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
FEDERAL 4H-3-65

2. TYPE OF WORK
DRILL NEW WELL ☒ REENTER P&A WELL ☐ DEEPEN WELL ☐

3. FIELD OR WILDCAT
BRUNDAGE CANYON

4. TYPE OF WELL
Oil Well Coalbed Methane Well: NO

5. UNIT or COMMUNITIZATION AGREEMENT NAME

6. NAME OF OPERATOR
BERRY PETROLEUM COMPANY

7. OPERATOR PHONE
303 999-4044

8. ADDRESS OF OPERATOR
4000 South 4028 West Rt 2 Box 7735, Roosevelt, UT, 84066

9. OPERATOR E-MAIL
kao@bry.com

10. MINERAL LEASE NUMBER (FEDERAL, INDIAN, OR STATE)
UTU77326

11. MINERAL OWNERSHIP
FEDERAL ☒ INDIAN ☐ STATE ☐ FEE ☐

12. SURFACE OWNERSHIP
FEDERAL ☒ INDIAN ☐ STATE ☐ FEE ☐

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 ☐ (Submit Commingling Application) NO ☒

19. SLANT
VERTICAL ☐ DIRECTIONAL ☐ HORIZONTAL ☒

20. LOCATION OF WELL	FOOTAGES	QTR-QTR	SECTION	TOWNSHIP	RANGE	MERIDIAN
LOCATION AT SURFACE	1994 FNL 1950 FWL	SENW	2	6.0 S	5.0 W	U
Top of Uppermost Producing Zone	1888 FNL 1465 FWL	SENW	2	6.0 S	5.0 W	U
At Total Depth	800 FNL 800 FWL	NWNW	3	6.0 S	5.0 W	U

21. COUNTY
DUCHESNE

22. DISTANCE TO NEAREST LEASE LINE (Feet)
1950

23. NUMBER OF ACRES IN DRILLING UNIT
1922

25. DISTANCE TO NEAREST WELL IN SAME POOL (Applied For Drilling or Completed)
20

26. PROPOSED DEPTH
MD: 5726 TVD: 12042

27. ELEVATION - GROUND LEVEL
7496

28. BOND NUMBER
UTB000035

29. SOURCE OF DRILLING WATER / WATER RIGHTS APPROVAL NUMBER IF APPLICABLE
43-12400

Hole, Casing, and Cement Information

String	Hole Size	Casing Size	Length	Weight	Grade & Thread	Max Mud Wt.	Cement	Sacks	Yield	Weight
Surf	12.25	9.625	0 - 1000	36.0	J-55 ST&C	9.2	Class G	500	1.15	15.8
I1	8.75	[illegible]	[illegible] - 6175	23.0	N-80 LT&C	9.4	Class G	310	1.97	12.4
							50/50 Poz	370	1.26	14.2
Prod	6.25	4.5	0 - 12042	11.6	P-110 LT&C	9.2	No Used	0	0.0	0.0

ATTACHMENTS

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

- ☑ WELL PLAT OR MAP PREPARED BY LICENSED SURVEYOR OR ENGINEER
- ☑ COMPLETE DRILLING PLAN
- ☐ AFFIDAVIT OF STATUS OF SURFACE OWNER AGREEMENT (IF FEE SURFACE)
- ☐ FORM 5. IF OPERATOR IS OTHER THAN THE LEASE OWNER
- ☑ DIRECTIONAL SURVEY PLAN (IF DIRECTIONALLY OR HORIZONTALLY DRILLED)
- ☑ TOPOGRAPHICAL MAP

NAME Kathy K. Fieldsted	**TITLE** Sr. Regulatory & Permitting Tech.	**PHONE** 435 722-1325
SIGNATURE	**DATE** 12/21/2011	**EMAIL** kkf@bry.com

API NUMBER ASSIGNED 43013511410000 **APPROVAL**

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Received: November 20, 2012

SELF-CERTIFICATION STATEMENT

The following self -certification statement is provided per federal requirements dated May 7, 2007.

Please be advised that Berry Petroleum Company is considered to be the operator of the following well.

FEDERAL 4H-3-65
SE ¼, NW ¼, 1994' FNL 1950' FWL, Sec. 2, T6S, R5W, U.S.B.& M.
BHL: NW ¼, NW ¼, 800' FNL, 800' FWL, Sec. 3, T6S, R5W
Lease: UTU-77326
Duchesne, County, Utah

Berry Petroleum Company is responsible under the terms of the lease for the operations conducted upon the lease lands.

Operator's Representative and Certification

A) Representative

NAME: Kathy K. Fieldsted

ADDRESS: Berry Petroleum Company
4000 South 4028 West
Route 2, Box 7735
Roosevelt, Utah 84066

PHONE: 435-722-1325

All lease and/or unit operations will be conducted in such a manner that full compliance is made with all applicable laws, regulations and onshore oil and gas orders. Berry Petroleum Company is fully responsible for the actions of its subcontractors. A copy of these conditions will be furnished to the field representative to ensure compliance.

The drilling permit will be valid for a period of two years from the date of approval. After permit termination, a new application will be filed for approval for any future operations.

B) 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 presently exist; that the statements made in this plan are, to the best of my knowledge and belief, true and correct; and that the work associated with the operations proposed herein will be performed by Berry Petroleum Company 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.

12/16/2011
DATE

Kathy K. Fieldsted
Kathy K. Fieldsted
Sr. Regulatory & Permitting Tech
Berry Petroleum Company

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BERRY PETROLEUM COMPANY
FEDERAL 4H-3-65
SE ¼, NW ¼, 1994' FNL 1950' FWL, Sec. 2, T6S, R5W, U.S.B.& M.
BHL: NW ¼, NW ¼, 800' FNL, 800' FWL, Sec. 3, T6S, R5W
Duchesne County, Utah

ONSHORE ORDER NO. 1

DRILLING PROGRAM

A,B Estimated Tops of Geological Markers and Formations Expected to Contain Water, Oil and Gas and Other Minerals

FORMATION	DRILL DEPTH * @ SHL (TVD)	DRILL DEPTH* @ BHL (TVD)	Measured Depth
Uinta Fm	Surface	Surface	
Green River	1,395'	1,395'	1,395'
Green River Upper Marker	1,950'	1,950'	1,950'
Mahogany	2,559'	2,559'	2,559'
Tgr3	3,598'	3,598'	3,598'
*Douglas Creek	4,331'	4,331'	4,331'
Black Shale	4,937'	4,937'	4,937'
*Castle Peak	5,249'	5,249'	5,249'
KOP	5,248'		5,248'
*Uteland Butte	5,666'		5,748'
UB-2 Marker	5,732'	5,624'	
Landing Point	5,726'		6,006'
TD (Lateral)	5,626'		12,042'
Base of Moderate Saline Water	2,972'	4,315'	

*PROSPECTIVE PAY

Berry Petroleum Company intends to drill a vertical "pilot hole" 100' – 200' into the Wasatch, obtaining open hole logs in the vertical portion of the wellbore. Once having successfully obtained log data for determination of lateral wellbore placement, Berry Petroleum Company would then plug and abandon the vertical portion of the wellbore from 100' below to +/- 200' above the planned kick off point. Once the cement plug has cured accordingly Berry Petroleum Company would utilize the cement plug to side track the wellbore at kick off point. The lateral portion of the wellbore would then be drilled horizontally through the prospective zone within the Uteland Butte, as identified by open hole logs from the pilot hole.

