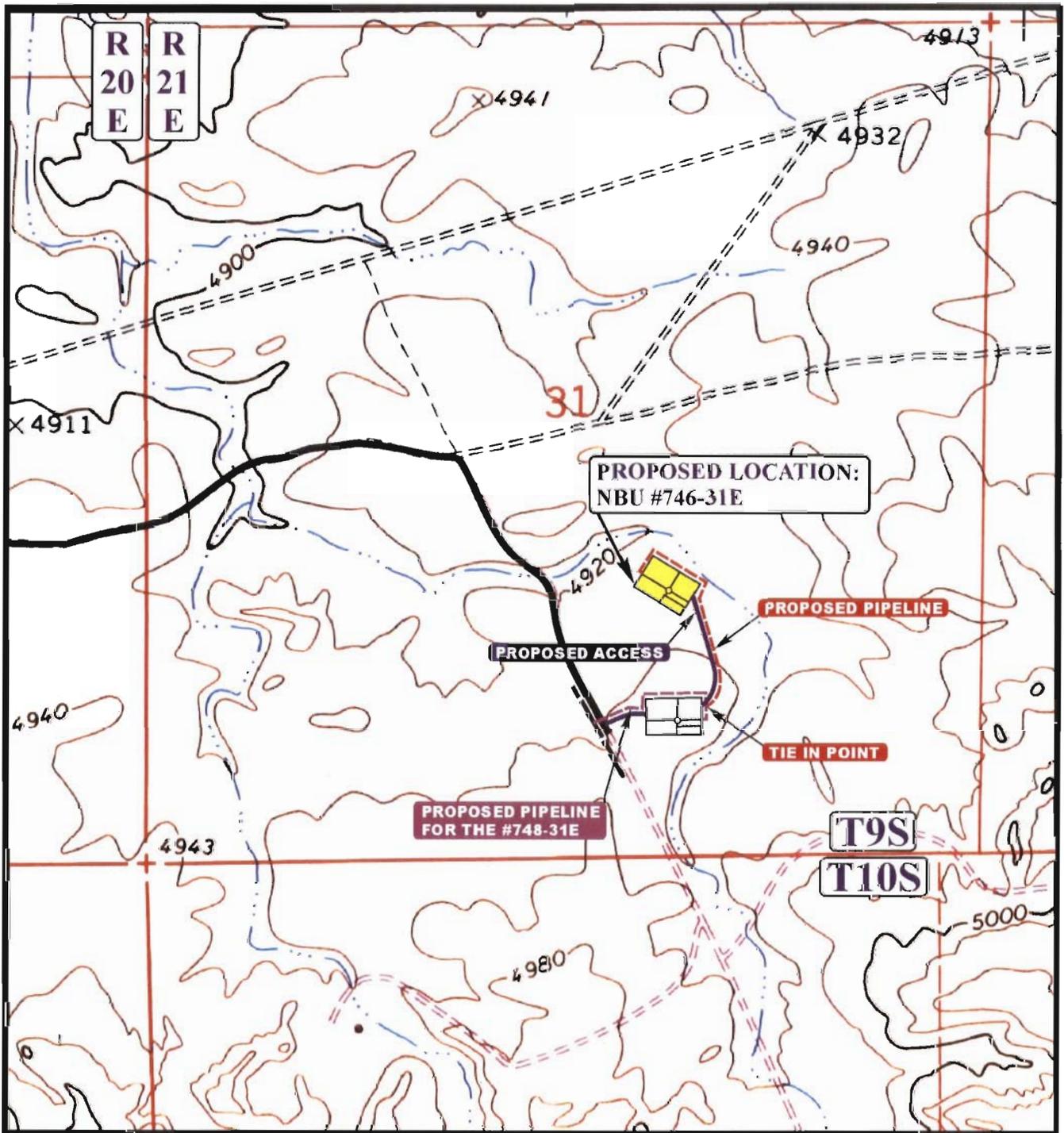
Utah Engineering & Land Surveying
85 South 200 East Vernal, Utah 84078
(435) 789-1017 * FAX (435) 789-1813



TOPOGRAPHIC MAP 04 02 08
MONTH DAY YEAR

SCALE: 1" = 2000' DRAWN BY: C.C. REVISED: 00-00-00





APPROXIMATE TOTAL PIPELINE DISTANCE = 1,544' +/-

LEGEND:

- PROPOSED ACCESS ROAD
- EXISTING PIPELINE
- PROPOSED PIPELINE
- PROPOSED PIPELINE (SERVICING OTHER WELLS)



EOG RESOURCES, INC.

NBU #746-31E
 SECTION 31, T9S, R21E, S.L.B.&M.
 1846' FSL 2107' FEL



Uintah Engineering & Land Surveying
 85 South 200 East Vernal, Utah 84078
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TOPOGRAPHIC MAP 04 02 08
 MONTH DAY YEAR
 SCALE: 1" = 1000' DRAWN BY: C.C. REVISED: 00-00-00





***Natural Buttes Unit 746-31E
NWSE, Section 31, T9S, R21E
Uintah County, Utah***

SURFACE USE PLAN

The well pad is approximately 375 feet long with a 261-foot width, containing 2.25 acres more or less. The well access road is approximately 792 feet long with a 30-foot right-of-way, disturbing approximately 0.55 acre. New surface disturbance associated with the well pad and access road is estimated to be 2.80 acres. The pipeline is approximately 1544 feet long with a 40-foot temporary right-of-way and a 8-foot permanent right-of-way disturbing approximately 0.28 acre.

1. EXISTING ROADS:

- A. See attached Plats showing directional reference stakes on location, and attached TOPO Map "B" showing access to location from existing roads.
- B. The proposed well site is located approximately 42.4 miles south of Vernal, Utah – See attached TOPO Map "A".
- C. Refer to attached Topographic Map "A" showing labeled access route to location.
- D. Existing roads will be maintained and repaired as necessary.

2. PLANNED ACCESS ROAD:

- A. The access road will be approximately 792' in length. Culvert's and low water crossings shall be installed as needed. See attached Topo B.
- B. The access road has a 30-foot ROW w/18 foot running surface.
- C. Maximum grade of the new access road will be 8 percent.
- D. No turnouts will be required.
- E. Road drainage crossings shall be of the typical dry creek drainage crossing type.
- F. No bridges, or major cuts and fills will be required.
- G. The access road will be dirt surface.
- H. No gates, cattleguards, or fences will be required or encountered.

- I. A 30-foot permanent right-of-way is requested. No surfacing material will be used.
- J. No additional storage areas will be needed for storing equipment, stockpiling, or vehicle parking.

All travel will be confined to existing access road rights-of-way.

New or reconstructed roads will be centerlined – flagged at time of location staking. Access roads and surface disturbing activities will conform to standards outlined in the Bureau of Land Management and Forest Service publication: Surface Operating Standards for Oil and Gas Exploration and Development, Fourth Edition and/or BLM Manual Section 9113 concerning road construction standards on projects subject to federal jurisdiction.

The road shall be constructed/upgraded to meet the standards of the anticipated traffic flow and all-weather road requirements. Construction/upgrading shall include ditching, draining, graveling, crowning, and capping the roadbed as necessary to provide a well-constructed, safe road. Prior to upgrading, the road shall be cleared of any snow cover and allowed to dry completely. Traveling off the 40-foot right-of-way will not be allowed. Road drainage crossings shall be of the typical dry creek drainage crossing type. Crossings shall be designed so they will not cause siltation or accumulation of debris in the drainage crossing nor shall the roadbed block the drainages. 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.

As operator, EOG Resources, Inc. shall be responsible for all maintenance on cattleguards, or gates associated with this oil and/or gas operation.

Traveling off the 30-foot right-of-way will not be allowed. The access road and associated drainage structures will be constructed and maintained in accordance with road guidelines contained in the joint BLM/USFS publication: Surface Operating Standards for Oil and Gas Exploration and Development, Fourth Edition, and/or BLM Manual Section 9113 concerning road construction standards on projects subject to federal jurisdiction. During the drilling and production phase of operations, the road surface and shoulders will be kept in a safe and useable condition and drainage ditches and culverts will be kept clear and free flowing.

3. LOCATION OF EXISTING WELLS WITHIN A ONE-MILE RADIUS:

See attached TOPO map "C" for the location of wells within a one-mile radius.

4. LOCATION OF EXISTING AND/OR PROPOSED PRODUCTION FACILITIES:

A. On Well Pad

1. Production facilities will be set on location if the well is successfully completed for production. Facilities will consist of wellhead valves, combo separator-dehy unit with meter, one (1) 300-bbl tank and/or two (2) 400-bbl vertical tanks and attaching piping.
2. Gas gathering lines – A 4" gathering line will be buried from dehy to the edge of the location.

B. Off Well Pad

1. Proposed pipeline will transport natural gas.
2. The pipeline will be a permanent feeder line.
3. The length of the proposed pipeline is 1544' x 40' temporary, 1544 x 8' permanent. The proposed pipeline leaves the western edge of the well pad (Lease UTU01480) proceeding in a southerly direction for an approximate distance of 1544' tying into an existing pipeline in the NWSE of Section 31, T9S, R21E. Pipe will be 4" NOM, 0.156 wall, Grade X42, Zap-Lock, electric weld with a 35 mil X-Tru coating.
4. Proposed pipeline will be a 4" OD steel, zap-lok line laid on the surface
5. Proposed pipeline will be laid on surface.
6. Pipeline will be coupled using the Zap lock method. No additional off-pad facilities will be required.

