


STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS AND MINING						FORM 3 AMENDED REPORT <input checked="" type="checkbox"/>							
APPLICATION FOR PERMIT TO DRILL						1. WELL NAME and NUMBER CCU 2-2-25-18							
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 UNDESIGNATED							
4. TYPE OF WELL Oil Well Coalbed Methane Well: NO						5. UNIT or COMMUNITIZATION AGREEMENT NAME CANE CREEK							
6. NAME OF OPERATOR FIDELITY E&P COMPANY						7. OPERATOR PHONE 720 931-6459							
8. ADDRESS OF OPERATOR 1700 Lincoln Street Ste 2800, Denver, CO, 80203						9. OPERATOR E-MAIL Robert.Sencenbaugh@fidelityepco.com							
10. MINERAL LEASE NUMBER (FEDERAL, INDIAN, OR STATE) M43326			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 type="checkbox"/> DIRECTIONAL <input type="checkbox"/> HORIZONTAL <input checked="" type="checkbox"/>							
20. LOCATION OF WELL		FOOTAGES		QTR-QTR		SECTION		TOWNSHIP		RANGE		MERIDIAN	
LOCATION AT SURFACE		810 FSL 2377 FEL		SWSE		2		25.0 S		18.0 E		S	
Top of Uppermost Producing Zone		1198 FSL 1943 FEL		NESE		2		25.0 S		18.0 E		S	
At Total Depth		702 FNL 764 FEL		NENE		1		25.0 S		18.0 E		S	
21. COUNTY GRAND			22. DISTANCE TO NEAREST LEASE LINE (Feet) 810			23. NUMBER OF ACRES IN DRILLING UNIT 640							
			25. DISTANCE TO NEAREST WELL IN SAME POOL (Applied For Drilling or Completed) 23			26. PROPOSED DEPTH MD: 17317 TVD: 8320							
27. ELEVATION - GROUND LEVEL 5153			28. BOND NUMBER 190017646/104891324			29. SOURCE OF DRILLING WATER / WATER RIGHTS APPROVAL NUMBER IF APPLICABLE Municipal							
Hole, Casing, and Cement Information													
String	Hole Size	Casing Size	Length	Weight	Grade & Thread	Max Mud Wt.	Cement	Sacks	Yield	Weight			
Cond	26	20											
Surf	17.5	13.375	0 - 860	54.5	J-55 Butress	0.0	35/65 Poz	216	2.07	12.3			
							Class G	200	1.47	14.2			
I1	12.25	9.625	0 - 5160	40.0	L-80 Butress	0.0	35/65 Poz	580	2.08	12.3			
							50/50 Poz	200	1.43	13.5			
Prod	8.5	7	0 - 17317	29.0	P-110 Other	16.5	Class G	150	1.26	16.8			
							Class G	1285	1.2	15.5			
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 checked="" type="checkbox"/> DIRECTIONAL SURVEY PLAN (IF DIRECTIONALLY OR HORIZONTALLY DRILLED)						<input checked="" type="checkbox"/> TOPOGRAPHICAL MAP							
NAME Joy Gardner				TITLE Sr. Engineering Tech				PHONE 720 956-5763					
SIGNATURE				DATE 12/18/2013				EMAIL joy.gardner@fidelityepco.com					
API NUMBER ASSIGNED 43019500440000				APPROVAL  Permit Manager									

Fidelity Exploration & Production Company Eight Point Plan**CCU 2-2-25-18****SEC 2 / T25S / R18E, SWSE, 810' FSL & 2377' FEL**
GRAND COUNTY, UTAH**1. & 2. ESTIMATED TOPS & ANTICIPATED OIL, GAS, & WATER ZONES:**

FORMATION	TVD-RKB (ft)	Sub-Sea (ft)	Lithology	Objective
Kayenta	362	4812		
Windgate Sand	506	4668	Sandstone	
Chinle	809	4365	Sand/Shale	
Moenkopi	1047	4127	Sand/Shale	
Cutler	1611	3563	Sandstone	
Honaker Trail	3027	2147	Sand/Evaporite	
Paradox	4573	601	Salt/Clastics	Secondary
Cane Creek Shale	8284	-3110	Shale	Primary
T.D.	8320	-3146		
T.D. (LATERAL MD)	±17,317			

Estimated TD: **8320' TVD/ 17,317' MD****Anticipated BHP: 6500 Psig**

1. Lost circulation in all intervals.
2. Cement isolation is installed to surface of the well isolating all zones by cement and casing.

3. PRESSURE CONTROL EQUIPMENT:Intermediate & Production Hole – 10,000 Psig
BOP schematic diagrams attached.**4. CASING PROGRAM:**

CASING	Hole Size	Length	Size	WEIGHT	Grade	Thread	Collapse (psi) a	Burst (psi) b	Tensile (1K lbs) c
Conductor	26"	0 – 90'	20"						
Surface	17 1/2"	0' – 860'	13 3/8"	54.5#	J-55	BTC	1130/2.1	2730/3.0	909/2.5
Intermediate	12 1/4"	0 – 5160'	9-5/8"	40.0#	L-80	BTC	7,100/1.5	9,440/1.2	1213/2.1
Production	8-1/2"	0 – 5100'	7"	29#	P-110	BTC	8,530/1.9	11,220/1.25	955/2.1
Production	8-1/2"	5100 – 8700'	7"	32#	HCP-110	BTC	11,890/1.9	12,460/1.25	897/2.1
Production	8-1/2"	8700 – 17,317'	7"	29#	P-110	BTC	8,530/1.9	11,220/1.25	955/2.1

Surface based on full evacuation: a=9.0 ppg fluid on backside, b=9.0 ppg inside, & c=9.0 ppf fluid + 100K overpull.

Intermediate based on full evacuation: a=9.0 ppg fluid on backside, b=9.0 ppg inside, & c=9.0 ppf fluid + 100K overpull.

Production based on full evacuation: a=16.5 ppg fluid on backside/1.25 psi/ft gradient w/ 0.375 inside X 1.9 for salt intervals, b=16.5 ppg inside, & c=16.5 ppf fluid + 100K overpull

All casing will be new or inspected.

Fidelity Exploration & Production Company Eight Point Plan**CCU 2-2-25-18****SEC 2 / T25S / R18E, SWSE, 810' FSL & 2377' FEL****GRAND COUNTY, UTAH****5. Float Equipment:****Surface Hole Procedure (0' - 860'±)**

Guide Shoe

Insert Float Collar (PDC drillable)

Centralizers: 1-5' above shoe, top of jts. #2 and #3 then every 3rd joint to surface. (8 total)**Intermediate Hole Procedure (0' - 5,160±)**

Guide Shoe

Insert Float Collar (PDC drillable)

Centralizers: 1-5' above shoe, top of jts. #2 and #3 then every 3rd joint to surface. (38 total)**Production Hole Procedure (0' - TD):**

Float shoe, 1 joint casing, float collar and balance of casing to surface. Thread lock float shoe, top and bottom of float collar, and top of 2nd joint. Two centralizers on the shoe joint, then every joint into the 7" casing from shoe joint to 4,200'. (±200 total)

6. MUD PROGRAM

Interval	Mud Type	Mud Wt.	PV / YP	OWR
0'-860'	Air Mist	---	---	---
860' - 5,160'	Air Mist/Aerated Water	---	---	---
5,160' - TD	Oil Based Mud	13.5-16.5 ppg	22-32 / 12-22	+/-90:10

Intermediate & Production Hole Procedure (5,160' - TD): Anticipated mud weight 13.5 – 16.5 ppg depending on actual wellbore conditions encountered while drilling.

An oil based mud (OBM) system will be used to prevent fluid interaction with the salts and shales. LCM sweeps, pills, etc., will be used to prevent fluid loss. Adequate amounts of weighting material will be on hand as needed for well control.

7. VARIANCE REQUESTS:

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

- Fidelity E&P. 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).
- Fidelity E&P 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.
- Fidelity E&P requests a variance to regulations, during air drilling operations only, requiring dedusting equipment. Dust during air drilling operations is controlled by water mist.