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C Pressure Control Equipment : (Schematic Attached)

Depth Intervals	BOP Equipment
0 – 1000'	No pressure control required
1000 – TD	11" 5000# Ram Type Bop

- Drilling spool to accommodate choke and kill lines
- Ancillary and choke manifold to be rated @ 5000 psi
- Ancillary equipment and choke manifold rated at 5000#. All BOP and BOPE tests will be in accordance with the requirements of onshore Order No. 2
- The BLM and the State of Utah Division of Oil, Gas and Mining will be notified 24 hours in advance of all Bop pressure tests
- BOP hand wheels may be underneath the sub-structure of the rig if the drilling rig used is set up to operate most efficiently in this matter.

D,E Proposed Casing and Cementing Program

Purpose	Depth	Hole Size	Casing Size	Type	Connection	Weight
Surface	1000'	12.25"	9.625"	J or K-55	ST&C	36#
Intermediate	6175'	8.75"	7.0"	N-80	LT&C	23#
Production	12042'	6.25"	4.5"	P-110	LT&C	11.6#

Surface	Fill	Type & Amount
9 5/8" Surface Casing		Cement with approximately 500 sx Premium G cement with additives mixed at 15.8 ppg (yield = 1.15 cuft/sx), calculated hole volume with 100% excess. Top out cement, if required: 100sx of Premium cement with additives mixed at 15.8 ppg (yield = 1.17 cuft/sx).

Intermediate	Type & Amount
7" Intermediate Casing	Lead with approximately 310 sx Premium G cement with additives, mixed at 12.4 ppg (yield = 1.97 cuft/sx). Tail with approximately 370 sx 50/50 POZ Premium cement with additives mixed at 14.2 ppg (yield = 1.26 cuft/sx). Planned TOC = 1000' above the KOP (tail).

Production	Type & Amount
4 ½" Liner	No cement will be used in this section. Swell packers or Packers Plus (or equivalent) will be run to isolate the production hole from the intermediate casing section.

Note: Top of Tail cement for the intermediate string will be calculated to 1000' above the KOP using gauge hole plus 50% excess. Lead to surface.

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F Drilling Fluids Program

Interval	Weight	Viscosity	Fluid Loss	Remarks
40' – 1,000'	8.4 – 8.9	26-36	NC	Freshwater Spud Mud Fluid System
1000 – 3000'	8.9 – 9.2	26-36	NC	Freshwater with sweeps
3000 – 6175'	9.2 – 9.4	42-55	6 – 10	Fresh Water PHPA
6175'– TD	9.0 – 9.2	45-58	4 – 10	Fresh Water PHPA

Note: Sufficient mud materials to maintain mud properties, control lost circulation and to contain "kicks" will be available at well site. Berry Petroleum Company may require minor amounts of diesel to be added to its fluid system in order to reduce torque and drag.

Auxiliary Equipment

a) Upper Kelly cock; lower Kelly cock will be installed while drilling
b) Inside BOP or stab-in valve (available on rig floor)
c) Safety valve(s) and subs to fit all string connections in use
d) Mud monitoring will be visually observed

G Evaluation Program

Cores	None anticipated
Testing	None anticipated; drill system tests may be run on shows of interest
Sampling	30' to 50' samples; surface casing to TD. Preserve samples all show intervals
Surveys	MWD as needed to land wellbore
Logging	DIL-GR-SP, FDC-CNL-GR-CALIPER-PE-Microlog, Sonic-GR (all TD to surface) FMI & Sonic Scanner to be run at geologist's discretion.

Note: All open hole logs would be run on the proposed "pilot hole" portion of the wellbore. FMI and CAL may be run on the lateral portion of the horizontal wellbore at the geologist's discretion.

H Anticipated Abnormal Pressures or Temperatures

No abnormal temperatures or pressures or other hazards are anticipated.
A gas buster will be utilized to handle the aerated mud.

Maximum anticipated bottom hole pressure equals approximately 2800 psi* and maximum anticipated surface pressure equals approximately 1540**psi (bottom hole pressure minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot).

*Max Mud Wt x 0.052 x TVD = A (bottom hole pressure)
**Maximum surface pressure = A – (0.22xTVD)

I Anticipated Starting Dates and Notification of Operations

Drilling Activity:

Anticipated Commencement Date:	Upon approval of the APD.
Drilling Days:	Approximately 25 days.
Completion Days:	Approximately 25 days.

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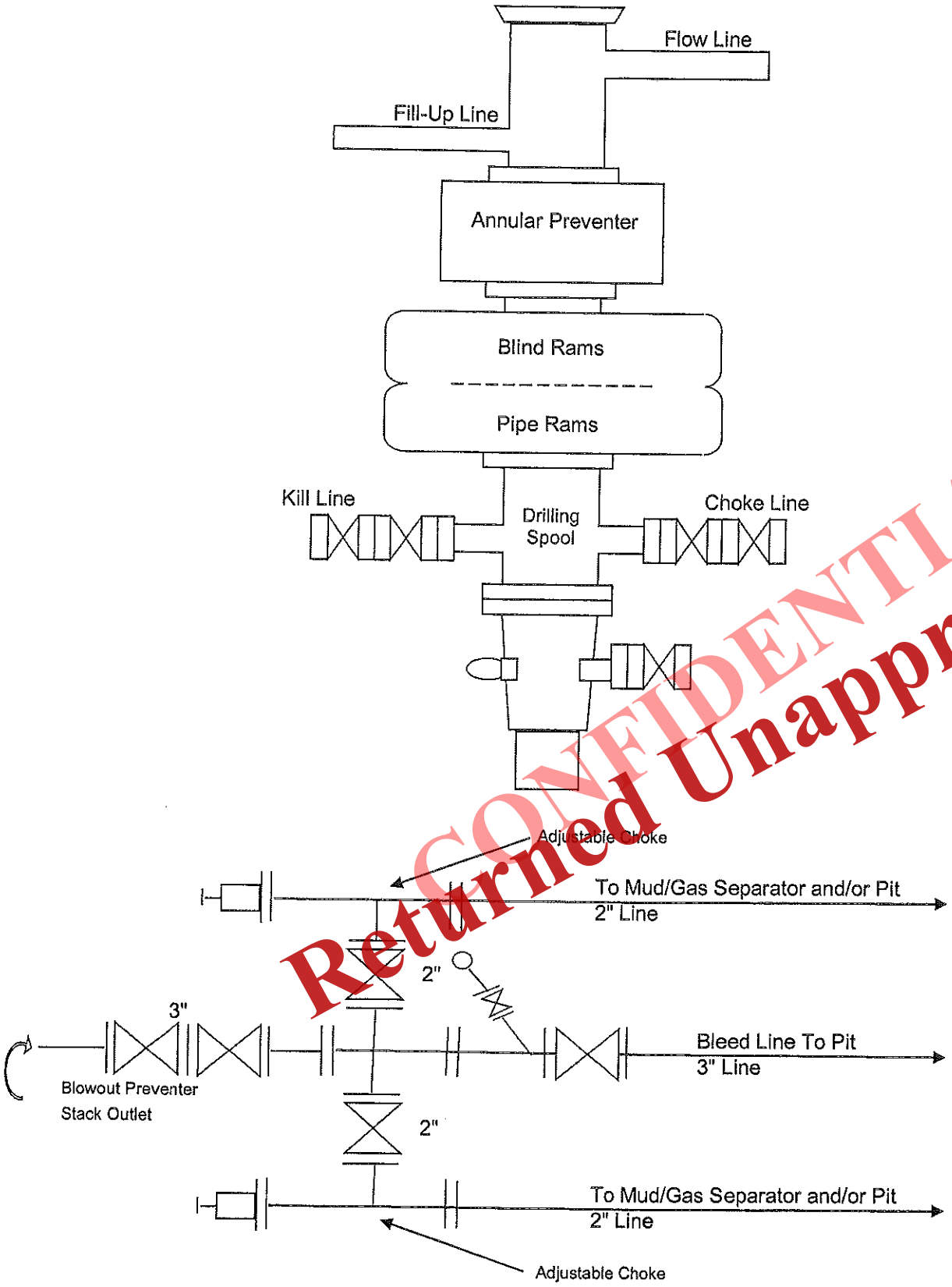
Received: December 21, 2011