All permanent (on site for six months or longer) structures constructed or installed (including pumping units) will be painted a flat, non-reflective, earthtone color to match one of the standard environmental colors, as determined by the Rocky Mountain Five State Interagency Committee. All facilities will be painted within 6 months of installation. **All facilities will be painted with Carlsbad Canyon.** Facilities required to comply with O.S.H.A. (Occupational Safety and Health Act) will be excluded.

5. LOCATION AND TYPE OF WATER SUPPLY:

- A. Water supply will be Bonanza Power Plant water source in Sec 26, T8S, R23E, Uintah County, UT (State Water Right # 49-225(A31368)). Water will be hauled by a licensed trucking company.
- B. Water will be hauled by a licensed trucking company.

C. No water well will be drilled on lease.

6. SOURCE OF CONSTRUCTION MATERIALS:

A. All construction material for this pipeline will be of native borrow and soil accumulated during the construction of the location.

B. No mineral materials will be required.

7. METHODS OF HANDLING WASTE DISPOSAL:

A. METHODS AND LOCATION

1. Cuttings will be confined in the reserve pit.
2. A portable toilet will be provided for human waste during the drilling and completion of the well. Disposal will be at the Vernal sewage disposal plant.
3. Burning will not be allowed. Trash and other waste material will be contained in a wire mesh cage and disposed of at the Uintah County Landfill.
4. Produced wastewater will be confined to a lined pit or storage tank for a period not to exceed 90 days after initial production. After the 90 day period, the produced water will be contained in a tank on location and then disposed of at one of the following locations: Natural Buttes Unit 21-20B SWD, Ace Disposal, CWU 550-30N SWD, CWU 2-29 SWD, Red Wash Evaporation ponds 1, 2, 3, 4, 5 or 6, Coyote Evaporation Ponds, or EOG Resources, Inc. drilling operations (Chapita Wells Unit, Natural Buttes Unit & Stagecoach Unit).
5. All chemicals will be disposed of at an authorized disposal site. Drip pans and absorbent pads will be used on the drilling rig to avoid leakage of oil to the pit.

B. Water from drilling fluids and recovered during testing operations will be disposed of by either evaporating in the reserve pit, through natural or artificial methods, or removed and disposed of at an authorized disposal site. Introduction of well bore hydrocarbons to the reserve pit will be avoided by flaring them off in the flare pit at the time of recovery.

The reserve pit will be constructed so as not to leak, break, or allow discharge. If the reserve pit requires padding prior to lining (due to rocky conditions) felt padding will be used.

The reserve pit shall be lined with **felt, and a 20-millimeter plastic liner**. Sufficient bedding (i.e. weed free straw, or hay; felt; polyswell or soil) will be 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, scrap pipe, etc., that could puncture the liner will be disposed of in the pit. More stringent protective requirements may be deemed necessary by the A.O.

EOG Resources, Inc. maintains a file, per 29 CFR 1910.1200 (g) containing current Material Safety Data Sheets (MSDS) for all chemicals, compounds, and/or substances which are used during the course of construction, drilling, completion, and production operations for this project. Hazardous materials (substances) which may be found at the site may include drilling mud and cementing products which are primarily inhalation hazards, fuels (flammable and/or combustible), materials that may be necessary for well completion/ stimulation activities such as flammable or combustible substances and acids/gels (corrosives). The opportunity for Superfund Amendments and Reauthorization Act (SARA) listed Extremely Hazardous Substances (EHS) at the site is generally limited to proprietary treating chemicals. All hazardous and EHS and commercial preparations will be handled in an appropriate manner to minimize the potential for leaks or spills to the environment.

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 annually in association with the drilling, testing, or completion of the well. Furthermore, extremely hazardous substances, as defined in 40 CFR 355, in threshold planning quantities, will not be used, produced, stored, transported, or disposed of in association with the drilling, testing or completion of the well.

8. ANCILLARY FACILITIES:

None anticipated.

9. WELL SITE LAYOUT:

- A. Refer to attached well site plat for related topography cuts and fills and cross sections.
- B. Refer to attached well site plat for rig layout and soil material stockpile location as approved on On-site.
- C. Refer to attached well site plat for rig orientation, parking areas, and access road.

The reserve pit will be located on the southeast corner of the location. The flare pit will be located downwind of the prevailing wind direction on the south side of the location, a minimum of 100 feet from the wellhead and 30 feet from the reserve pit fence.

The stockpiled pit topsoil (first six inches) will be stored separate from the location. The stockpiled location topsoil will be stored in a location providing easy access for interim reclamation and protection of the topsoil. Upon completion of construction, the stockpiled topsoil from the location will be broadcast seeded with the approved seed mixture from this location and then walked down with a Caterpillar tractor.

Access to the well pad will be from the east.

FENCING REQUIREMENTS:

All pits will be fenced according to the following minimum standards:

- A. Thirty-nine 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 strand shall be 3 inches above the net 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 as to keep the fence tight at all times.
- D. Standard steel, wood, or pipe posts shall be used between the corner braces. Maximum distances between any two posts shall be no greater than 16 feet.
- E. All wire shall be stretched by using a stretching device before it is attached to the corner posts.

The reserve pit fencing will be on the three sides during drilling operations and on the fourth side when the rig moves off location. Pits will be fenced and maintained until clean-up.

Each existing fence to be crossed by the access road shall be braced and tied off before cutting so as to prevent slacking of the wire. The opening shall be closed temporarily as necessary during construction to prevent the escape of livestock, and, upon completion of construction, the fence shall be repaired to BLM or SMA specifications. A cattleguard with an adjacent 16 foot gate shall be installed in any fence where a road is regularly traveled. If the well is a producer, the cattleguards (shall/shall not) be permanently counted on concrete bases. Prior to crossing any fence located on Federal land, or any fence between Federal land and private land, the operator will contact the BLM, who will in turn contact the grazing permittee or owner of said fence and offer him/her the opportunity to be present when the fence is cut in order to satisfy himself/herself that the fence is adequately braced and tied off.

10. PLANS FOR RECLAMATION OF THE SURFACE:

A. Interim Reclamation (Producing Location)

Immediately upon well completion, the location and surrounding area will be cleared of all unused tubing, equipment, debris, materials, trash, and junk not required for production.

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

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

The reserve pit and that portion of the location not needed for production facilities/operations will be recontoured to the approximate natural contours. The reserve pit will be reclaimed within 90 days from the date of the well completion, or as soon as environmental conditions allow. Before any dirt takes place, the reserve pit must be completely dry and free of all foreign obstacles.

The stockpiled pit topsoil will then be spread over the pit area and broadcast seeded with the prescribed seed mixture for this location. The seeded area will then be walked down with a cat.

B. Dry Hole/Abandoned Location

At such time as the well is plugged and abandoned, the operator will submit a subsequent report of abandonment and the BLM will attach the appropriated surface rehabilitation conditions of approval.

*Pure live seed (PLS) formula: percent of purity of seed mixture times percent germination of seed mixture equals portion of seed mixture that is PLS.

11. SURFACE OWNERSHIP:

Surface ownership of the proposed well site, access road, and pipeline route is as follows:

State of Utah

12. OTHER INFORMATION:

A. EOG Resources, Inc. will inform all persons in the area who are associated with this project that they are subject to prosecution for knowingly disturbing historic or archaeological sites, or for collecting artifacts. If historic or archaeological materials are uncovered during construction, the operator will immediately stop work that might further disturb such materials, and contact the Authorized Officer. Within five working days the Authorized Officer will inform the operator as to:

- Whether the materials appear eligible for the National Register of Historic Places;
- The mitigation measures the operator will likely have to undertake before the site can be used.
- A time frame for the Authorized Officer to complete an expedited review under 36 CFR 800.11 to confirm, through the State Historic Preservation Officer, that the findings of the Authorized Officer are correct and that mitigation is appropriate.

If the operator wished, at any time, to relocate activities to avoid the expense of mitigation and/or the delays associated with this process, the Authorized Officer will assume responsibility for whatever recordation and stabilization of the exposed materials that may be required. Otherwise, the operator will be responsible for mitigation costs. The Authorized Officer will provide technical and procedural guidelines for the conduct of mitigation. Upon verification from the Authorized Officer that required mitigation has been completed, the operator will then be allowed to resume construction.

- B. As operator, EOG Resources, Inc. will control noxious weeds along Right-of-Ways for roads, pipelines, well sites, or other applicable facilities. A list of noxious weeds will be obtained from the BLM administered land, a Pesticide Use proposal shall be submitted, and given approval, prior to the application of herbicides or other pesticides or possible hazardous chemicals.
- C. Drilling rigs and/or equipment used during drilling operations on this well site will not be stacked or stored on BLM lands after the conclusion of drilling operations or at any other time without BLM authorization. However, if BLM authorization is obtained, it is only a temporary measure to allow time to make arrangements for permanent storage on commercial facilities. (The BLM does not seek to compete with private industry. There are commercial facilities available for stacking and storing drilling rigs.)
- D. The drilling rig and ancillary equipment will be removed from the location prior to commencement of completion operations. Completion operations will be conducted utilizing a completion/workover rig.

All lease and/or unit operations will be conducted in such a manner that full compliance is made with all applicable laws, regulations, Onshore Oil and Gas Orders, the approved Plan of Operations, and any applicable Notice of Lessees. The operator is fully responsible for the actions of its subcontractors. A complete copy of the approved "Application for Permit to Drill" will be furnished to the field representative(s) to ensure compliance and shall be on location during all construction and drilling operations.