Fidelity Exploration & Production Company Eight Point Plan**CCU 2-2-25-18****SEC 2 / T2S5 / R18E, SWSE, 810' FSL & 2377' FEL**
GRAND COUNTY, UTAH

- Fidelity E&P 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).
- Fidelity E&P 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:**Mud Logs:** Mud log from 860' to TD.**Open-hole Logs:** Quad-Combo, (Dipole Sonic), ECS, FMI, OBMI*

*depending on hole conditions

9. CEMENT PROGRAM:**Surface Hole Procedure (Surface – 860'±):****Lead:** 216 sks 35:65 Poz cement + 0.04 pps Static Free + 0.5% bwoc KCL + 0.25 pps LCM + 2 pps Kol-Seal (LCM) + 0.5% bwoc Na Metasilicate + 0.5 gps FP-13L + 6% bwoc gel + 11.36 gps of water. Yield = 2.07 ft³/sk @ 12.30 ppg**Tail:** 200 sks Class "G" cement + 0.04 pps Static Free + 1% bwoc CaCl + 0.25 pps LCM + 0.5 gps FP-13L + 7.35 gps water. Yield = 1.47 ft³/sk @ 14.20 ppg**Top Out:** As necessary with Class "G" cement with 2% CaCl₂, 1/4#/sk LCM 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.**Intermediate Hole Procedure (Surface – 5,160'±):****Lead:** 580 sks 35:65 Poz cement + 0.04 pps Static Free + 0.25 pps LCM + 0.4% bwoc FL-63 + 0.2% CD32 + 0.2% BA-59 + 0.5 gps FP-13L + 2% bwoc gel + 11.56 gps of water. Yield = 2.08 ft³/sk @ 12.30 ppg**Tail:** 200 sks 50:50 Poz cement + 0.04 pps Static Free + 0.25 pps LCM + 0.2% bwoc CD-32 + 0.2% bwoc BS-59 + 0.5 gps FP-13L + 6.97 gps water. Yield = 1.43 ft³/sk @ 13.5 ppg**Top Out:** As necessary with Class "G" cement with 2% CaCl₂, 1/4#/sk LCM mixed at 15.6 ppg, 1.18 ft³/sk., 5.2 gps water.**Production Hole Procedure (5,160 – 17,317'±):****Lead:** 150 sks Class G cement + 0.11 pps LCM fiber + 0.5% retarder + 3% bwoc CaCl + 20% bwoc Barite. Yield = 1.26 @ 16.80 ppg.**Tail:** 1285 sks Class G cement + 0.1 pps fiber + 0.2% R3 + 0.04 pps Static Free + 0.5% bwoc KCL + 0.25 pps LCM + 2 pps Kol-Seal (LCM) + 0.2% bwoc CD-32 + 0.5 gps FP-13L + 30% bwoc Barite + 6% bwoc gel + 5.39 gps of water. Yield = 1.20 ft³/sk @ 15.50 ppg.

Fidelity Exploration & Production Company Eight Point Plan

CCU 2-2-25-18

SEC 2 / T25S / R18E, SWSE, 810' FSL & 2377' FEL

GRAND COUNTY, UTAH

Note: The above number of sacks is based on gauge-hole calculation.
Final Cement volumes will be based upon actual depth, gauge-hole plus 30% excess and depth of hydrocarbon show. Actual weights will depend on well conditions. Specific additives will vary by vendor.

10. ABNORMAL CONDITIONS:

Surface Hole (Surface – 860'±):

None

Intermediate & Production Hole (860'± - TD):

Lost circulation zones and over pressure in the production zone.

11. STANDARD REQUIRED EQUIPMENT:

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

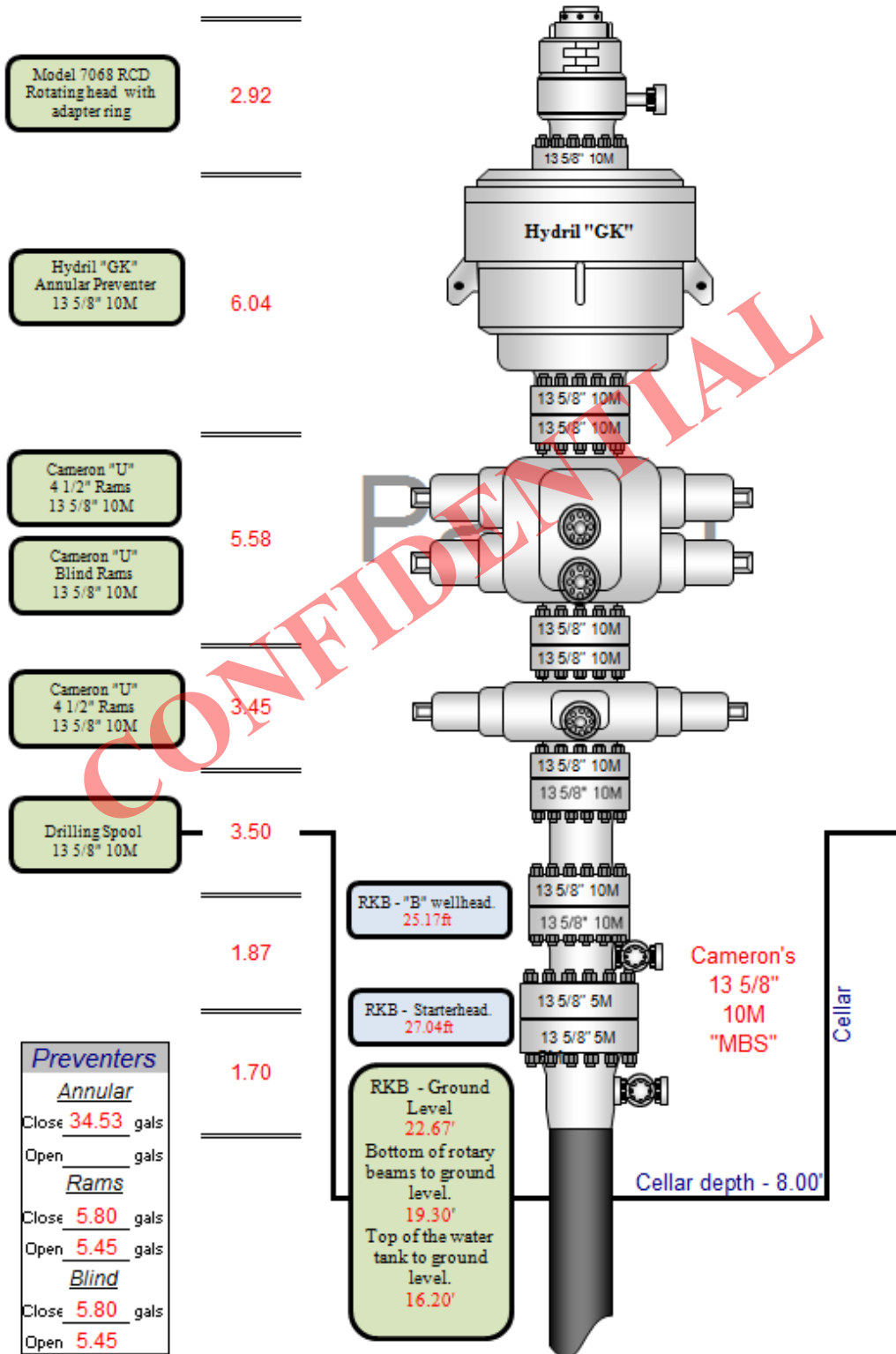
12. HAZARDOUS CHEMICALS:

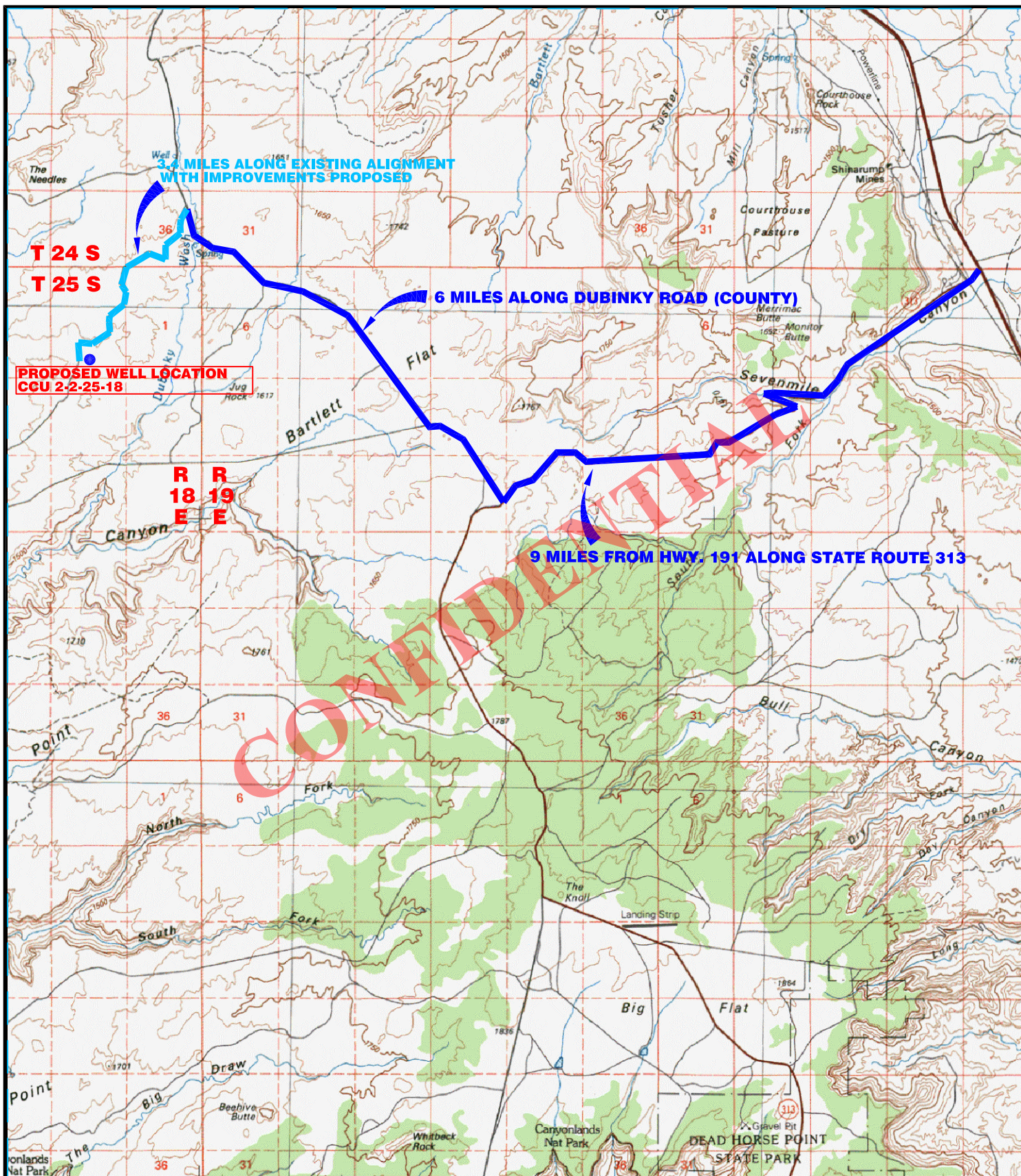
No chemicals subject to reporting under SARA title III in an amount equal to or greater than 10,000 pounds will be used, produced, stored, transported, or disposed of annually in association with the drilling of this well. Furthermore, no extremely hazardous substances, as defined in 40 CFR 355, in threshold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

(Attachment: BOP Schematic Diagram)

Fidelity Exploration & Production Company Eight Point Plan

CCU 2-2-25-18

SEC 2 / T25S / R18E, SWSE, 810' FSL & 2377' FEL
GRAND COUNTY, UTAH



- PROPOSED WELL
- PROPOSED ACCESS TO SUBJECT WELL
- ROAD TO OTHER WELLS
- EXISTING ROAD TO BE IMPROVED
- EXISTING ROAD

TOPOGRAPHIC MAP "A"

DATE: 12-2-13

SCALE: 1:100000

SURVEYED 9-13-13

DRAWN BY: TMK

REVISED:

FIDELITY EXPLORATION & PRODUCTION CO.

PROPOSED ACCESS TO

CCU 2-2-25-18

WITHIN SECTIONS 1 & 2, T 25 S, R 18 E, SLM, GRAND COUNTY, UTAH

KEOGH LAND SURVEYING

45 EAST CENTER STREET

MOAB, UTAH, 84532

RECEIVED: December 18, 2013

WELL	CCU State 2-2-25-18H	FIELD	UT, Grand County (NAD 27 CZ)	STRUCTURE	Fidelity (CCU State 2-2-25-18H)
Magnetic Parameters Model: BGGM 2013 Dip: 64.627° Mag Dec: 10.822°		Surface Location Lat: N 38 39 14.267 Lon: W 109 54 3.358		Miscellaneous Slot: CCU State 2-2-25-18H Plan: RD mdr 03Oct13	
Date: October 03, 2013 FS: 51225.6mT		NAD27 Utah State Plane, Central Zone, US Feet Northing: 120870.90 RUS Easting: 2456708.20 RUS Grid Conv: 1.024° Scale Fact: 1.00010921		TVD Ref: RKB(5174ft above Mean Sea Level) Srvy Date: October 03, 2013	

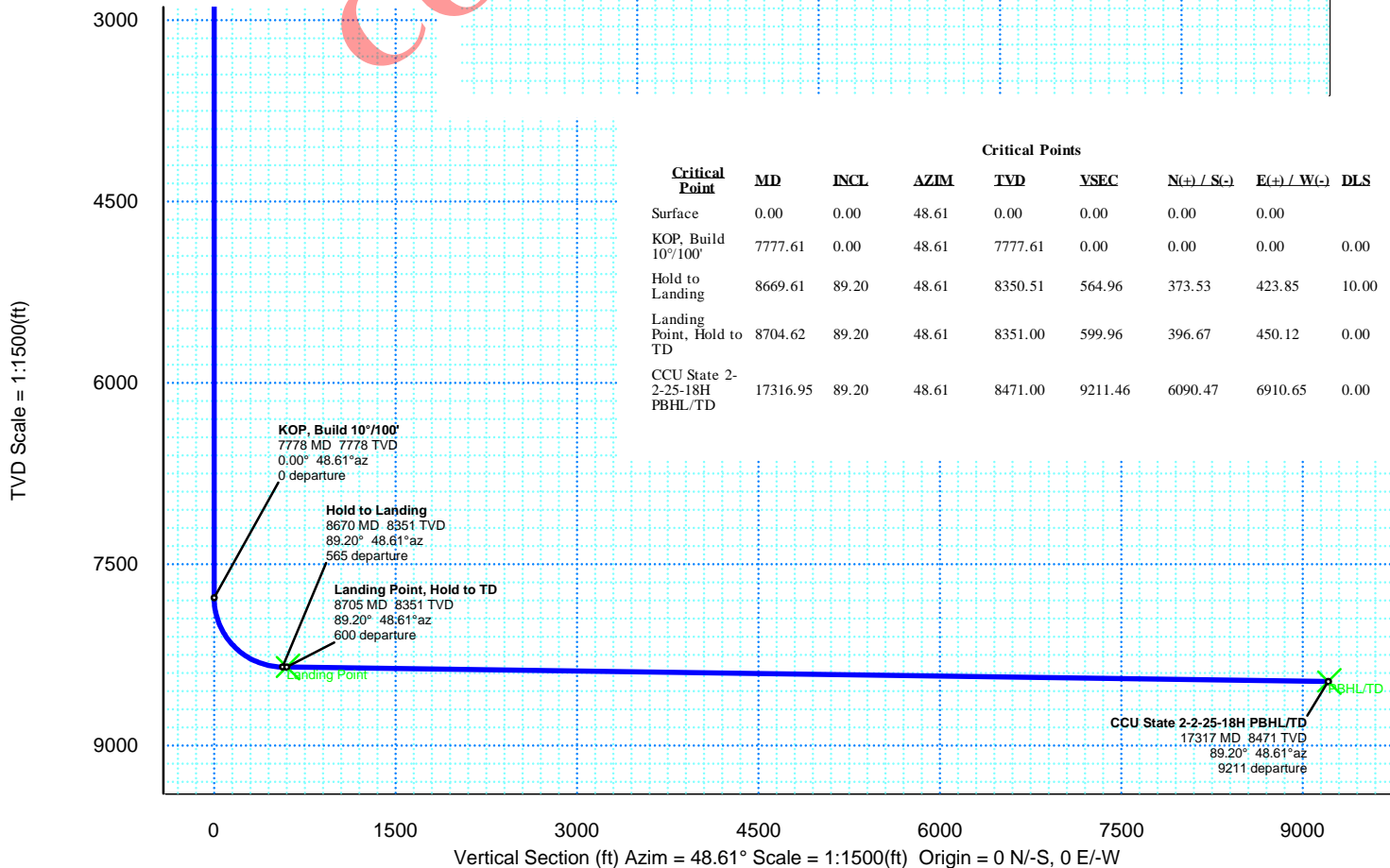
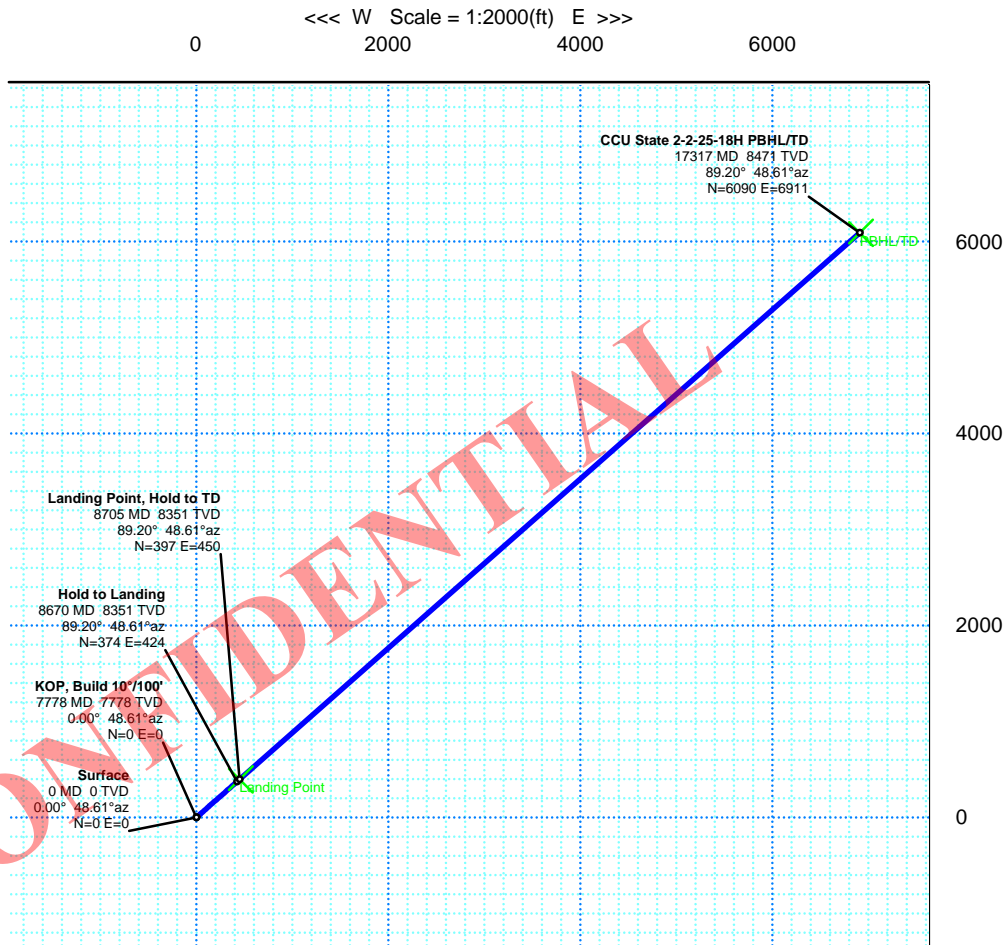
Proposal