SCHEMATIC DIAGRAM OF 5,000 PSI BOP STACK



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Received: December 21, 2011

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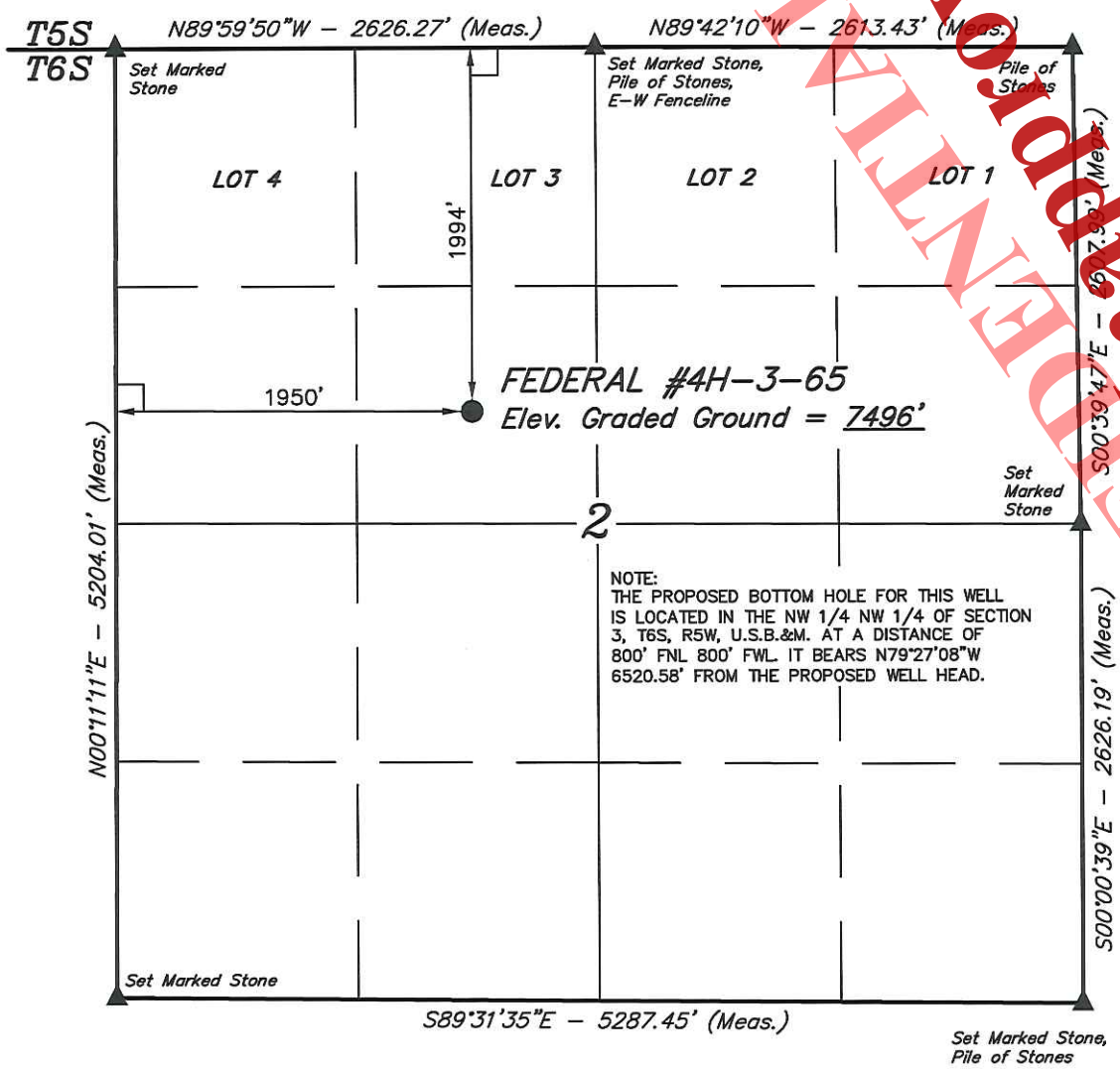
BERRY PETROLEUM COMPANY

Well location, FEDERAL #4H–3–65 (SURFACE LOCATION), located as shown in the SE 1/4 NW 1/4 of Section 2, T6S, R5W, U.S.B.&M. Duchesne County, Utah.

T6S, R5W, U.S.B.&M.

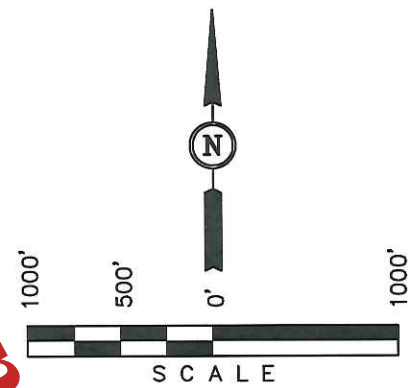


BASIS OF ELEVATION

BENCH MARK (M67) LOCATED IN THE SW 1/4 OF SECTION 9, T5S, R4W, U.S.B.&M., TAKEN FROM THE DUCHESNE SE, QUADRANGLE, UTAH, DUCHESNE COUNTY, 7.5 MINUTE QUAD. (TOPOGRAPHIC MAP) PUBLISHED BY THE UNITED STATES DEPARTMENT OF THE INTERIOR, GEOLOGICAL SURVEY. SAID ELEVATION IS MARKED ON CAP AS BEING 6097 FEET.