Construction activity will not be conducted using frozen or saturated soils material or during periods when watershed damage is likely to occur.

If the existing access road, proposed access road, and proposed pad are dry during construction, drilling, and completion activities, water will be applied to help facilitate compaction during construction and to minimize soil loss as a result of wind erosion.

A cultural resources survey was conducted and will be submitted by Montgomery Archaeological Consultants. A paleontological survey was conducted and will be submitted by Intermountain Paleo.

Additional Surface Stipulations:

None

LESSEE OR OPERATOR'S REPRESENTATIVE AND CERTIFICATION:

PERMITTING AGENT

Kaylene R. Gardner
EOG Resources, Inc.
1060 East Highway 40
Vernal, UT 84078
(435) 781-9111

All lease and/or unit operations will be conducted in such a manner that full compliance is made with all applicable laws, regulations, Onshore Oil and Gas Orders, the approved plan of operations, and any applicable Notice to Lessees. The operator is fully responsible for the actions of his subcontractors. A copy of these conditions will be furnished to the field representative to insure compliance.

The operator or his/her contractor shall contact the BLM office at (435) 781-4400 forty-eight (48) hours prior to construction activities.

CERTIFICATION:

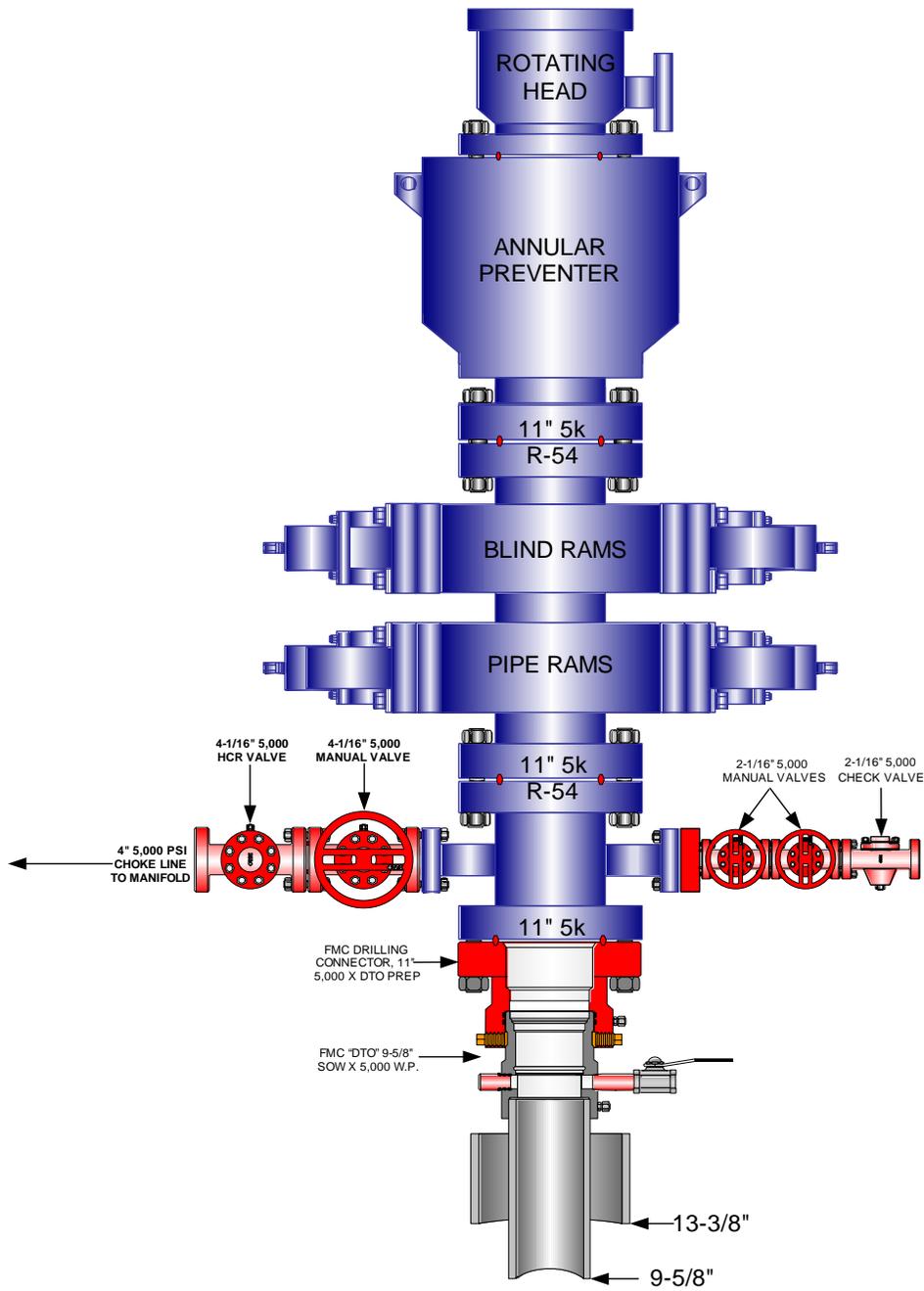
I hereby certify that I, or persons under my direct supervision, have inspected the proposed drill site and access route; that I am familiar with the conditions which currently exist; that the statements made in this plan are, to the best of my knowledge, true and correct; and that the work associated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

Please be advised that EOG Resources, Inc. is considered to be the operator of the Natural Buttes Unit 746-31E Well, located in the NWSE, of Section 31, T9S, R21E, Uintah County, Utah; Federal land and minerals; and is responsible under the terms and conditions of the lease for the operations conducted upon the leased lands. Bond Coverage is under Bond # NM 2308.

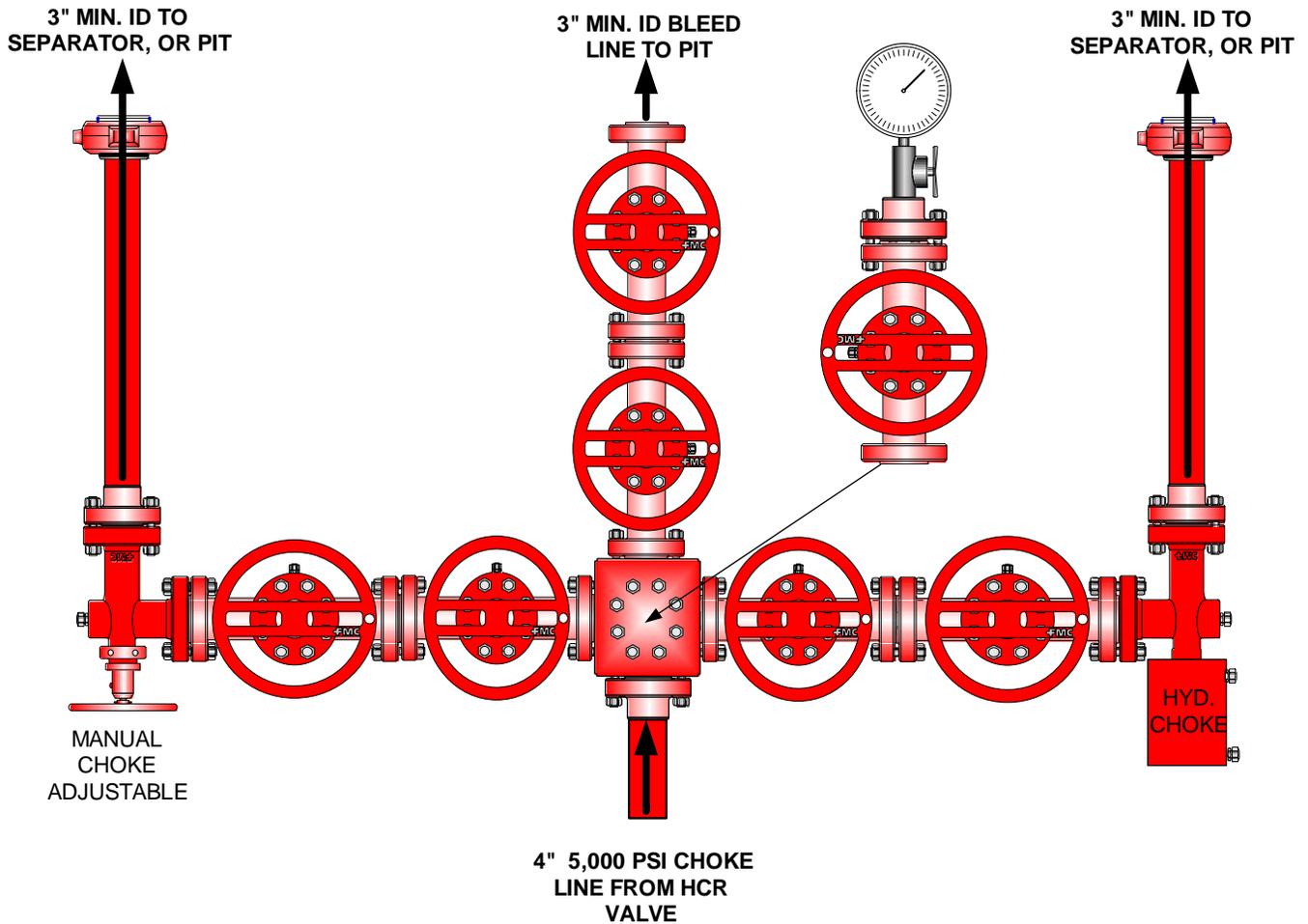
August 22, 2008
Date

Kaylene R. Gardner, Regulatory Administrator

EOG RESOURCES 11" 5,000 PSI W.P. BOP CONFIGURATION



**EOG RESOURCES CHOKE MANIFOLD CONFIGURATION
W/ 5,000 PSI WP VALVES**



Testing Procedure:

1. BOP will be tested with a professional tester to conform to Onshore Order #2.
2. Blind and Pipe rams will be tested to rated working pressure, 5,000 psi.
3. Annular Preventer will be tested to 50% working pressure, 2,500 psi.
Casing will be tested to 0.22 psi / ft. or 1,500 psi. Not to exceed 70% of burst strength, **whichever is greater.**
4. All lines subject to well pressure will be tested to the same pressure as blind and pipe rams.
5. All BOPE specifications and configurations will meet Onshore Order #2 requirements.