True North
Tot Corr (M->T 10.822°)
Mag Dec (10.822°)
Grid Conv (1.024°)

Quality Control

Date Drawn: October 03, 2013 09:34:24 AM
Drawn by: Matt VanderSchaaf
Checked by:
Client OK:





SURFACE USE PLAN

Name of Operator Fidelity Exploration & Production Company
Address: 1700 Lincoln Street, Suite 2800
Denver, CO 80203
Well Location: **CCU 2-2-25-18**
810' FSL & 2377' FEL,
SWSE, Section 2, T25S, R18E
Grand County, UT

The proposed CCU 2-2-25-18 well site will be located on surface and minerals owned by the State of Utah and managed by the School and Institutional Trust Lands Administration (SITLA). Fidelity does not anticipate any additional disturbance beyond the access road and original well pad dimensions. However, any additional construction work will be accomplished in coordination with the State and a Sundry Notice will be submitted to the State prior to construction of any new surface disturbance activity on State surface not specified in this document.

The surface owner or surface owner representative and dirt contractor will be provided with an approved copy of the surface use plan of operations and approved conditions of approval before initiating any additional construction activities. The State of Utah Authorized Officer will be notified at least 48 hours prior to beginning drilling and/or additional facilities construction for scheduling of a preconstruction meeting.

1. Location of Existing Roads:

- a. The well pad is located approximately 15 miles west of Moab, Utah.
- b. Directions to the location from Moab, Utah are as follows:

Proceed northwest on Highway 191 for 11.2 miles. Turn left onto Highway 313 and proceed southwest 9 miles. Turn right on Dubinky road and proceed northwest for 6 miles. Turn left onto unnamed County Road and proceed 3.4 miles to pad access road and location. For location of access roads, see Map A & B.

All roads are maintained by the Grand County Road Department or Utah State Highway Department. Any required improvements to the unnamed County Road will be in coordination with and with permission from the Grand County Road Department.

- c. All existing roads will be maintained and kept in good repair during all phases of operation.

- d. Vehicle operators will obey posted speed restrictions and observe safe speeds commensurate with road and weather conditions.

2. New or Reconstructed Access Roads:

- a. Approximately 0.3 miles of new access road will be constructed for the drilling of this well
- b. Surface disturbance and vehicular travel will be limited to the approved location access road.
- c. The operator will be responsible for all maintenance of the access road including drainage structures.

3. Location of Existing Wells:

- a. There will be one existing well within a 40' of the proposed CCU 2-2-25-18 location.

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

- a. All permanent structures will be painted a flat, non-reflective Juniper Green or Beetle Green to match the standard environmental colors. All facilities will be painted within six months of installation. Facilities required to comply with the Occupational Safety and Health Act (OSHA) may be excluded.
- b. Site security guidelines identified in 43 CFR 3163.7-5 and Onshore Oil and Gas Order No. 3 will be adhered to.
- c. A gas meter run will be constructed and located on lease within 500 feet of the wellhead. Meter runs will be housed and/or fenced. All gas production and measurement shall comply with the provisions of 43 CFR 3162.7-3, Onshore Oil and Gas Order No. 5, and American Gas Association (AGA) Report No. 3.
- d. A tank battery will be constructed on this well site; it will be surrounded by a dike of sufficient capacity to contain the storage capacity of the largest tank. All loading lines and valves will be placed inside the berm surrounding the tank battery. All liquid hydrocarbons production and measurement shall conform to the provisions of 43 CFR 3162.7-3 and Onshore Oil and Gas Order No. 4 and Onshore Oil and Gas Order No. 5 for natural gas production and measurement.
- e. Any necessary pits will be properly fenced to prevent any wildlife and livestock entry.
- f. All access roads will be maintained as necessary to prevent erosion and accommodate year-round traffic. The road will be maintained in a safe useable condition.
- g. The site will require periodic maintenance to ensure that drainages are kept open and free of debris, ice, and snow, and that surfaces are properly treated to reduce erosion, fugitive dust, and impacts to adjacent areas.

- h. A pipeline corridor has been considered for this well and will be applied for once production is achieved.

5. Location and Type of Water Supply:

- a. The water supply for construction, drilling and operations will be provided under a direct purchase agreement with the City of Moab municipal water supply.
- b. No water pipelines will be laid for this well.
- c. No water well will be drilled for this well.
- d. Drilling water for this will be hauled on the road(s) shown.
- e. Should additional water sources be pursued they will be properly permitted through the State of Utah – Division of Water Rights.

6. Source of Construction Material:

- a. The use of materials will conform to 43 CFR 3610.2-3.
- b. No construction materials will be removed from BLM lands.
- c. If any gravel is used, it will be obtained from a state approved gravel pit.

7. Ancillary Facilities:

- a. Garbage Containers and Portable Toilets are the only ancillary facilities proposed in this application.
- b. No camps or airstrips are proposed with this application.

8. Well Site Layout:

- a. The well will be properly identified in accordance with 43 CFR 3162.6.
- b. The existing access to the well pad will be from the west.
- c. The pad and road designs are consistent with BLM specifications.
- d. All surface disturbing activities, will be supervised by a qualified, responsible company representative who is aware of the terms and conditions of the APD and specifications in the approved plans.
- e. The stockpiled topsoil (first 6 inches or maximum available) will be stored in a discontinuous windrow on the side of the location to prevent any possible contamination. All topsoil will be stockpiled for reclamation in such a way as to prevent soil loss, sterilization and contamination.

- f. Pits will remain fenced until site cleanup.
- g. The blooie line will be located at least 100 feet from the well head.
- h. Water injection may be implemented if necessary to minimize the amount of fugitive dust.

9. Plans for Restoration of the Surface (Interim Reclamation and Final Reclamation):

- a. Multiple wells are planned for the CCU 2-2-25-18 location. Upon drilling of the final well for this pad, interim site reclamation will be accomplished for portions of the site not required for the continued operation of the wells.
- b. Upon final well completion, any hydrocarbons in the pit shall be removed in accordance with 43 CFR 3162.7-1. Once the reserve pit is dry, the nylon reinforced plastic liner 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 re-contoured to the approximate natural contours.
- c. Following BLM published Best Management Practices, interim reclamation will be completed following completion of the final well to reestablish vegetation, reduce dust and erosion, and complement the visual resources of the area.
 - 1. All equipment and debris will be removed from the area proposed for interim reclamation and the pit area will be backfilled and re-contoured.
 - 2. The area outside of the rig anchors and other disturbed areas not needed for the operation of the wells will be re-contoured to blend with the surrounding area and reseeded with the following native grass seeds:

<i>Species of Seed</i>	<i>Broadcast Application Rate (lbs/ac)</i>	<i>App. Rate PLS (lbs/ac)</i>
Blue Gramma	5	3
Galleta	2	2
Indian Ricegrass	3	2
Bottlebrush Squirreltail	1	1
Total: 11		Total: 8

- 3. Reclaimed areas receiving incidental disturbance during the life of the producing well will be re-contoured and reseeded as soon as practical.
- d. The Operator will control noxious weeds along access road use authorizations, pipeline route authorizations, well sites, or other applicable facilities by spraying or mechanical removal. A list of noxious weeds may be obtained from the BLM or the appropriate County Extension Office.
- e. Prior to final abandonment of the site, all disturbed areas, including the access road, will

be scarified and left with a rough surface. The site will then be seeded as described above.