BASIS OF BEARINGS

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



CERTIFICATE

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

REGISTERED LAND SURVEYOR
REGISTRATION NO. 161319
STATE OF UTAH

REGISTERED LAND SURVEYOR REGISTRATION NO. 161319 ROBERT L. KAY STATE OF UTAH

10-13-11

REV: 10–12–11

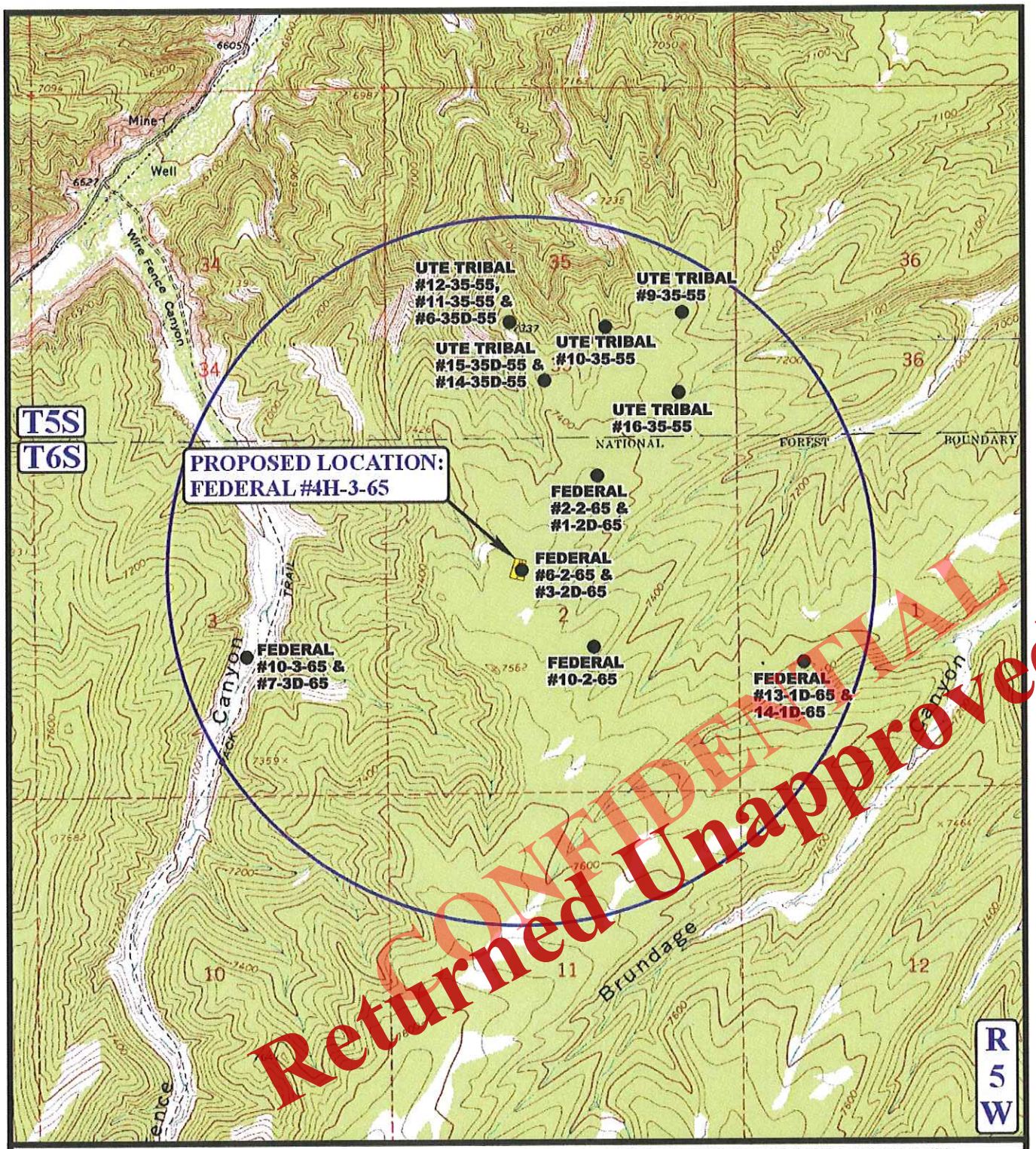
UINTAH ENGINEERING & LAND SURVEYING
85 SOUTH 200 EAST – VERNAL, UTAH 84078
(435) 789–1017

SCALE 1" = 1000'	DATE SURVEYED: 09–16–11	DATE DRAWN: 09–29–11
PARTY G.O. J.C. K.O.	REFERENCES G.L.O. PLAT	
WEATHER WARM	FILE BERRY PETROLEUM COMPANY	

LEGEND:

└ = 90° SYMBOL
● = PROPOSED WELL HEAD.
▲ = SECTION CORNERS LOCATED.

NAD 83 (SURFACE LOCATION)	
LATITUDE = 39°59'26.00" (39.990556)	
LONGITUDE = 110°25'03.23" (110.417564)	
NAD 27 (SURFACE LOCATION)	
LATITUDE = 39°59'26.13" (39.990592)	
LONGITUDE = 110°25'00.68" (110.416856)	



LEGEND:

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

N

BERRY PETROLEUM COMPANY

FEDERAL #4H-3-65
SECTION 2, T6S, R5W, U.S.B.&M.
1994' FNL 1950' FWL

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

TOPOGRAPHIC MAP	09 MONTH	26 DAY	11 YEAR	C TOPO
SCALE: 1" = 2000'	DRAWN BY: B.D.H.	REVISED: 10-12-11		

Received: December 21, 2011

Well Planning Proposal

FOR

Berry Petroleum Co.
Federal 4H-3-65
Duchesne Co., UT

Well File: Design #1 (10/17/11)

Presented By:

Pat Rasmussen
Regional Manager

Bret Wolford
Well Planner

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GREAT WHITE DIRECTIONAL SERVICES, L.L.C.

Received: December 21, 2011

Berry Petroleum Company
Project: Duchesne Co., UT (UT27C)
Site: Sec.2-T6S-R5W
Well: Federal 4H-3-65
Wellbore: Wellbore #1
Design: Design #1
Lat: 39° 59' 26.131 N
Long: 110° 25' 0.682 W
Pad GL: 7496.00
KB: WELL @ 7516.00usft

GREAT WHITE DIRECTIONAL SERVICES, L.L.C.