***Natural Buttes Unit 746-31E
NWSE, Section 31, T9S, R21E
Uintah County, Utah***

SURFACE USE PLAN

The well pad is approximately 375 feet long with a 261-foot width, containing 2.25 acres more or less. The well access road is approximately 792 feet long with a 30-foot right-of-way, disturbing approximately 0.55 acre. New surface disturbance associated with the well pad and access road is estimated to be 2.80 acres. The pipeline is approximately 1544 feet long with a 40-foot temporary right-of-way and a 8-foot permanent right-of-way disturbing approximately 0.28 acre.

1. EXISTING ROADS:

- A. See attached Plats showing directional reference stakes on location, and attached TOPO Map "B" showing access to location from existing roads.
- B. The proposed well site is located approximately 42.4 miles south of Vernal, Utah – See attached TOPO Map "A".
- C. Refer to attached Topographic Map "A" showing labeled access route to location.
- D. Existing roads will be maintained and repaired as necessary.

2. PLANNED ACCESS ROAD:

- A. The access road will be approximately 792' in length. Culvert's and low water crossings shall be installed as needed. See attached Topo B.
- B. The access road has a 30-foot ROW w/18 foot running surface.
- C. Maximum grade of the new access road will be 8 percent.
- D. No turnouts will be required.
- E. Road drainage crossings shall be of the typical dry creek drainage crossing type.
- F. No bridges, or major cuts and fills will be required.
- G. The access road will be dirt surface.
- H. No gates, cattleguards, or fences will be required or encountered.

- I. A 30-foot permanent right-of-way is requested. No surfacing material will be used.
- J. No additional storage areas will be needed for storing equipment, stockpiling, or vehicle parking.

All travel will be confined to existing access road rights-of-way.

New or reconstructed roads will be centerlined – flagged at time of location staking. Access roads and surface disturbing activities will conform to standards outlined in the Bureau of Land Management and Forest Service publication: Surface Operating Standards for Oil and Gas Exploration and Development, Fourth Edition and/or BLM Manual Section 9113 concerning road construction standards on projects subject to federal jurisdiction.

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As operator, EOG Resources, Inc. shall be responsible for all maintenance on cattleguards, or gates associated with this oil and/or gas operation.

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3. LOCATION OF EXISTING WELLS WITHIN A ONE-MILE RADIUS:

See attached TOPO map "C" for the location of wells within a one-mile radius.

4. LOCATION OF EXISTING AND/OR PROPOSED PRODUCTION FACILITIES:

A. On Well Pad

1. Production facilities will be set on location if the well is successfully completed for production. Facilities will consist of wellhead valves, combo separator-dehy unit with meter, one (1) 300-bbl tank and/or two (2) 400-bbl vertical tanks and attaching piping.
2. Gas gathering lines – A 4" gathering line will be buried from dehy to the edge of the location.

B. Off Well Pad

1. Proposed pipeline will transport natural gas.
2. The pipeline will be a permanent feeder line.
3. The length of the proposed pipeline is 1544' x 40' temporary, 1544 x 8' permanent. The proposed pipeline leaves the western edge of the well pad (Lease UTU01480) proceeding in a southerly direction for an approximate distance of 1544' tying into an existing pipeline in the NWSE of Section 31, T9S, R21E. Pipe will be 4" NOM, 0.156 wall, Grade X42, Zap-Lock, electric weld with a 35 mil X-Tru coating.
4. Proposed pipeline will be a 4" OD steel, zap-lok line laid on the surface
5. Proposed pipeline will be laid on surface.
6. Pipeline will be coupled using the Zap lock method. No additional off-pad facilities will be required.

All permanent (on site for six months or longer) structures constructed or installed (including pumping units) will be painted a flat, non-reflective, earthtone color to match one of the standard environmental colors, as determined by the Rocky Mountain Five State Interagency Committee. All facilities will be painted within 6 months of installation. **All facilities will be painted with Carlsbad Canyon.** Facilities required to comply with O.S.H.A. (Occupational Safety and Health Act) will be excluded.

5. LOCATION AND TYPE OF WATER SUPPLY:

- A. Water supply will be Bonanza Power Plant water source in Sec 26, T8S, R23E, Uintah County, UT (State Water Right # 49-225(A31368)). Water will be hauled by a licensed trucking company.
- B. Water will be hauled by a licensed trucking company.

C. No water well will be drilled on lease.

6. SOURCE OF CONSTRUCTION MATERIALS:

A. All construction material for this pipeline will be of native borrow and soil accumulated during the construction of the location.

B. No mineral materials will be required.

7. METHODS OF HANDLING WASTE DISPOSAL:

A. METHODS AND LOCATION

1. Cuttings will be confined in the reserve pit.
 2. A portable toilet will be provided for human waste during the drilling and completion of the well. Disposal will be at the Vernal sewage disposal plant.
 3. Burning will not be allowed. Trash and other waste material will be contained in a wire mesh cage and disposed of at the Uintah County Landfill.
 4. Produced wastewater will be confined to a lined pit or storage tank for a period not to exceed 90 days after initial production. After the 90 day period, the produced water will be contained in a tank on location and then disposed of at one of the following locations: Natural Buttes Unit 21-20B SWD, Ace Disposal, CWU 550-30N SWD, CWU 2-29 SWD, Red Wash Evaporation ponds 1, 2, 3, 4, 5 or 6, Coyote Evaporation Ponds, or EOG Resources, Inc. drilling operations (Chapita Wells Unit, Natural Buttes Unit & Stagecoach Unit).
 5. All chemicals will be disposed of at an authorized disposal site. Drip pans and absorbent pads will be used on the drilling rig to avoid leakage of oil to the pit.
- B. Water from drilling fluids and recovered during testing operations will be disposed of by either evaporating in the reserve pit, through natural or artificial methods, or removed and disposed of at an authorized disposal site. Introduction of well bore hydrocarbons to the reserve pit will be avoided by flaring them off in the flare pit at the time of recovery.

The reserve pit will be constructed so as not to leak, break, or allow discharge. If the reserve pit requires padding prior to lining (due to rocky conditions) felt padding will be used.

The reserve pit shall be lined with **felt, and a 20-millimeter plastic liner**. Sufficient bedding (i.e. weed free straw, or hay; felt; polyswell or soil) will be 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, scrap pipe, etc., that could puncture the liner will be disposed of in the pit. More stringent protective requirements may be deemed necessary by the A.O.

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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 annually in association with the drilling, testing, or completion of the well. Furthermore, extremely hazardous substances, as defined in 40 CFR 355, in threshold planning quantities, will not be used, produced, stored, transported, or disposed of in association with the drilling, testing or completion of the well.

8. ANCILLARY FACILITIES:

None anticipated.

9. WELL SITE LAYOUT:

- A. Refer to attached well site plat for related topography cuts and fills and cross sections.
- B. Refer to attached well site plat for rig layout and soil material stockpile location as approved on On-site.
- C. Refer to attached well site plat for rig orientation, parking areas, and access road.

The reserve pit will be located on the southeast corner of the location. The flare pit will be located downwind of the prevailing wind direction on the south side of the location, a minimum of 100 feet from the wellhead and 30 feet from the reserve pit fence.

The stockpiled pit topsoil (first six inches) will be stored separate from the location. The stockpiled location topsoil will be stored in a location providing easy access for interim reclamation and protection of the topsoil. Upon completion of construction, the stockpiled topsoil from the location will be broadcast seeded with the approved seed mixture from this location and then walked down with a Caterpillar tractor.

Access to the well pad will be from the east.

FENCING REQUIREMENTS:

All pits will be fenced according to the following minimum standards:

- A. Thirty-nine 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 strand shall be 3 inches above the net 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 as to keep the fence tight at all times.
- D. Standard steel, wood, or pipe posts shall be used between the corner braces. Maximum distances between any two posts shall be no greater than 16 feet.
- E. All wire shall be stretched by using a stretching device before it is attached to the corner posts.

The reserve pit fencing will be on the three sides during drilling operations and on the fourth side when the rig moves off location. Pits will be fenced and maintained until clean-up.

Each existing fence to be crossed by the access road shall be braced and tied off before cutting so as to prevent slacking of the wire. The opening shall be closed temporarily as necessary during construction to prevent the escape of livestock, and, upon completion of construction, the fence shall be repaired to BLM or SMA specifications. A cattleguard with an adjacent 16 foot gate shall be installed in any fence where a road is regularly traveled. If the well is a producer, the cattleguards (shall/shall not) be permanently counted on concrete bases. Prior to crossing any fence located on Federal land, or any fence between Federal land and private land, the operator will contact the BLM, who will in turn contact the grazing permittee or owner of said fence and offer him/her the opportunity to be present when the fence is cut in order to satisfy himself/herself that the fence is adequately braced and tied off.