- f. A final abandonment notice will be submitted to the State when the reclamation activities (as presented in this document) are complete and new vegetation is established. Should there be any deviation from these planned reclamation activities, the surface owner will be notified and a Sundry Notice will be submitted to the State for approval of the new closure and reclamation activities.

10. Surface and Mineral Ownership:

- a. Surface Ownership – State of Utah.
- b. Mineral Ownership – State of Utah.

11. Other Information:

Company Representatives:

Bruce Houtchens
Drilling and Completion Manager
1700 Lincoln St. Suite 2800
Denver, CO 80203
(713) 351-1950-Direct line
(281) 217-6452 Cell
Bruce.houtchens@fidelityepco.com

Will Alexander
Sr. Drilling Engineer
1700 Lincoln St. Suite 2800
Denver, CO 80203
(720) 917-3025-Direct line
(303) 819-5461 Cell
William.alexander@fidelityepco.com

Joy Gardner – Sr. Engineering Tech
Fidelity Exploration & Production Company
1700 Lincoln St. Suite 2800
Denver, CO, 80203
(720) 956-5763 - Direct line
Joy.gardner@fidelityepco.com



WASTE MANAGEMENT PLAN

Name of Operator: Fidelity Exploration & Production Company

Address: 1700 Lincoln Street, Suite 2800
Denver, CO 80203

Well Location: **CCU 2-2-25-18**
810' FSL & 2377' FEL,
SWSE, Section 2, T25S, R18E
Grand County, UT

For the CCU 2-2-25-18 well, Fidelity will drill with air to a depth of 5,160 feet and then drill with oil based mud (OBM) from 5,160 to 17,317 feet (TD). Approximately 190 cubic yards of air based cuttings will be generated and disposed into the reserve pit. The reserve pit will be lined with 24 mil minimum thickness, nylon reinforced, plastic liner material. The liner will overlay a felt liner pad only if rock is encountered during excavation. The pit 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. Pit walls will be sloped no greater than 2:1. A minimum 2-foot freeboard will be maintained in the pit at all times during drilling and completion operations. Three sides of the reserve pit will be fenced before drilling starts. The fourth side will be fenced as soon as drilling is completed, and shall remain until the pit is dry. After the reserve pit has dried, all areas not needed for production will be rehabilitated.

OBM will be provided by National Oilwell Varco, Moab, UT, and stored in 400 barrel frac tanks on location. When the OBM is returned to the surface, solids control equipment will be used to remove OBM from the cuttings for reuse. Shale shakers, drying shakers, and a vertical cuttings dryer will be used in series for OBM removal. The dried cuttings will be dumped into a small shale bin and later transferred to a large shale bin for mix-off with saw dust, as necessary, and storage prior to hauling. OBM materials will be stored on location for roughly 25 to 30 days.

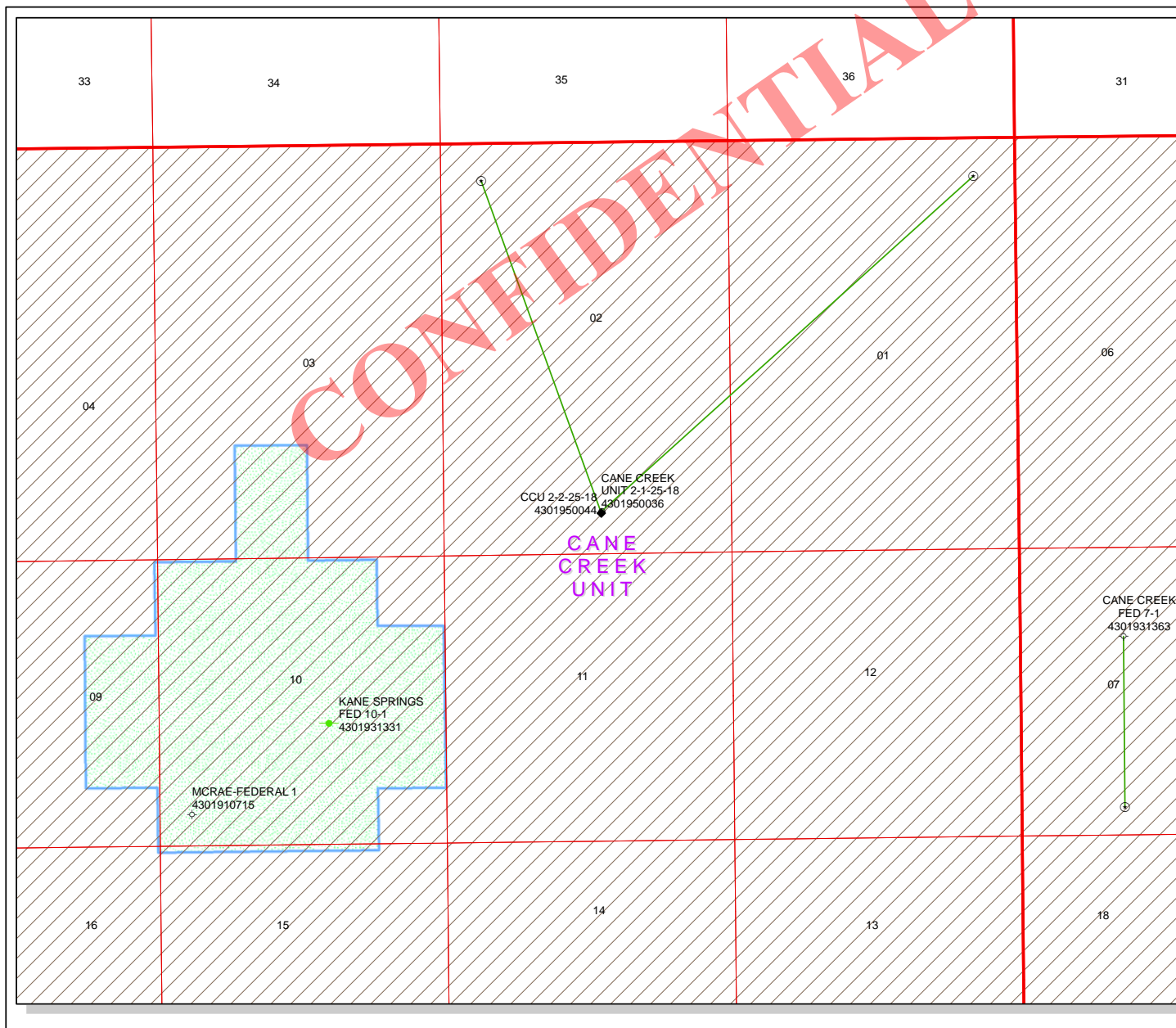
Roughly 177 cubic yards of OBM cuttings will be generated at the CCU 2-1-25-18. All OBM cuttings will be disposed at Klondike Flats Class I Landfill. The Klondike facility is owned and operated by Solid Waste Management Special Service District #1, P.O. Box 980, Moab, UT 84532, and is located approximately 20 miles north of Moab, off of Highway 191.

Produced fluids from the well other than water will be produced into a test tank until such time as construction of production facilities is completed. Any spills of oil, gas, salt water or other produced fluids will be cleaned up and removed. After initial well clean-up, a 400 barrel tank will be installed to contain produced wastewater. This water will be transported from the tank to an approved disposal facility. Any salts and/or chemicals, which are an integral part of the drilling system, will be disposed of in the same manner as the drilling fluid.

Sanitary facilities will be on site at all times during operations. Sewage will be placed in a portable chemical toilet. The portable chemical toilet will be replaced periodically utilizing a licensed contractor. The contractor will transport the toilet to the Grand County Wastewater Treatment Facility for clean-out in accordance with state and county regulations.

Trash will be contained in a trash cage and hauled away to an approved disposal site as necessary, but no later than at the completion of drilling operations. The contents of the trash container will be hauled to the approved Grand County facility, Bob's Sanitation, Moab, Utah.