PROJECT DETAILS: Duchesne Co., UT (UT27C)

Geodetic System: US State Plane 1927 (Exact solution)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: Utah Central 4302

System Datum: Mean Sea Level

T M

Azimuths to True North
Magnetic North: 11.40°

Magnetic Field
Strength: 52140.7snT
Dip Angle: 65.67°
Date: 10/17/2011
Model: IGRF2010

WELL DETAILS: Federal 4H-3-65

Ground Level: 7496.00

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.00	0.00	605455.939	2303469.490	39° 59' 26.131 N	110° 25' 0.682 W	

WELLBORE TARGET DETAILS (LAT/LONG)

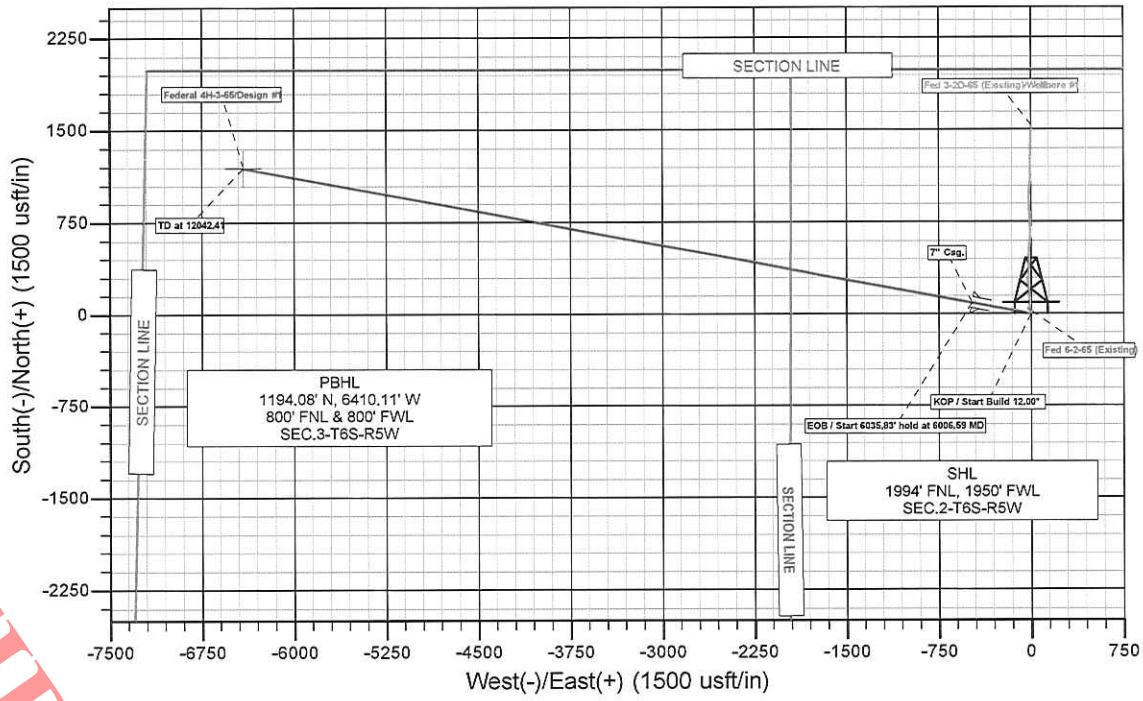
Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
Fed 4H-3-65 PBHL	5626.00	1194.08	-6410.11	39° 59' 37.925 N	110° 26' 23.048 W	

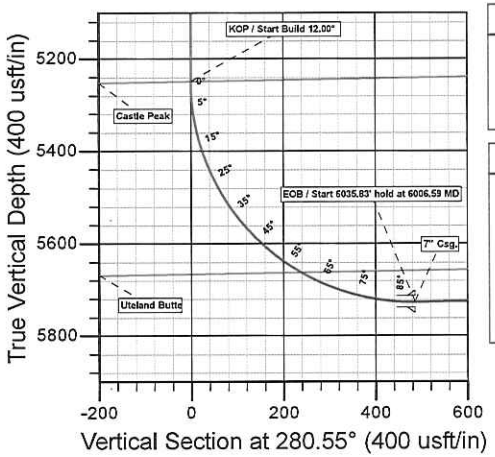
CASING DETAILS

TVD	MD	Name	Size
5726.07	6006.59	7" Csg.	7

FORMATION TOP DETAILS

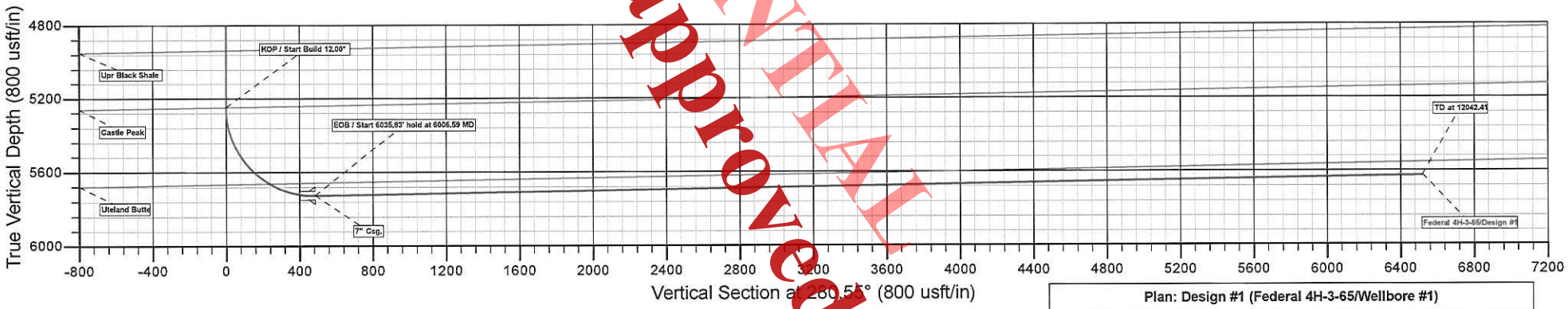
TVDPath	MDPath	Formation
1395.00	1395.00	Green River
1950.00	1950.00	Douck Mkr
2559.00	2559.00	Mahogany
3598.00	3598.00	Tgr3 Mkr
4331.00	4331.00	Douglas Creek
4937.00	4937.00	Upr Black Shale
5249.00	5249.00	Castle Peak
5662.04	5748.43	Uteland Butte





SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Annotation
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
5248.67	0.00	0.00	5248.67	0.00	0.00	0.00	0.00	0.00	KOP / Start Build 12.00°
6006.59	90.95	280.55	5726.07	88.89	-477.17	12.00	280.55	485.38	EOB / Start 6035.83' hold at 6006.59 MD
12042.41	90.95	280.55	5626.00	1194.08	-6410.11	0.00	0.00	6520.38	TD at 12042.41



Plan: Design #1 (Federal 4H-3-65/Wellbore #1)

Created By: Bret Wolford Date: 19:34, October 17 2011

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Berry Petroleum Company

Duchesne Co., UT (UT27C)
Sec.2-T6S-R5W
Federal 4H-3-65

Wellbore #1

Plan: Design #1

Standard Planning Report

17 October, 2011

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GREAT WHITE
DIRECTIONAL SERVICES, L.L.C.