10. PLANS FOR RECLAMATION OF THE SURFACE:

A. Interim Reclamation (Producing Location)

Immediately upon well completion, the location and surrounding area will be cleared of all unused tubing, equipment, debris, materials, trash, and junk not required for production.

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

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

The reserve pit and that portion of the location not needed for production facilities/operations will be recontoured to the approximate natural contours. The reserve pit will be reclaimed within 90 days from the date of the well completion, or as soon as environmental conditions allow. Before any dirt takes place, the reserve pit must be completely dry and free of all foreign obstacles.

The stockpiled pit topsoil will then be spread over the pit area and broadcast seeded with the prescribed seed mixture for this location. The seeded area will then be walked down with a cat.

B. Dry Hole/Abandoned Location

At such time as the well is plugged and abandoned, the operator will submit a subsequent report of abandonment and the BLM will attach the appropriated surface rehabilitation conditions of approval.

*Pure live seed (PLS) formula: percent of purity of seed mixture times percent germination of seed mixture equals portion of seed mixture that is PLS.

11. SURFACE OWNERSHIP:

Surface ownership of the proposed well site, access road, and pipeline route is as follows:

State of Utah

12. OTHER INFORMATION:

A. EOG Resources, Inc. will inform all persons in the area who are associated with this project that they are subject to prosecution for knowingly disturbing historic or archaeological sites, or for collecting artifacts. If historic or archaeological materials are uncovered during construction, the operator will immediately stop work that might further disturb such materials, and contact the Authorized Officer. Within five working days the Authorized Officer will inform the operator as to:

- Whether the materials appear eligible for the National Register of Historic Places;
- The mitigation measures the operator will likely have to undertake before the site can be used.
- A time frame for the Authorized Officer to complete an expedited review under 36 CFR 800.11 to confirm, through the State Historic Preservation Officer, that the findings of the Authorized Officer are correct and that mitigation is appropriate.

If the operator wished, at any time, to relocate activities to avoid the expense of mitigation and/or the delays associated with this process, the Authorized Officer will assume responsibility for whatever recordation and stabilization of the exposed materials that may be required. Otherwise, the operator will be responsible for mitigation costs. The Authorized Officer will provide technical and procedural guidelines for the conduct of mitigation. Upon verification from the Authorized Officer that required mitigation has been completed, the operator will then be allowed to resume construction.

- B. As operator, EOG Resources, Inc. will control noxious weeds along Right-of-Ways for roads, pipelines, well sites, or other applicable facilities. A list of noxious weeds will be obtained from the BLM administered land, a Pesticide Use proposal shall be submitted, and given approval, prior to the application of herbicides or other pesticides or possible hazardous chemicals.
- C. Drilling rigs and/or equipment used during drilling operations on this well site will not be stacked or stored on BLM lands after the conclusion of drilling operations or at any other time without BLM authorization. However, if BLM authorization is obtained, it is only a temporary measure to allow time to make arrangements for permanent storage on commercial facilities. (The BLM does not seek to compete with private industry. There are commercial facilities available for stacking and storing drilling rigs.)
- D. The drilling rig and ancillary equipment will be removed from the location prior to commencement of completion operations. Completion operations will be conducted utilizing a completion/workover rig.

All lease and/or unit operations will be conducted in such a manner that full compliance is made with all applicable laws, regulations, Onshore Oil and Gas Orders, the approved Plan of Operations, and any applicable Notice of Lessees. The operator is fully responsible for the actions of its subcontractors. A complete copy of the approved "Application for Permit to Drill" will be furnished to the field representative(s) to ensure compliance and shall be on location during all construction and drilling operations.

Construction activity will not be conducted using frozen or saturated soils material or during periods when watershed damage is likely to occur.

If the existing access road, proposed access road, and proposed pad are dry during construction, drilling, and completion activities, water will be applied to help facilitate compaction during construction and to minimize soil loss as a result of wind erosion.

A cultural resources survey was conducted and will be submitted by Montgomery Archaeological Consultants. A paleontological survey was conducted and will be submitted by Intermountain Paleo.

Additional Surface Stipulations:

None

LESSEE OR OPERATOR'S REPRESENTATIVE AND CERTIFICATION:

PERMITTING AGENT

Kaylene R. Gardner
EOG Resources, Inc.
1060 East Highway 40
Vernal, UT 84078
(435) 781-9111

All lease and/or unit operations will be conducted in such a manner that full compliance is made with all applicable laws, regulations, Onshore Oil and Gas Orders, the approved plan of operations, and any applicable Notice to Lessees. The operator is fully responsible for the actions of his subcontractors. A copy of these conditions will be furnished to the field representative to insure compliance.

The operator or his/her contractor shall contact the BLM office at (435) 781-4400 forty-eight (48) hours prior to construction activities.

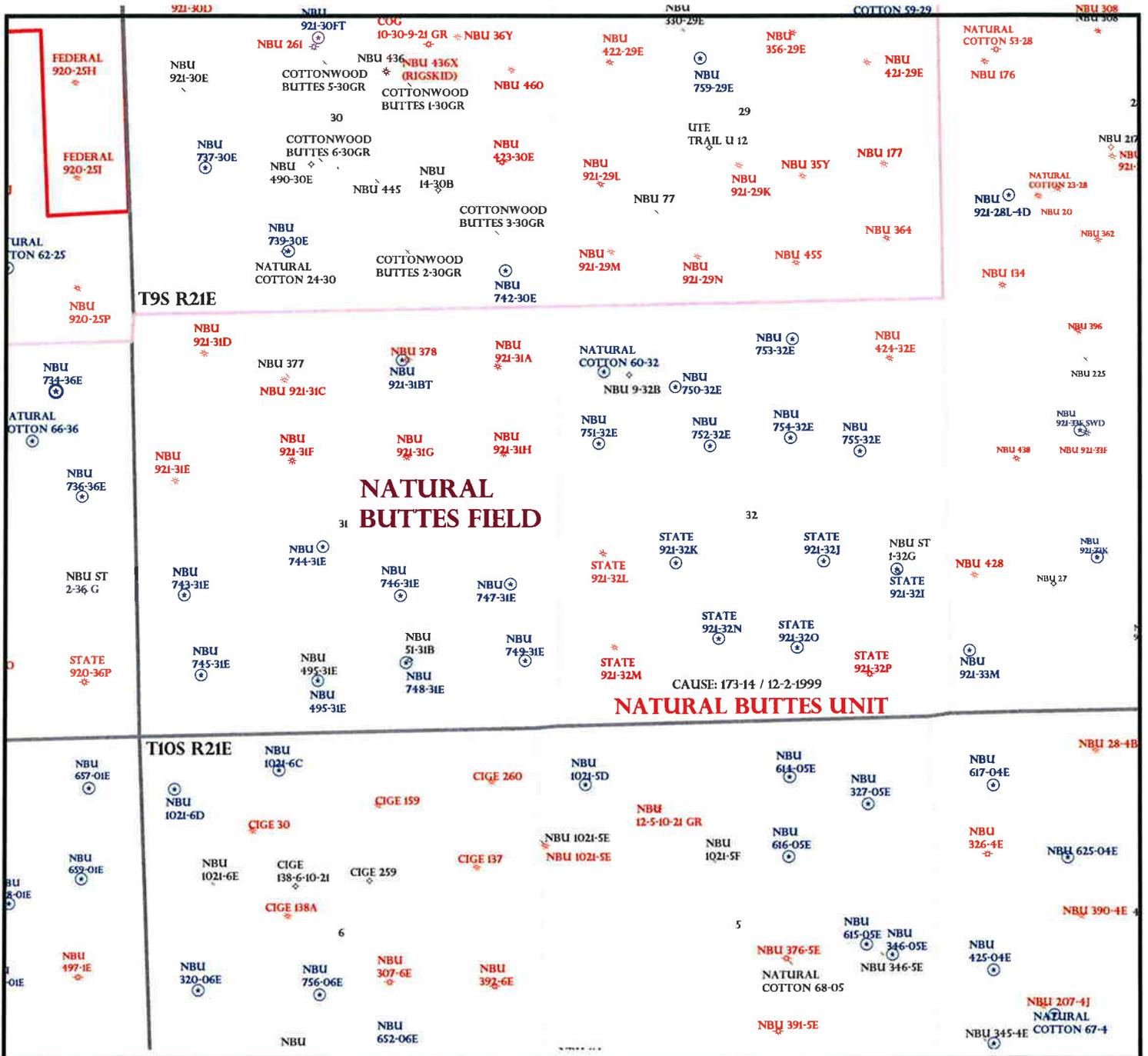
CERTIFICATION:

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

Please be advised that EOG Resources, Inc. is considered to be the operator of the Natural Buttes Unit 746-31E Well, located in the NWSE, of Section 31, T9S, R21E, Uintah County, Utah; Federal land and minerals; and is responsible under the terms and conditions of the lease for the operations conducted upon the leased lands. Bond Coverage is under Bond # NM 2308.