CONFIDENTIAL



API Number: 4301950044

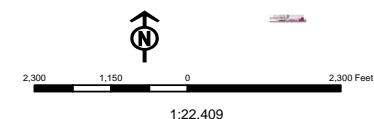
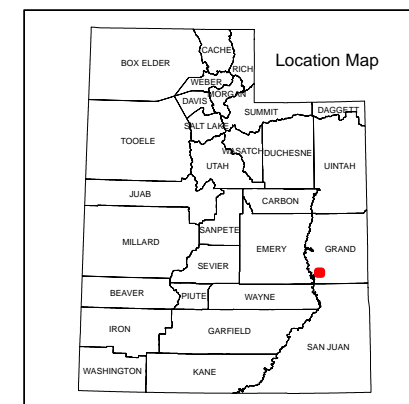
Well Name: CCU 2-2-25-18

Township: T25.0S Range: R18.0E Section: 02 Meridian: S

Operator: FIDELITY E&P COMPANY

Map Prepared: 12/19/2013
Map Produced by Diana Mason

Wells Query		Units	
Status		STATUS	
APD - Approved Permit		ACTIVE	
DRL - Spudded (Drilling Commenced)		EXPLORATORY	
GIW - Gas Injection		GAS STORAGE	
GS - Gas Storage		NF PP OIL	
LOC - New Location		NF SECONDARY	
OPS - Operation Suspended		PI OIL	
PA - Plugged Abandoned		PP GAS	
PGW - Producing Gas Well		PP GEOTHERML	
POW - Producing Oil Well		PP OIL	
SGW - Shut-in Gas Well		SECONDARY	
SOW - Shut-in Oil Well		TERMINATED	
TA - Temp. Abandoned			
TW - Test Well			
WOW - Water Disposal			
WW - Water Injection Well			
WSW - Water Supply Well			
		Fields	
		STATUS	
		Unknown	
		ABANDONED	
		ACTIVE	
		COMBINED	
		INACTIVE	
		STORAGE	
		TERMINATED	



United States Department of the Interior

BUREAU OF LAND MANAGEMENT

Utah State Office
440 West 200 South, Suite 500
Salt Lake City, UT 84101

IN REPLY REFER TO:

3160

(UT-922)

December 20, 2013

Memorandum

To: Assistant Field Office Manager Resources,
Moab Field Office

From: Michael Coulthard, Petroleum Engineer

Subject: 2013 Plan of Development Cane Creek Unit,
Grand and San Juan Counties, Utah.

Pursuant to email between Diana Mason, Division of Oil, Gas and Mining, and Mickey Coulthard, Utah State Office, Bureau of Land Management, the following well is planned for calendar year 2013 within the Cane Creek Unit, Grand and San Juan Counties, Utah.

API#	WELL NAME	LOCATION
Proposed PZ CANE CREEK)		
43-019-50044	CCU 2-2-25-18	Sec 02 T25S R18E 0810 FSL 2377 FEL
		BHL Sec 01 T25S R18E 0702 FNL 0764 FEL

This office has no objection to permitting the well at this time.

Michael Coulthard

Digitally signed by Michael Coulthard
DN: cn=Michael Coulthard, o=Bureau of Land Management,
ou=Division of Minerals, email=mcoultha@blm.gov, c=US
Date: 2013.12.20 13:37:03 -0700

bcc: File - Cane Creek Unit
Division of Oil Gas and Mining
Central Files
Agr. Sec. Chron
Fluid Chron

MCoulthard:mc:12-20-13

RECEIVED: December 20, 2013



Diana Mason <dianawhitney@utah.gov>

Cane Creek Unit

Jeff Conley <jconley@utah.gov>

Thu, Feb 13, 2014 at 8:30 AM

To: Bradley Hill <bradhill@utah.gov>, Diana Mason <dianawhitney@utah.gov>, "Gardner, Joy"

<joy.gardner@fidelityepco.com>

Cc: Jim Davis <jimdavis1@utah.gov>

Hello,

The following well has been approved by SITLA including arch and paleo:

(4301950044) CCU 2-2-25-18

Thanks,

--

Jeff Conley
SITLA Resource Specialist
jconley@utah.gov
801-538-5157

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Well Name	FIDELITY E&P COMPANY CCU 2-2-25-18 43019500440000			
String	Cond	Surf	I1	Prod
Casing Size(in)	20.000	13.375	9.625	7.000
Setting Depth (TVD)	90	860	5160	8471
Previous Shoe Setting Depth (TVD)	0	90	860	5160
Max Mud Weight (ppg)	8.3	8.3	8.3	16.5
BOPE Proposed (psi)	0	500	10000	10000
Casing Internal Yield (psi)	1000	2730	5750	11220
Operators Max Anticipated Pressure (psi)	6500			14.8

Calculations	Cond String	20.000	"	
Max BHP (psi)	.052*Setting Depth*MW=	39		
			BOPE Adequate For Drilling And Setting Casing at Depth?	
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=	28	NO	
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=	19	NO	
			*Can Full Expected Pressure Be Held At Previous Shoe?	
Pressure At Previous Shoe	Max BHP-.22*(Setting Depth - Previous Shoe Depth)=	19	NO	
Required Casing/BOPE Test Pressure=		90	psi	
*Max Pressure Allowed @ Previous Casing Shoe=		0	psi *Assumes 1psi/ft frac gradient	

Calculations	Surf String	13.375	"	
Max BHP (psi)	.052*Setting Depth*MW=	374		
			BOPE Adequate For Drilling And Setting Casing at Depth?	
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=	268	YES	air/mist
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=	182	YES	OK
			*Can Full Expected Pressure Be Held At Previous Shoe?	
Pressure At Previous Shoe	Max BHP-.22*(Setting Depth - Previous Shoe Depth)=	202	NO	OK
Required Casing/BOPE Test Pressure=		860	psi	
*Max Pressure Allowed @ Previous Casing Shoe=		90	psi *Assumes 1psi/ft frac gradient	

Calculations	I1 String	9.625	"	
Max BHP (psi)	.052*Setting Depth*MW=	2227		
			BOPE Adequate For Drilling And Setting Casing at Depth?	
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=	1608	YES	air/mist
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=	1092	YES	OK
			*Can Full Expected Pressure Be Held At Previous Shoe?	
Pressure At Previous Shoe	Max BHP-.22*(Setting Depth - Previous Shoe Depth)=	1281	NO	OK
Required Casing/BOPE Test Pressure=		4025	psi	
*Max Pressure Allowed @ Previous Casing Shoe=		860	psi *Assumes 1psi/ft frac gradient	

Calculations	Prod String	7.000	"	
Max BHP (psi)	.052*Setting Depth*MW=	7268		
			BOPE Adequate For Drilling And Setting Casing at Depth?	
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=	6251	YES	10M BOPE, annular preventer, dbl rams, blind rams, rotating
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=	5404	YES	head
			*Can Full Expected Pressure Be Held At Previous Shoe?	
Pressure At Previous Shoe	Max BHP-.22*(Setting Depth - Previous Shoe Depth)=	6540	NO	OK
Required Casing/BOPE Test Pressure=		7854	psi	
*Max Pressure Allowed @ Previous Casing Shoe=		5160	psi *Assumes 1psi/ft frac gradient	

43019500440000 CCU 2-2-25-18

Casing Schematic

Surface

to 0' @ 5% w/o, tail 522'
cut tail 642'
13-3/8"
MW 9.
Frac 19.3

9-5/8"
MW 9.
Frac 19.3

7778'
KOP

8770'

Horizontal 89.2° Az 49°

7"
MW 16.5

127
127
281

TOC @ 311.
Surface 860. MD
860. TVD
1047'
1611'
to 574' @ 0% w/o, tail 4426'
* Proposed 700'
TOC @ 2405.
3027' Honaker Trail
4573' Paradox
Intermediate 5160. MD
5160. TVD
8284' Cane Creek Shale
to 5189 @ 2% w/o, tail 6513'
* Proposed 5160
* S + P ✓

Navajo
Kayenta
Windgate
Chinle
Moenkopi

Cutler

* S + P ✓

* S + P ✓

Production
17317. MD
8471. TVD

810 SL	2377 EL
6090	6911
6900 SL	4534 EL
7595	5280
675 FNL	746 FEL

NE NE Sec 1-25S-18E

✓ Skip cuts.

CONFIDENTIAL

Well name:	43019500440000 CCU 2-2-25-18	
Operator:	FIDELITY E&P COMPANY	
String type:	Surface	Project ID: 43-019-50044
Location:	GRAND COUNTY	

Design parameters:**Collapse**

Mud weight: 9.000 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: 74 °F
Bottom hole temperature: 86 °F
Temperature gradient: 1.40 °F/100ft
Minimum section length: 100 ft

Cement top: 311 ft

Burst

Max anticipated surface pressure: 757 psi
Internal gradient: 0.120 psi/ft
Calculated BHP 860 psi

No backup mud specified.