Received: December 21, 2011

Database:	EDMDBBW	**Local Co-ordinate Reference:**	Well Federal 4H-3-65
Company:	Berry Petroleum Company	**TVD Reference:**	WELL @ 7516.00usft
Project:	Duchesne Co., UT (UT27C)	**MD Reference:**	WELL @ 7516.00usft
Site:	Sec.2-T6S-R5W	**North Reference:**	True
Well:	Federal 4H-3-65	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Project Duchesne Co., UT (UT27C)

Map System:	US State Plane 1927 (Exact solution)	**System Datum:**	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	Utah Central 4302		

Site Sec.2-T6S-R5W

Site Position:		**Northing:**	604,367.187 usft	**Latitude:**	39° 59' 15.227 N
From:	Lat/Long	**Easting:**	2,304,673.866 usft	**Longitude:**	110° 24' 45.378 W
Position Uncertainty:	0.00 usft	**Slot Radius:**	13-3/16"	**Grid Convergence:**	0.70 °

Well Federal 4H-3-65

Well Position	**+N/-S**	1,103.31 usft	**Northing:**	605,455.939 usft	**Latitude:**	39° 59' 26.131 N
	+E/-W	-1,191.05 usft	**Easting:**	2,303,469.490 usft	**Longitude:**	110° 25' 0.682 W
Position Uncertainty		0.00 usft	**Wellhead Elevation:**	usft	**Ground Level:**	7,496.00 usft

Wellbore Wellbore #1

Magnetics	**Model Name**	**Sample Date**	**Declination (°)**	**Dip Angle (°)**	**Field Strength (nT)**
	IGRF2010	10/17/11	11.40	65.67	52,141

Design Design #1

Audit Notes:

Version:		**Phase:**	PLAN	**Tie On Depth:**	0.00

Vertical Section:	**Depth From (TVD) (usft)**	**+N/-S (usft)**	**+E/-W (usft)**	**Direction (°)**
	0.00	0.00	0.00	280.55

Plan Sections

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
5,248.67	0.00	0.00	5,248.67	0.00	0.00	0.00	0.00	0.00	0.00	
6,006.59	90.95	280.55	5,726.07	88.89	-477.17	12.00	12.00	0.00	280.55	Fed 4H-3-65 PBHL
12,042.41	90.95	280.55	5,626.00	1,194.08	-6,410.11	0.00	0.00	0.00	0.00	Fed 4H-3-65 PBHL

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Received: December 21, 2011

Database:	EDMDBBW	**Local Co-ordinate Reference:**	Well Federal 4H-3-65
Company:	Berry Petroleum Company	**TVD Reference:**	WELL @ 7516.00usft
Project:	Duchesne Co., UT (UT27C)	**MD Reference:**	WELL @ 7516.00usft
Site:	Sec.2-T6S-R5W	**North Reference:**	True
Well:	Federal 4H-3-65	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00
Green River									
1,395.00	0.00	0.00	1,395.00	0.00	0.00	0.00	0.00	0.00	0.00
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	0.00	0.00
Fouch Mkr									
1,950.00	0.00	0.00	1,950.00	0.00	0.00	0.00	0.00	0.00	0.00
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00
2,100.00	0.00	0.00	2,100.00	0.00	0.00	0.00	0.00	0.00	0.00
2,200.00	0.00	0.00	2,200.00	0.00	0.00	0.00	0.00	0.00	0.00
2,300.00	0.00	0.00	2,300.00	0.00	0.00	0.00	0.00	0.00	0.00
2,400.00	0.00	0.00	2,400.00	0.00	0.00	0.00	0.00	0.00	0.00
2,500.00	0.00	0.00	2,500.00	0.00	0.00	0.00	0.00	0.00	0.00
Mahogany									
2,559.00	0.00	0.00	2,559.00	0.00	0.00	0.00	0.00	0.00	0.00
2,600.00	0.00	0.00	2,600.00	0.00	0.00	0.00	0.00	0.00	0.00
2,700.00	0.00	0.00	2,700.00	0.00	0.00	0.00	0.00	0.00	0.00
2,800.00	0.00	0.00	2,800.00	0.00	0.00	0.00	0.00	0.00	0.00
2,900.00	0.00	0.00	2,900.00	0.00	0.00	0.00	0.00	0.00	0.00
3,000.00	0.00	0.00	3,000.00	0.00	0.00	0.00	0.00	0.00	0.00
3,100.00	0.00	0.00	3,100.00	0.00	0.00	0.00	0.00	0.00	0.00
3,200.00	0.00	0.00	3,200.00	0.00	0.00	0.00	0.00	0.00	0.00
3,300.00	0.00	0.00	3,300.00	0.00	0.00	0.00	0.00	0.00	0.00
3,400.00	0.00	0.00	3,400.00	0.00	0.00	0.00	0.00	0.00	0.00
3,500.00	0.00	0.00	3,500.00	0.00	0.00	0.00	0.00	0.00	0.00
Tgr3 Mkr									
3,598.00	0.00	0.00	3,598.00	0.00	0.00	0.00	0.00	0.00	0.00
3,600.00	0.00	0.00	3,600.00	0.00	0.00	0.00	0.00	0.00	0.00
3,700.00	0.00	0.00	3,700.00	0.00	0.00	0.00	0.00	0.00	0.00
3,800.00	0.00	0.00	3,800.00	0.00	0.00	0.00	0.00	0.00	0.00
3,900.00	0.00	0.00	3,900.00	0.00	0.00	0.00	0.00	0.00	0.00
4,000.00	0.00	0.00	4,000.00	0.00	0.00	0.00	0.00	0.00	0.00
4,100.00	0.00	0.00	4,100.00	0.00	0.00	0.00	0.00	0.00	0.00
4,200.00	0.00	0.00	4,200.00	0.00	0.00	0.00	0.00	0.00	0.00
4,300.00	0.00	0.00	4,300.00	0.00	0.00	0.00	0.00	0.00	0.00
Douglas Creek									
4,331.00	0.00	0.00	4,331.00	0.00	0.00	0.00	0.00	0.00	0.00