August 22, 2008
Date

Kaylene R. Gardner, Regulatory Administrator



OPERATOR: EOG RESOURCES INC (N9550)

SEC: 31,32 T.9S R. 21E

FIELD: NATURAL BUTTES (630)

COUNTY: Uintah

CAUSE: 173-14 / 12-2-1999

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



PREPARED BY: DIANA MASON
DATE: 26-AUGUST-2008

Application for Permit to Drill Statement of Basis

11/25/2008

Utah Division of Oil, Gas and Mining

Page 1

APD No	API WellNo	Status	Well Type	Surf Owner	CBM
958	43047500900000	SITLA	GW	S	No
Operator	EOG RESOURCES, INC.		Surface Owner-APD		
Well Name	NBU 746-31E		Unit		
Field	NATURAL BUTTES		Type of Work		
Location	NWSE 31 9S 21E S 1846 FSL		2107 FEL GPS Coord (UTM) 620250E 4427307N		

Geologic Statement of Basis

Kerr McGee proposes to set 2,300' 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 3,900'. A search of Division of Water Rights records shows one water well within a 10,000 foot radius of the center of section 31. The well is located over a mile to the east, is 200 feet deep and listed as used for oil & gasdrilling. The surface formation at this site is the Uinta Formation. The Uinta Formation is made up of interbedded shales and sandstones. The sandstones are mostly lenticular and discontinuous and should not be a significant source of useable ground water. The production casing cement should be brought up above the base of the moderately saline ground water to isolate it from fresher waters uphole.

Brad Hill
APD Evaluator

10/1/2008
Date / Time

Surface Statement of Basis

The general area is within the Natural Buttes Unit in the lower Cottonwood Wash Drainage. The area is characterized by rolling hills and benches, which are frequently intersected by somewhat gentle draws, which flow into Cottonwood Wash. The draws are occasionally rimmed with steep side hills, which have exposed sand stone bedrock cliffs along the rims. Cottonwood Wash is an ephemeral drainage, which drains northerly approximately 5 miles to the White River. No seeps, springs or streams exist in the area.

This location is approximately 11 miles southeast of Ouray, Utah and is accessed by the Seep Ridge Road then by existing or planned oil field development roads to within approximately 0.15 miles of the proposed site. New construction will be required from this point.

The proposed NBU 746-31E gas well location is in the bottom of a wide flat-bottomed swale. A shallow drainage runs longitudinally through the pad area from pit corner A to beyond location corner 6. A diversion will be required paralleling the location on the south, rejoining the natural drainage beyond corner 6.

The selected location appears to be a suitable site for drilling and operating a well.

Both the surface and minerals for this location are owned by SITLA. Jim Davis of SITLA attended the on-site visit. He had no concerns regarding the proposal except for the need of a diversion around the site. SITLA is to be contacted for site reclamation standards including seed mixes to be used.

Ben Williams of the Utah Division of Wildlife Resources was invited to the pre-site visit. He did not attend.

Floyd Bartlett
Onsite Evaluator

9/10/2008
Date / Time

Application for Permit to Drill

Statement of Basis

11/25/2008

Utah Division of Oil, Gas and Mining

Page 2

Conditions of Approval / Application for Permit to Drill

Category	Condition
Pits	A synthetic liner with a minimum thickness of 16 mils with a felt subliner shall be properly installed and maintained in the reserve pit.
Surface	Drainages adjacent to the proposed pad shall be diverted around the location.
Surface	The reserve pit shall be fenced upon completion of drilling operations.

ON-SITE PREDRILL EVALUATION

Utah Division of Oil, Gas and Mining

Operator EOG RESOURCES, INC.
Well Name NBU 746-31E
API Number 43-047-50090-0 **APD No** 958 **Field/Unit** NATURAL BUTTES
Location: 1/4,1/4 NWSE **Sec** 31 **Tw** 9S **Rng** 21E 1846 FSL 2107 FEL
GPS Coord (UTM) 620250 4427324 **Surface Owner**

Participants

Floyd Bartlett (DOGM), Byron Tolman (Agent for EOG Resources), Jim Davis (SITLA).

Regional/Local Setting & Topography

The general area is within the Natural Buttes Unit in the lower Cottonwood Wash Drainage. The area is characterized by rolling hills and benches, which are frequently intersected by somewhat gentle draws, which flow into Cottonwood Wash. The draws are occasionally rimmed with steep side hills, which have exposed sand stone bedrock cliffs along the rims. Cottonwood Wash is an ephemeral drainage, which drains northerly approximately 5 miles to the White River. No seeps, springs or streams exist in the area.

This location is approximately 11 miles southeast of Ouray, Utah and is accessed by the Seep Ridge Road then by existing or planned oil field development roads to within approximately 0.15 miles of the proposed site. New construction will be required from this point.

The proposed NBU 746-31E gas well location is in the bottom of a wide flat-bottomed swale. A shallow drainage runs longitudinally through the pad area from pit corner A to beyond location corner 6. A diversion will be required paralleling the location on the south, rejoining the natural drainage beyond corner 6.

The selected location appears to be a suitable site for drilling and operating a well.

Both the surface and minerals for this location are owned by SITLA.

Surface Use Plan

Current Surface Use

Grazing
 Recreational
 Wildlife Habitat

New Road

Miles	Well Pad		Src Const Material	Surface Formation
0.15	Width 276	Length 375	Onsite	UNTA

Ancillary Facilities N

Waste Management Plan Adequate?

Environmental Parameters

Affected Floodplains and/or Wetland N

Flora / Fauna

Vegetation cover is poor. A scattered stand of shadscale, greasewood, halogeton, broom snakeweed, rabbitbrush, spiny hop-sage, horsebrush, cheat grass and annuals exist.

Antelope, cattle, rabbits, coyotes, and small mammals, birds and raptors.

Soil Type and Characteristics

Deep sandy loam

Erosion Issues N

Sedimentation Issues Y

A shallow drainage runs longitudinally through the pad area from pit corner A to beyond location corner 6. A diversion will be required paralleling the location on the south, rejoining the natural drainage beyond corner 6.

Site Stability Issues N

Drainage Diversion Required Y

A shallow drainage runs longitudinally through the pad area from pit corner A to beyond location corner 6. A diversion will be required paralleling the location on the south, rejoining the natural drainage beyond corner 6.

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	
Distance to Groundwater (feet)	100 to 200	5	
Distance to Surface Water (feet)	>1000	0	
Dist. Nearest Municipal Well (ft)	>5280	0	
Distance to Other Wells (feet)	300 to 1320	10	
Native Soil Type	Mod permeability	10	
Fluid Type	Fresh Water	5	
Drill Cuttings	Normal Rock	0	
Annual Precipitation (inches)	<10	0	
Affected Populations	<10	0	
Presence Nearby Utility Conduits	Not Present	0	
	Final Score	30	1 Sensitivity Level

Characteristics / Requirements

The reserve pit is planned in an area of cut in the southeast corner of the location. Dimensions are 75' x 175' x 12' deep with 2' of freeboard. A liner with a minimum thickness of 16 mils. and a felt sub-liner are required.

Closed Loop Mud Required? N **Liner Required?** Y **Liner Thickness** 16 **Pit Underlayment Required?** Y