Tension:

8 Round STC: 1.80 (J)
8 Round LTC: 1.70 (J)
Buttress: 1.60 (J)
Premium: 1.50 (J)
Body yield: 1.50 (B)

Tension is based on air weight.
Neutral point: 746 ft

Non-directional string.**Re subsequent strings:**

Next setting depth: 5,160 ft
Next mud weight: 9.000 ppg
Next setting BHP: 2,412 psi
Fracture mud wt: 19.250 ppg
Fracture depth: 860 ft
Injection pressure: 860 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)	Est. Cost (\$)
1	860	13.375	54.50	J-55	Buttress	860	860	12.49	11420

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	402	1130	2.810	860	2730	3.17	46.9	853.2	18.20 B

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

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

Date: January 9, 2014
Salt Lake City, Utah

Remarks:

Collapse is based on a vertical depth of 860 ft, a mud weight of 9 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:	43019500440000 CCU 2-2-25-18	
Operator:	FIDELITY E&P COMPANY	
String type:	Intermediate	Project ID: 43-019-50044
Location:	GRAND COUNTY	

Design parameters:**Collapse**

Mud weight: 9.000 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: 74 °F
Bottom hole temperature: 146 °F
Temperature gradient: 1.40 °F/100ft
Minimum section length: 100 ft

Cement top: 2,405 ft

Burst

Max anticipated surface pressure: 4,025 psi
Internal gradient: 0.220 psi/ft
Calculated BHP 5,160 psi

No backup mud specified.

Tension:

8 Round STC: 1.80 (J)
8 Round LTC: 1.70 (J)
Buttress: 1.60 (J)
Premium: 1.50 (J)
Body yield: 1.50 (B)

Tension is based on air weight.
Neutral point: 4,469 ft

Non-directional string.**Re subsequent strings:**

Next setting depth: 8,471 ft
Next mud weight: 16.500 ppg
Next setting BHP: 7,261 psi
Fracture mud wt: 19.250 ppg
Fracture depth: 5,160 ft
Injection pressure: 5,160 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)	Est. Cost (\$)
1	5160	9.625	40.00	L-80	Buttress	5160	5160	8.75	79010
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	2412	3090	1.281	5160	5750	1.11	206.4	916.3	4.44 B

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

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

Date: January 9, 2014
Salt Lake City, Utah

Remarks:

Collapse is based on a vertical depth of 5160 ft, a mud weight of 9 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:	43019500440000 CCU 2-2-25-18	
Operator:	FIDELITY E&P COMPANY	
String type:	Production	Project ID: 43-019-50044
Location:	GRAND COUNTY	

Design parameters:**Collapse**

Mud weight: 16.500 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: 74 °F
Bottom hole temperature: 193 °F
Temperature gradient: 1.40 °F/100ft
Minimum section length: 100 ft

Cement top: 9,693 ft

Burst

Max anticipated surface pressure: 5,397 psi
Internal gradient: 0.220 psi/ft
Calculated BHP 7,261 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: 1.60 (B)

Tension is based on air weight.
Neutral point: 6,467 ft

Directional Info - Build & Hold

Kick-off point 7778 ft
Departure at shoe: 9211 ft
Maximum dogleg: 10 °/100ft
Inclination at shoe: 89.2 °

Estimated cost: 213,498 (\$)

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Est. Cost (\$)
3	5100	7	29.00	P-110	Buttress	5100	5100	6.059	61631
2	3600	7	32.00	HCP-110	Buttress	8351	8700	6	47734
1	8617	7	29.00	P-110	Buttress	8471	17317	6.059	104133

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
3	4371	8221	1.881	6519	11220	1.72	255.4	929.4	3.64 B
2	7158	10770	1.505	7235	11640	1.61	107.5	1024.9	9.53 B
1	7261	8530	1.175	7261	11220	1.55	3.5	929.4	99.99 B

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

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

Date: January 9, 2014
Salt Lake City, Utah

Remarks:

Collapse is based on a vertical depth of 8471 ft, a mud weight of 16.5 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.

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

ON-SITE PREDRILL EVALUATION

Utah Division of Oil, Gas and Mining

Operator FIDELITY E&P COMPANY
Well Name CCU 2-2-25-18
API Number 43019500440000 **APD No** 9221 **Field/Unit** UNDESIGNATED
Location: SWSE **Sec** 2 **Tw** 25.0S **Rng** 18.0E 810 FSL 2377 FEL
1/4, 1/4
GPS Coord (UTM) **Surface Owner**

Participants

Bart Kettle-DOGM, Nicole Nielson-UDWR, Jim Davis-SITLA, Charlie Harrison-Harrison Oil Field Services, Joy Gardner-Fidelity E&P, Dina Brown-Fidelity E&P Company, Ben Briggs-Fidelity E&P.

Regional/Local Setting & Topography

Original on-site surface evaluation completed on 10/21/2013 as part of permitting for the CCU 2-1-25-18. Well pad construction has been started, but well has not been spudded. Resource and social aspects surrounding the original APD have not changed, therefore information is deemed relevant and as such will be used for current APD.

Proposed project site is located ~19 miles northwest of Moab Utah, in Grand County Utah. On a regional setting the proposed project is located in the Canyonlands Region of the Colorado Plateau. The Canyonlands Region is renowned for its red rock canyons and spectacular views. Tourism is a growing industry in the region. In close proximity to the proposed project site, Dead Horse State Park, Aches National Park and Canyonlands National Park are popular destinations along with the community of Moab Utah. On a local scale the proposed project site is located near Hell Roaring Canyon and Dubinky Point. Local points of interest include: Gemini Arch, Gemini Bridges, Arths Pasture, Seven mile Canyon, Long Canyon, Dead Horse Point, Horsetheif Point, Mineral Bottoms, Islands in the Sky, Hell Roaring Canyon, Courthouse Rock and Dubinky Point. Topography is typical of the Canyonlands Region: a series of large sandy mesa's abruptly falling off into steep canyons comprised of alternating layers of sandstone and shale. Climatic conditions within the region are arid, and vegetation is typically sparse. The proposed project site is located on a gentle slope consisting of sandy loam soils deposited on sandstone bedrock. Precipitation is considered a 8-10" precept zone. Soils are dominated by Eolian deposits and are predominantly unstable sands and sandy loams. Vegetation would be described as Pinion-Juniper Woodlands and black brush communities. Water drainage is to the southwest, entering Hell Roaring Canyon 2 miles and the Colorado River within 9 miles. No perennial water sources were observed in close proximity to the project site.

Surface Use Plan

Current Surface Use
Existing Well Pad

New Road Miles	Well Pad	Src Const Material	Surface Formation
0	Width 500 Length 500	Onsite	NAVWN

Ancillary Facilities N

Representative sample of oil based cutting should be analyzed.

Waste Management Plan Adequate? Y

Environmental Parameters

Affected Floodplains and/or Wetlands N

Ephemeral drainage adjacent to proposed project site

Flora / Fauna

Flora

Grass: Muhly spp.

Forbs: Russian thistle, sunflower, primrose, globe mallow, multiple unknown annuals.

Shrubs: Sand sage, Mormon tea, winter fat.

Succulents: Prickly pear cactus spp.

Fauna: Mule deer, big horn sheep, coyote, kit fox, gray fox. Seasonal use by migrating birds such as sage sparrow, cassin finch, house finch, pinion jay, white crowned sparrow, gray crowned rosy finch, blue gray knat catcher, Bewick's wren, black throated sparrow, black capped chickadee, Brewers sparrow, bushtit, western kingbird, chipping sparrow, common nighthawk, Coppers hawk, sharp shin hawk, red tailed hawk, ruff legged hawk, golden eagle, turkey vulture, Downey wood pecker, juniper titmouse, northern shrike, mountain bluebird, mourning dove, pine siskin, sage thrasher, western blue bird, and western meadow lark. . Host of small rodents and reptiles possible such as: Black tailed rabbit, cottontail rabbit, woodrat spp, kangaroo rat spp., deer mouse, pinion mouse, rock squirrel, spotted skunk, and antelope squirrel.

Soil Type and Characteristics

Reddish orange sands and sandy loams.

Erosion Issues Y

Soils prone to wind and water erosion once disturbed.

Sedimentation Issues N

Site Stability Issues N

Site appears suitable for proposed drilling program. Road base may be required on access road and well pad to prevent large dust pockets.

Drainage Diversion Required? N

Berm Required? N

Erosion Sedimentation Control Required? Y

Seeding should be completed outside of anchors within one year following well pad construction.