CONFIDENTIAL
Returned Unapproved

Received: December 21, 2011

Database:	EDMDBBW	**Local Co-ordinate Reference:**	Well Federal 4H-3-65
Company:	Berry Petroleum Company	**TVD Reference:**	WELL @ 7516.00usft
Project:	Duchesne Co., UT (UT27C)	**MD Reference:**	WELL @ 7516.00usft
Site:	Sec.2-T6S-R5W	**North Reference:**	True
Well:	Federal 4H-3-65	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
4,400.00	0.00	0.00	4,400.00	0.00	0.00	0.00	0.00	0.00	0.00
4,500.00	0.00	0.00	4,500.00	0.00	0.00	0.00	0.00	0.00	0.00
4,600.00	0.00	0.00	4,600.00	0.00	0.00	0.00	0.00	0.00	0.00
4,700.00	0.00	0.00	4,700.00	0.00	0.00	0.00	0.00	0.00	0.00
4,800.00	0.00	0.00	4,800.00	0.00	0.00	0.00	0.00	0.00	0.00
4,900.00	0.00	0.00	4,900.00	0.00	0.00	0.00	0.00	0.00	0.00
Upr Black Shale									
4,937.00	0.00	0.00	4,937.00	0.00	0.00	0.00	0.00	0.00	0.00
5,000.00	0.00	0.00	5,000.00	0.00	0.00	0.00	0.00	0.00	0.00
5,100.00	0.00	0.00	5,100.00	0.00	0.00	0.00	0.00	0.00	0.00
5,200.00	0.00	0.00	5,200.00	0.00	0.00	0.00	0.00	0.00	0.00
KOP / Start Build 12.00°									
5,248.67	0.00	0.00	5,248.67	0.00	0.00	0.00	0.00	0.00	0.00
Castle Peak									
5,249.00	0.04	280.55	5,249.00	0.00	0.00	0.00	12.00	12.00	0.00
5,250.00	0.16	280.55	5,250.00	0.00	0.00	0.00	12.00	12.00	0.00
5,275.00	3.16	280.55	5,274.99	0.13	-0.71	0.73	12.00	12.00	0.00
5,300.00	6.16	280.55	5,299.90	0.50	-2.71	2.76	12.00	12.00	0.00
5,325.00	9.16	280.55	5,324.68	1.11	-5.99	6.09	12.00	12.00	0.00
5,350.00	12.16	280.55	5,349.24	1.96	-10.53	10.71	12.00	12.00	0.00
5,375.00	15.16	280.55	5,373.53	3.04	-16.33	16.62	12.00	12.00	0.00
5,400.00	18.16	280.55	5,397.48	4.36	-23.38	23.78	12.00	12.00	0.00
5,425.00	21.16	280.55	5,421.02	5.90	-31.65	32.19	12.00	12.00	0.00
5,450.00	24.16	280.55	5,444.09	7.66	-41.11	41.82	12.00	12.00	0.00
5,475.00	27.16	280.55	5,466.62	9.64	-51.76	52.65	12.00	12.00	0.00
5,500.00	30.16	280.55	5,488.55	11.84	-63.54	64.63	12.00	12.00	0.00
5,525.00	33.16	280.55	5,509.83	14.24	-76.44	77.76	12.00	12.00	0.00
5,550.00	36.16	280.55	5,530.39	16.84	-90.42	91.97	12.00	12.00	0.00
5,575.00	39.16	280.55	5,550.18	19.64	-105.43	107.24	12.00	12.00	0.00
5,600.00	42.16	280.55	5,569.14	22.62	-121.44	123.53	12.00	12.00	0.00
5,625.00	45.16	280.55	5,587.23	25.78	-138.41	140.79	12.00	12.00	0.00
5,650.00	48.16	280.55	5,604.38	29.11	-156.28	158.97	12.00	12.00	0.00
5,675.00	51.16	280.55	5,620.57	32.60	-175.01	178.02	12.00	12.00	0.00
5,700.00	54.16	280.55	5,635.73	36.24	-194.55	197.90	12.00	12.00	0.00
5,725.00	57.16	280.55	5,649.83	40.02	-214.84	218.54	12.00	12.00	0.00
Uteland Butte									
5,748.43	59.97	280.55	5,662.04	43.68	-234.49	238.52	12.00	12.00	0.00
5,750.00	60.16	280.55	5,662.83	43.93	-235.83	239.89	12.00	12.00	0.00
5,775.00	63.16	280.55	5,674.70	47.96	-257.46	261.89	12.00	12.00	0.00
5,800.00	66.16	280.55	5,685.40	52.10	-279.67	284.48	12.00	12.00	0.00
5,825.00	69.16	280.55	5,694.90	56.33	-302.40	307.60	12.00	12.00	0.00
5,850.00	72.16	280.55	5,703.18	60.65	-325.58	331.19	12.00	12.00	0.00
5,875.00	75.16	280.55	5,710.21	65.04	-349.17	355.17	12.00	12.00	0.00
5,900.00	78.16	280.55	5,715.98	69.50	-373.08	379.50	12.00	12.00	0.00
5,925.00	81.16	280.55	5,720.46	74.00	-397.25	404.09	12.00	12.00	0.00
5,950.00	84.16	280.55	5,723.66	78.54	-421.63	428.88	12.00	12.00	0.00
5,975.00	87.16	280.55	5,725.55	83.11	-446.13	453.80	12.00	12.00	0.00
6,000.00	90.16	280.55	5,726.13	87.68	-470.70	478.79	12.00	12.00	0.00
EOB / Start 6035.83' hold at 6006.59 MD - 7" Csg.									
6,006.59	90.95	280.55	5,726.07	88.89	-477.18	485.38	11.99	11.99	0.00
6,100.00	90.95	280.55	5,724.52	105.99	-568.99	578.78	0.00	0.00	0.00
6,200.00	90.95	280.55	5,722.86	124.30	-667.29	678.77	0.00	0.00	0.00
6,300.00	90.95	280.55	5,721.20	142.61	-765.58	778.75	0.00	0.00	0.00