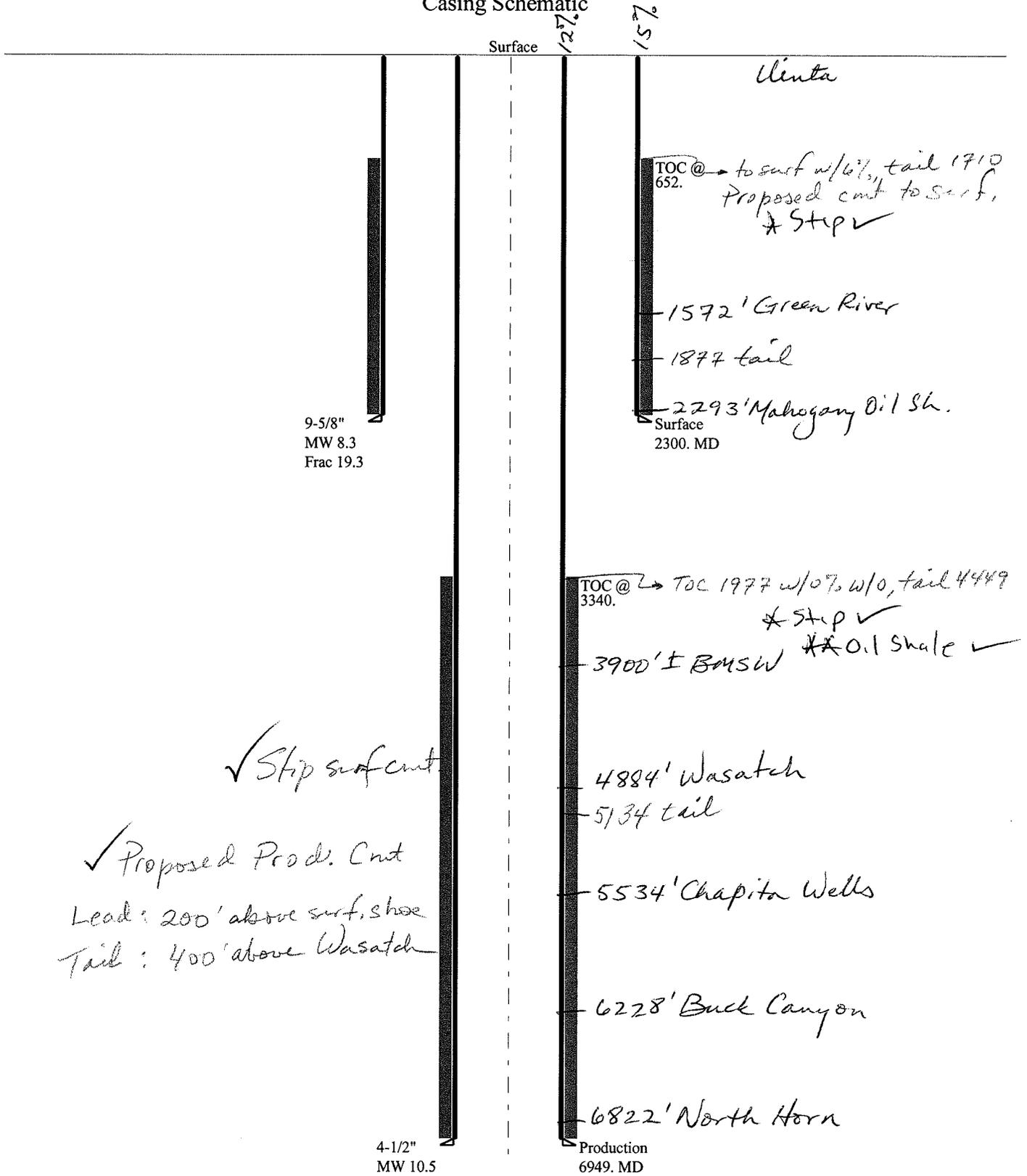
Other Observations / Comments

Floyd Bartlett
Evaluator

9/10/2008
Date / Time

43047500900000 NBU 746-31E

Casing Schematic



Well name:	43047500900000 NBU 746-31E		
Operator:	EOG Resources, Inc.		Project ID:
String type:	Surface		43-047-50090-0000
Location:	Uintah County, Utah		

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: 75 °F
 Bottom hole temperature: 107 °F
 Temperature gradient: 1.40 °F/100ft
 Minimum section length: 1,300 ft
 Cement top: 652 ft

Burst

Max anticipated surface pressure: 2,024 psi
 Internal gradient: 0.120 psi/ft
 Calculated BHP 2,300 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: 2,016 ft

Non-directional string.

Re subsequent strings:

Next setting depth: 6,949 ft
 Next mud weight: 10.500 ppg
 Next setting BHP: 3,790 psi
 Fracture mud wt: 19.250 ppg
 Fracture depth: 2,300 ft
 Injection pressure: 2,300 psi

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Internal Capacity (ft³)
1	2300	9.625	36.00	J-55	ST&C	2300	2300	8.796	998.3
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	995	2020	2.030	2300	3520	1.53	73	394	5.43 J

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

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

Date: October 29, 2008
 Salt Lake City, Utah

Remarks:

Collapse is based on a vertical depth of 2300 ft, a mud weight of 8.33 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.

Well name:	43047500900000 NBU 746-31E		
Operator:	EOG Resources, Inc.		
String type:	Production	Project ID:	43-047-50090-0000
Location:	Uintah County, Utah		

Design parameters:

Collapse

Mud weight: 10,500 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: 172 °F
 Temperature gradient: 1.40 °F/100ft
 Minimum section length: 1,500 ft

Cement top: 3,340 ft

Burst

Max anticipated surface pressure: 2,262 psi
 Internal gradient: 0.220 psi/ft
 Calculated BHP 3,790 psi

No backup mud specified.

Tension:

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

Non-directional string.

Tension is based on buoyed weight.
 Neutral point: 5,858 ft

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Internal Capacity (ft³)
1	6949	4.5	11.60	N-80	LT&C	6949	6949	3.875	606.4
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	3790	6350	1.675	3790	7780	2.05	68	223	3.28 J

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

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

Date: October 29, 2008
 Salt Lake City, Utah

Remarks:

Collapse is based on a vertical depth of 6949 ft, a mud weight of 10.5 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.

BOPE REVIEW

BOPE REVIEW

Well Name		EOG NBU 746-31E API 43-047-50090-0000	
Casing Size (")	String 1	String 2	
Setting Depth (TVD)	9 5/8	4 1/2	
Previous Shoe Setting Depth (TVD)	2300	6949	
Max Mud Weight (ppg)	60	2300	
BOPE Proposed (psi)	8.4	10.5	
Casing Internal Yield (psi)	500	5000	
Operators Max Anticipated Pressure (psi)	3520	7780	
	3794	10.5 ppg	

Calculations	String 1	9 5/8 "
Max BHP [psij]	.052*Setting Depth*MW =	1005
MASP (Gas) [psij]	Max BHP-(0.12*Setting Depth) =	729
MASP (Gas/Mud) [psij]	Max BHP-(0.22*Setting Depth) =	499
Pressure At Previous Shoe	Max BHP-.22*(Setting Depth - Previous Shoe Depth) =	512
Required Casing/BOPE Test Pressure		2300 psi
*Max Pressure Allowed @ Previous Casing Shoe =		60 psi

BOPE Adequate For Drilling And Setting Casing at Depth? NO - O.K. - Air Drill

*Can Full Expected Pressure Be Held At Previous Shoe? NO Reasonably depth in area - no known pressure

*Assumes 1psi/ft frac gradient

Calculations	String 2	4 1/2 "
Max BHP [psij]	.052*Setting Depth*MW =	3794
MASP (Gas) [psij]	Max BHP-(0.12*Setting Depth) =	2960
MASP (Gas/Mud) [psij]	Max BHP-(0.22*Setting Depth) =	2265
Pressure At Previous Shoe	Max BHP-.22*(Setting Depth - Previous Shoe Depth) =	2771
Required Casing/BOPE Test Pressure		5000 psi
*Max Pressure Allowed @ Previous Casing Shoe =		2300 psi

BOPE Adequate For Drilling And Setting Casing at Depth? YES

*Can Full Expected Pressure Be Held At Previous Shoe? NO O.K.

*Assumes 1psi/ft frac gradient

From: Jim Davis
To: Bonner, Ed; Mason, Diana
Date: 11/24/2008 10:00 AM
Subject: EOG well approval

CC: Garrison, LaVonne
The following well have been approved by SITLA including arch and paleo clearance.

EOG Resources' NBU 746-31E [API #4304750090]

Thanks.
-Jim

Jim Davis
Utah Trust Lands Administration
jimdavis1@utah.gov
Phone: (801) 538-5156

ON-SITE PREDRILL EVALUATION

Utah Division of Oil, Gas and Mining

Operator EOG RESOURCES, INC.
Well Name NBU 746-31E
API Number 43047500900000 **APD No** 958 **Field/Unit** NATURAL BUTTES
Location: 1/4,1/4 NWSE **Sec** 31 **Tw** 9.0S **Rng** 21.0E 1846 **FSL** 2107 **FEL**
GPS Coord (UTM) 620250 4427324 **Surface Owner**

Participants

Floyd Bartlett (DOGM), Byron Tolman (Agent for EOG Resources), Jim Davis (SITLA).

Regional/Local Setting & Topography

The general area is within the Natural Buttes Unit in the lower Cottonwood Wash Drainage. The area is characterized by rolling hills and benches, which are frequently intersected by somewhat gentle draws, which flow into Cottonwood Wash. The draws are occasionally rimmed with steep side hills, which have exposed sand stone bedrock cliffs along the rims. Cottonwood Wash is an ephemeral drainage, which drains northerly approximately 5 miles to the White River. No seeps, springs or streams exist in the area.

This location is approximately 11 miles southeast of Ouray, Utah and is accessed by the Seep Ridge Road then by existing or planned oil field development roads to within approximately 0.15 miles of the proposed site. New construction will be required from this point.

The proposed NBU 746-31E gas well location is in the bottom of a wide flat-bottomed swale. A shallow drainage runs longitudinally through the pad area from pit corner A to beyond location corner 6. A diversion will be required paralleling the location on the south, rejoining the natural drainage beyond corner 6.

The selected location appears to be a suitable site for drilling and operating a well.

Both the surface and minerals for this location are owned by SITLA.

Surface Use Plan

Current Surface Use

- Grazing
- Recreational
- Wildlife Habitat

New Road Miles	Well Pad	Src Const Material	Surface Formation
0.15	Width 276 Length 375	Onsite	UNTA

Ancillary Facilities N

Waste Management Plan Adequate?

Environmental Parameters

Affected Floodplains and/or Wetlands N

Flora / Fauna

Vegetation cover is poor. A scattered stand of shadscale, greasewood, halogeton, broom snakeweed, rabbitbrush, spiny hop-sage, horsebrush, cheat grass and annuals exist.

Antelope, cattle, rabbits, coyotes, and small mammals, birds and raptors.

Soil Type and Characteristics

Deep sandy loam

Erosion Issues N

Sedimentation Issues Y

A shallow drainage runs longitudinally through the pad area from pit corner A to beyond location corner 6. A diversion will be required paralleling the location on the south, rejoining the natural drainage beyond corner 6.

Site Stability Issues N

Drainage Diversion Required? Y

A shallow drainage runs longitudinally through the pad area from pit corner A to beyond location corner 6. A diversion will be required paralleling the location on the south, rejoining the natural drainage beyond corner 6.

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

Distance to Groundwater (feet)	100 to 200	5	
Distance to Surface Water (feet)	>1000	0	
Dist. Nearest Municipal Well (ft)	>5280	0	
Distance to Other Wells (feet)	300 to 1320	10	
Native Soil Type	Mod permeability	10	
Fluid Type	Fresh Water	5	
Drill Cuttings	Normal Rock	0	
Annual Precipitation (inches)		0	
Affected Populations			
Presence Nearby Utility Conduits	Not Present	0	
	Final Score	30	1 Sensitivity Level

Characteristics / Requirements

The reserve pit is planned in an area of cut in the southeast corner of the location. Dimensions are 75' x 175' x 12' deep with 2' of freeboard. A liner with a minimum thickness of 16 mils. and a felt sub-liner are required.