Paleo Survey Run? Y Paleo Potential Observed? N Cultural Survey Run? Y Cultural Resources? N

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)	20	
Native Soil Type	High permeability	20
Fluid Type	Oil Base Mud Fluid	15
Drill Cuttings	Salt or Detrimental	10
Annual Precipitation (inches)	10 to 20	5
Affected Populations		
Presence Nearby Utility Conduits	Not Present	0
Final Score	75	1 Sensitivity Level

Characteristics / Requirements

Proposed drilling system includes the use of a oil based mud drilling system to stabilize hole through Paradox salt zones. As such a reserve pit is being proposed along with a closed loop drilling system for oil based drilling mediums.

Proposed drilling program includes a vertical hole followed by a lateral. Duration to complete drilling program is anticipated to exceed 30 days. Due to prolonged drilling program pit liners shall be inspected weekly to assure integrity.

Reserve pit fluids at sites with comparable drilling programs within the Paradox formation have had TDS in excess of 50,000 mg/l. Additional reclamation steps may be required for materials high in chlorides. Precautions should be taken while drilling to assure salt or detrimental cuttings are not mixed with normal rock cuttings.

Surface formations are members of the Glen Canyon group and are capable of containing fresh water aquifers. Permeability of soils and underlying sandstones is medium to high. Pit liner of 24 ml for reserve pit shall be properly installed with bedding of sand or felt. Tanks and handling equipment containing oil based drilling materials should be underlain with a 20 mil synthetic liner as secondary containment.

Closed Loop Mud Required? Y Liner Required? Y Liner Thickness 24 Pit Underlayment Required? Y

Other Observations / Comments

Access road is proposed as a 14' running surface with turnouts. Minimal construction will be completed until well is deemed capable of commercial production. Pit run will be placed at wash crossing and portions of road requiring maintenance during drilling operations.

DOGM noted significant concerns regarding reserve/cuttings pit lining, management and reclamation. Pit contents with TDS in excess of 50,000 mg/l are possible, as such additional stipulations and precautions will be required.

Top 6-12" of top soils should be saved and stockpile on the east and southern sides of the well pad. All disturbed soils shall be seeded within 12 months of disturbance.

Bart Kettle
Evaluator

1/2/2014
Date / Time

Application for Permit to Drill

Statement of Basis

Utah Division of Oil, Gas and Mining

APD No	API WellNo	Status	Well Type	Surf Owner	CBM
9221	43019500440000	LOCKED	OW	S	No
Operator	FIDELITY E&P COMPANY		Surface Owner-APD		
Well Name	CCU 2-2-25-18		Unit	CANE CREEK	
Field	UNDESIGNATED		Type of Work	DRILL	
Location	SWSE 2 25S 18E S 810 FSL 2377 FEL GPS Coord (UTM) 595579E 4278952N				

Geologic Statement of Basis

Fidelity E&P Company proposes to drill the well to a total depth of 8,320' (TVD) and plans to set surface casing from 0'-860'. The surface string will be drilled using an air mist and/or aerated water. The proposed well would be spud in sandy soil that has been developed from the erosion of the Navajo Sandstone and the Kayenta Formation, which are exposed at the surface at this location. The well location is approximately four miles from the axis of the Cane Creek Anticline. It is reasonable to expect fractures & joints that may result in zones of lost circulation during drilling. There are no underground water rights within one mile of the proposed location. It is unlikely that fresh water will be encountered, at this location, in the Wingate Aquifer. The proposed casing and cementing program should adequately protect any useable groundwater resources encountered during the drilling of this well.

Ammon McDonald
APD Evaluator

1/6/2014
Date / Time

Surface Statement of Basis

Original on-site evaluation conducted October 21, 2013. Surface resources values and social factors have not changed since that time, therefore original analysis is deemed relevant for this APD. In attendance: Bart Kettle-DOGM, Nicole Nielson-UDWR, Jim Davis-SITLA, Charlie Harrison-Harrison Oil Field Services, Joy Gardner-Fidelity E&P, Dina Brown-Fidelity E&P Company, Ben Briggs-Fidelity E&P.

Proposed project is located in an environmentally sensitive region. National Parks, slick rock trails, river rafting and scenic views attract thousands of tourist to the region annually. Due to awareness of mineral exploration in the area it is reasonable to expect scrutiny of drilling operations for proposed project. Operator instructed to monitor drilling operations and ROW activity closely. Problems should be addressed immediately. Steps to limit activity during peak tourist season, and hours of the day are recommended.

DOGM is requiring additional precautions for reserve pit and handling of salt laden and oil base mud cuttings. Slopes of pit walls should not exceed 2:1. Pits shall be lined as determined by site evaluation ranking. The geomembrane shall consist of 24 mil string reinforced LDPE or equivalent liner for reserve pit. The geomembrane liner should be composed of an impervious synthetic material resistant to hydrocarbons, salts and alkaline solutions.

Tanks and equipment handling or storing oil based drilling mediums and chloride laden

cuttings will require 20 mil string reinforced geomembrane liner. Liner should be placed over prepared surface containing 12" berms and key trench to secure liner.

Blasting is anticipated for reserve pit, fractured rock should be properly bedded with sand or a felt liner. Liner edges should be secured. Liner should be protected from fluid force or mechanical damage at points of discharge or suction.

Due to anticipated prolonged drilling operations precautions should be taken to prevent punctures from drilling related activities. Weekly inspection of liner should be conducted and recorded. Surface water run off should not be allowed to enter pits.

While drilling three sides of pits should be fenced. Fencing should include reinforced corner braces, 36" woven net wire on the bottom and two strands of barbed wire on top spaced at 6" apart. Following completion of drilling activities pits will require fencing on the fourth side, removal of free standing oil and netting to prevent entry by water fowl.

Pits will require reclamation to be completed one year following the removal of drilling rig. Reclamation measures shall be submitted to DOGM for approval following analysis of pit contents.

Bart Kettle
Onsite Evaluator

1/2/2014
Date / Time

Conditions of Approval / Application for Permit to Drill

Category	Condition
Pits	A geomembrane liner with a minimum thickness of 20 mils shall be properly installed and maintained under tanks and equipment storing or handling oil based drilling fluids or salt laden cuttings. Geomembrane liner shall consist of a string reinforced impervious synthetic material, resistant to hydrocarbons, salts and alkaline solutions.
Pits	A representative sample of drill cuttings shall be collected and analyzed prior to disposal at approved facility.
Pits	A closed loop mud circulation system is required while using oil based drilling mediums.
Pits	Reserve pit liner shall be protected from fluid force or mechanical damage at points of discharge or suction.
Pits	The Division shall be consulted prior to reclamation of reserve pit and drill cuttings.
Pits	Weekly inspections of liners shall be conducted and documented until materials are removed, or reserve pit is reclaimed.
Pits	Fractured rock in reserve pit area or oil based mud handling areas shall be properly bedded.
Pits	Liner edges must be secured.
Pits	The reserve pit shall be fenced upon completion of drilling operations. Netting will be required over pit if it contains hydrocarbons or RCRA-exempt hazardous substances.
Surface	Access road and well pad shall have fresh water applied to control dust as needed.

WORKSHEET APPLICATION FOR PERMIT TO DRILL

APD RECEIVED: 12/18/2013

API NO. ASSIGNED: 43019500440000

WELL NAME: CCU 2-2-25-18

OPERATOR: FIDELITY E&P COMPANY (N3155)

PHONE NUMBER: 720 956-5763

CONTACT: Joy Gardner

PROPOSED LOCATION: SWSE 02 250S 180E

Permit Tech Review: ☒

SURFACE: 0810 FSL 2377 FEL

Engineering Review: ☒

BOTTOM: 0702 FNL 0764 FEL

Geology Review: ☒

COUNTY: GRAND

LATITUDE: 38.65398

LONGITUDE: -109.90156

UTM SURF EASTINGS: 595579.00

NORTHINGS: 4278952.00

FIELD NAME: UNDESIGNATED

LEASE TYPE: 3 - State

LEASE NUMBER: M43326

PROPOSED PRODUCING FORMATION(S): CANE CREEK

SURFACE OWNER: 3 - State

COALBED METHANE: NO

RECEIVED AND/OR REVIEWED:

☒ PLAT☒ Bond: STATE - 190017646/104891324☐ Potash☐ Oil Shale 190-5☐ Oil Shale 190-3☐ Oil Shale 190-13☒ Water Permit: Municipal☐ RDCC Review:☐ Fee Surface Agreement☐ Intent to Commingle

Commingle Approved

LOCATION AND SITING:

☐ R649-2-3.

Unit: CANE CREEK

☐ R649-3-2. General☐ R649-3-3. Exception☒ Drilling Unit

Board Cause No: R649-3-2

Effective Date:

Siting:

☐ R649-3-11. Directional DrillComments: Presite Completed
IRR SEC:Stipulations: 5 - Statement of Basis - bhill
8 - Cement to Surface -- 2 strings - hmadonald
13 - Cement Volume Formation (3a) - hmadonald
23 - Spacing - dmason
27 - Other - bhill

RECEIVED: March 04, 2014