Closed Loop Mud Required? N **Liner Required?** Y **Liner Thickness** 16 **Pit Underlayment Required?** Y

Other Observations / Comments

Floyd Bartlett

9/10/2008

Evaluator

Date / Time



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

Permit To Drill

Well Name: NBU 746-31E
API Well Number: 43047500900000
Lease Number: UTU01480ST
Surface Owner: STATE
Approval Date: 11/25/2008

Issued to:

EOG Resources, Inc., 1060 East Highway 40, Vernal, UT 84078

Authority:

Pursuant to Utah Code Ann. §40-6-1 et seq., and Utah Administrative Code R649-3-1 et seq., the Utah Division of Oil, Gas and Mining issues conditions of approval, and permit to drill the listed well. This permit is issued in accordance with the requirements of CAUSE 173-14 .

Duration:

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

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.

Conditions of Approval:

In accordance with the Order in Cause No. 190-5(b) dated October 28, 1982, the operator shall comply with the requirements of Rules R649-3-31 and R649-3-27 pertaining to Designated Oil Shale Areas. Additionally, the operators shall ensure that the surface and or production casing is properly cemented over the entire oil shale section as defined by Rule R649-3-31. The Operator shall report the actual depth the oil shale is encountered to the division.

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

Surface casing shall be cemented to the surface.

Cement volume for the 4 1/2" production string shall be determined from actual hole diameter in order to place cement from the pipe setting depth back to 2100' MD as indicated in the submitted drilling plan.

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

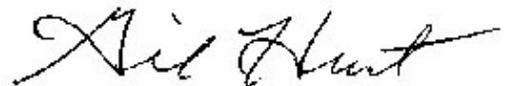
The following are Division of Oil, Gas and Mining contacts and their telephone numbers (please leave a voice mail message if the person is not available to take the call):

- 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

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.

Approved By:



Gil Hunt
Associate Director, Oil & Gas

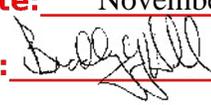
STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	FORM 9 5. LEASE DESIGNATION AND SERIAL NUMBER: UTU01480ST
SUNDRY NOTICES AND REPORTS ON WELLS Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.	6. IF INDIAN, ALLOTTEE OR TRIBE NAME: 7. UNIT or CA AGREEMENT NAME: NATURAL BUTTES
1. TYPE OF WELL Gas Well	8. WELL NAME and NUMBER: NBU 746-31E
2. NAME OF OPERATOR: EOG Resources, Inc.	9. API NUMBER: 43047500900000
3. ADDRESS OF OPERATOR: 1060 East Highway 40 , Vernal, UT, 84078	PHONE NUMBER: 435 781-9111 Ext
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1846 FSL 2107 FEL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NWSE Section: 31 Township: 09.0S Range: 21.0E Meridian: S	9. FIELD and POOL or WILDCAT: NATURAL BUTTES COUNTY: UINTAH 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"/> NOTICE OF INTENT Approximate date work will start: 11/12/2009 <input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion: <input type="checkbox"/> SPUD REPORT Date of Spud: <input type="checkbox"/> DRILLING REPORT Report Date:	<input type="checkbox"/> ACIDIZE <input type="checkbox"/> CHANGE TO PREVIOUS PLANS <input type="checkbox"/> CHANGE WELL STATUS <input type="checkbox"/> DEEPEN <input type="checkbox"/> OPERATOR CHANGE <input type="checkbox"/> PRODUCTION START OR RESUME <input type="checkbox"/> REPERFORATE CURRENT FORMATION <input type="checkbox"/> TUBING REPAIR <input type="checkbox"/> WATER SHUTOFF <input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> ALTER CASING <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> RECLAMATION OF WELL SITE <input type="checkbox"/> SIDETRACK TO REPAIR WELL <input type="checkbox"/> VENT OR FLARE <input type="checkbox"/> SI TA STATUS EXTENSION <input type="checkbox"/> OTHER	<input type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CONVERT WELL TYPE <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> PLUG BACK <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION <input type="checkbox"/> TEMPORARY ABANDON <input type="checkbox"/> WATER DISPOSAL <input checked="" type="checkbox"/> APD EXTENSION OTHER: _____

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.
 EOG Resources, Inc. respectfully requests the APD for the referenced well be extended for one year.

Approved by the
 Utah Division of
 Oil, Gas and Mining

Date: November 12, 2009
 By: 

NAME (PLEASE PRINT) Mickenzie Gates	PHONE NUMBER 435 781-9145	TITLE Operations Clerk
SIGNATURE N/A		DATE 11/12/2009



The Utah Division of Oil, Gas, and Mining

- State of Utah
- Department of Natural Resources

Electronic Permitting System - Sundry Notices

Request for Permit Extension Validation Well Number 43047500900000

API: 43047500900000

Well Name: NBU 746-31E

Location: 1846 FSL 2107 FEL QTR NWSE SEC 31 TWP 090S RNG 210E MER S

Company Permit Issued to: EOG RESOURCES, INC.

Date Original Permit Issued: 11/25/2008

The undersigned as owner with legal rights to drill on the property as permitted above, hereby verifies that the information as submitted in the previously approved application to drill, remains valid and does not require revision. Following is a checklist of some items related to the application, which should be verified.

- If located on private land, has the ownership changed, if so, has the surface agreement been updated? Yes No

- Have any wells been drilled in the vicinity of the proposed well which would affect the spacing or siting requirements for this location? Yes No

- Has there been any unit or other agreements put in place that could affect the permitting or operation of this proposed well? Yes No

- Have there been any changes to the access route including ownership, or rightof- way, which could affect the proposed location? Yes No

- Has the approved source of water for drilling changed? Yes No

- Have there been any physical changes to the surface location or access route which will require a change in plans from what was discussed at the onsite evaluation? Yes No

- Is bonding still in place, which covers this proposed well? Yes No

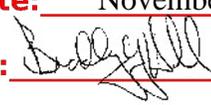
**Approved by the
Utah Division of
Oil, Gas and Mining**

Signature: Mickenzie Gates

Date: 11/12/2009

Title: Operations Clerk **Representing:** EOG RESOURCES, INC.

Date: November 12, 2009

By: 

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	FORM 9 5. LEASE DESIGNATION AND SERIAL NUMBER: UO1480ST
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.	6. IF INDIAN, ALLOTTEE OR TRIBE NAME: 7. UNIT or CA AGREEMENT NAME: NATURAL BUTTES
1. TYPE OF WELL Gas Well	8. WELL NAME and NUMBER: NBU 746-31E
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.	9. API NUMBER: 43047500900000
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779	PHONE NUMBER: 720 929-6007 Ext
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1846 FSL 2107 FEL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NWSE Section: 31 Township: 09.0S Range: 21.0E Meridian: S	9. FIELD and POOL or WILDCAT: NATURAL BUTTES COUNTY: UINTAH 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"/> NOTICE OF INTENT Approximate date work will start: 11/25/2010 <input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion: <input type="checkbox"/> SPUD REPORT Date of Spud: <input type="checkbox"/> DRILLING REPORT Report Date:	<input type="checkbox"/> ACIDIZE <input type="checkbox"/> CHANGE TO PREVIOUS PLANS <input type="checkbox"/> CHANGE WELL STATUS <input type="checkbox"/> DEEPEN <input type="checkbox"/> OPERATOR CHANGE <input type="checkbox"/> PRODUCTION START OR RESUME <input type="checkbox"/> REPERFORATE CURRENT FORMATION <input type="checkbox"/> TUBING REPAIR <input type="checkbox"/> WATER SHUTOFF <input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> ALTER CASING <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> RECLAMATION OF WELL SITE <input type="checkbox"/> SIDETRACK TO REPAIR WELL <input type="checkbox"/> VENT OR FLARE <input type="checkbox"/> SI TA STATUS EXTENSION <input type="checkbox"/> OTHER	<input type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CONVERT WELL TYPE <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> PLUG BACK <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION <input type="checkbox"/> TEMPORARY ABANDON <input type="checkbox"/> WATER DISPOSAL <input checked="" type="checkbox"/> APD EXTENSION OTHER: <input style="width: 100px;" type="text"/>

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

Kerr-McGee Oil & Gas Onshore, L.P. (Kerr-McGee) respectfully requests an extension to this APD for the maximum time allowed. Please contact the undersigned with any questions and/or comments. Thank you.

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

Date: 11/23/2010
 By: 

NAME (PLEASE PRINT) Danielle Piernot	PHONE NUMBER 720 929-6156	TITLE Regulatory Analyst
SIGNATURE N/A		DATE 11/22/2010



The Utah Division of Oil, Gas, and Mining

- State of Utah
- Department of Natural Resources

Electronic Permitting System - Sundry Notices

Request for Permit Extension Validation Well Number 43047500900000

API: 43047500900000

Well Name: NBU 746-31E

Location: 1846 FSL 2107 FEL QTR NWSE SEC 31 TWP 090S RNG 210E MER S

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- Has the approved source of water for drilling changed? Yes No
- Have there been any physical changes to the surface location or access route which will require a change in plans from what was discussed at the onsite evaluation? Yes No
- Is bonding still in place, which covers this proposed well? Yes No

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

Signature: Danielle Piernot

Date: 11/22/2010

Title: Regulatory Analyst **Representing:** KERR-MCGEE OIL & GAS ONSHORE,

Date: 11/23/2010
By: 