CONFIDENTIAL
Returned Unapproved

Received: December 21, 2011

Database:	EDMDBBW	**Local Co-ordinate Reference:**	Well Federal 4H-3-65
Company:	Berry Petroleum Company	**TVD Reference:**	WELL @ 7516.00usft
Project:	Duchesne Co., UT (UT27C)	**MD Reference:**	WELL @ 7516.00usft
Site:	Sec.2-T6S-R5W	**North Reference:**	True
Well:	Federal 4H-3-65	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
6,400.00	90.95	280.55	5,719.55	160.92	-863.88	878.74	0.00	0.00	0.00
6,500.00	90.95	280.55	5,717.89	179.23	-962.18	978.73	0.00	0.00	0.00
6,600.00	90.95	280.55	5,716.23	197.55	-1,060.47	1,078.71	0.00	0.00	0.00
6,700.00	90.95	280.55	5,714.57	215.86	-1,158.77	1,178.70	0.00	0.00	0.00
6,800.00	90.95	280.55	5,712.91	234.17	-1,257.06	1,278.69	0.00	0.00	0.00
6,900.00	90.95	280.55	5,711.26	252.48	-1,355.36	1,378.67	0.00	0.00	0.00
7,000.00	90.95	280.55	5,709.60	270.79	-1,453.65	1,478.66	0.00	0.00	0.00
7,100.00	90.95	280.55	5,707.94	289.10	-1,551.95	1,578.64	0.00	0.00	0.00
7,200.00	90.95	280.55	5,706.28	307.41	-1,650.24	1,678.63	0.00	0.00	0.00
7,300.00	90.95	280.55	5,704.62	325.72	-1,748.54	1,778.62	0.00	0.00	0.00
7,400.00	90.95	280.55	5,702.97	344.03	-1,846.83	1,878.60	0.00	0.00	0.00
7,500.00	90.95	280.55	5,701.31	362.34	-1,945.13	1,978.59	0.00	0.00	0.00
7,600.00	90.95	280.55	5,699.65	380.65	-2,043.42	2,078.58	0.00	0.00	0.00
7,700.00	90.95	280.55	5,697.99	398.96	-2,141.72	2,178.56	0.00	0.00	0.00
7,800.00	90.95	280.55	5,696.33	417.27	-2,240.01	2,278.55	0.00	0.00	0.00
7,900.00	90.95	280.55	5,694.68	435.58	-2,338.31	2,378.53	0.00	0.00	0.00
8,000.00	90.95	280.55	5,693.02	453.89	-2,436.61	2,478.52	0.00	0.00	0.00
8,100.00	90.95	280.55	5,691.36	472.20	-2,534.90	2,578.51	0.00	0.00	0.00
8,200.00	90.95	280.55	5,689.70	490.51	-2,633.20	2,678.49	0.00	0.00	0.00
8,300.00	90.95	280.55	5,688.04	508.82	-2,731.49	2,778.48	0.00	0.00	0.00
8,400.00	90.95	280.55	5,686.39	527.13	-2,829.79	2,878.47	0.00	0.00	0.00
8,500.00	90.95	280.55	5,684.73	545.45	-2,928.08	2,978.45	0.00	0.00	0.00
8,600.00	90.95	280.55	5,683.07	563.76	-3,026.38	3,078.44	0.00	0.00	0.00
8,700.00	90.95	280.55	5,681.41	582.07	-3,124.67	3,178.42	0.00	0.00	0.00
8,800.00	90.95	280.55	5,679.75	600.38	-3,222.97	3,278.41	0.00	0.00	0.00
8,900.00	90.95	280.55	5,678.10	618.69	-3,321.26	3,378.40	0.00	0.00	0.00
9,000.00	90.95	280.55	5,676.44	637.00	-3,419.56	3,478.38	0.00	0.00	0.00
9,100.00	90.95	280.55	5,674.78	655.31	-3,517.85	3,578.37	0.00	0.00	0.00
9,200.00	90.95	280.55	5,673.12	673.62	-3,616.15	3,678.35	0.00	0.00	0.00
9,300.00	90.95	280.55	5,671.46	691.93	-3,714.44	3,778.34	0.00	0.00	0.00
9,400.00	90.95	280.55	5,669.81	710.24	-3,812.74	3,878.33	0.00	0.00	0.00
9,500.00	90.95	280.55	5,668.15	728.55	-3,911.04	3,978.31	0.00	0.00	0.00
9,600.00	90.95	280.55	5,666.49	746.86	-4,009.33	4,078.30	0.00	0.00	0.00
9,700.00	90.95	280.55	5,664.83	765.17	-4,107.63	4,178.29	0.00	0.00	0.00
9,800.00	90.95	280.55	5,663.17	783.48	-4,205.92	4,278.27	0.00	0.00	0.00
9,900.00	90.95	280.55	5,661.52	801.79	-4,304.22	4,378.26	0.00	0.00	0.00
10,000.00	90.95	280.55	5,659.86	820.10	-4,402.51	4,478.25	0.00	0.00	0.00
10,100.00	90.95	280.55	5,658.20	838.41	-4,500.81	4,578.23	0.00	0.00	0.00
10,200.00	90.95	280.55	5,656.54	856.72	-4,599.10	4,678.22	0.00	0.00	0.00
10,300.00	90.95	280.55	5,654.88	875.03	-4,697.40	4,778.20	0.00	0.00	0.00
10,400.00	90.95	280.55	5,653.23	893.35	-4,795.69	4,878.19	0.00	0.00	0.00
10,500.00	90.95	280.55	5,651.57	911.66	-4,893.99	4,978.18	0.00	0.00	0.00
10,600.00	90.95	280.55	5,649.91	929.97	-4,992.28	5,078.16	0.00	0.00	0.00
10,700.00	90.95	280.55	5,648.25	948.28	-5,090.58	5,178.15	0.00	0.00	0.00
10,800.00	90.95	280.55	5,646.60	966.59	-5,188.88	5,278.14	0.00	0.00	0.00
10,900.00	90.95	280.55	5,644.94	984.90	-5,287.17	5,378.12	0.00	0.00	0.00
11,000.00	90.95	280.55	5,643.28	1,003.21	-5,385.47	5,478.11	0.00	0.00	0.00
11,100.00	90.95	280.55	5,641.62	1,021.52	-5,483.76	5,578.09	0.00	0.00	0.00
11,200.00	90.95	280.55	5,639.96	1,039.83	-5,582.06	5,678.08	0.00	0.00	0.00
11,300.00	90.95	280.55	5,638.31	1,058.14	-5,680.35	5,778.07	0.00	0.00	0.00
11,400.00	90.95	280.55	5,636.65	1,076.45	-5,778.65	5,878.05	0.00	0.00	0.00
11,500.00	90.95	280.55	5,634.99	1,094.76	-5,876.94	5,978.04	0.00	0.00	0.00
11,600.00	90.95	280.55	5,633.33	1,113.07	-5,975.24	6,078.03	0.00	0.00	0.00
11,700.00	90.95	280.55	5,631.67	1,131.38	-6,073.53	6,178.01	0.00	0.00	0.00

CONFIDENTIAL
Returned Unapproved

Received: December 21, 2011

Database:	EDMDBBW	**Local Co-ordinate Reference:**	Well Federal 4H-3-65
Company:	Berry Petroleum Company	**TVD Reference:**	WELL @ 7516.00usft
Project:	Duchesne Co., UT (UT27C)	**MD Reference:**	WELL @ 7516.00usft
Site:	Sec.2-T6S-R5W	**North Reference:**	True
Well:	Federal 4H-3-65	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
11,800.00	90.95	280.55	5,630.02	1,149.69	-6,171.83	6,278.00	0.00	0.00	0.00
11,900.00	90.95	280.55	5,628.36	1,168.00	-6,270.12	6,377.98	0.00	0.00	0.00
12,000.00	90.95	280.55	5,626.70	1,186.31	-6,368.42	6,477.97	0.00	0.00	0.00
TD at 12042.41 - Fed 4H-3-65 PBHL									
12,042.41	90.95	280.55	5,626.00	1,194.08	-6,410.11	6,520.38	0.00	0.00	0.00

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
Fed 4H-3-65 PBHL - plan hits target center - Point	0.00	0.00	5,626.00	1,194.08	-6,410.11	606,572.308	2,297,045.390	39° 59' 37.925 N	110° 26' 23.048 W

Casing Points

Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
6,006.59	5,726.07	7" Csg.	7	8-3/

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,395.00	1,395.00	Green River		-0.95	280.55
1,950.00	1,950.00	Fouch Mkr		-0.95	280.55
2,559.00	2,559.00	Mahogany		-0.95	280.55
3,598.00	3,598.00	Tgr3 Mkr		-0.95	280.55
4,331.00	4,331.00	Douglas Creek		-0.95	280.55
4,937.00	4,937.00	Upr Black Shale		-0.95	280.55
5,249.00	5,249.00	Castle Peak		-0.95	280.55
5,748.43	5,666.00	Uteland Butte		-0.95	280.55

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
5,248.67	5,248.67	0.00	0.00	KOP / Start Build 12.00°
6,006.59	5,726.07	88.89	-477.17	EOB / Start 6035.83' hold at 6006.59 MD
12,042.41	5,626.00	1,194.08	-6,410.11	TD at 12042.41

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Received: December 21, 2011

Berry Petroleum Company

Duchesne Co., UT (UT27C)
Sec.2-T6S-R5W
Federal 4H-3-65

Wellbore #1
Design #1

Anticollision Report

17 October, 2011

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GREAT WHITE
DIRECTIONAL SERVICES, L.L.C.

Received: December 21, 2011

Great White Directional

Anticollision Report

GREAT WHITE DIRECTIONAL SERVICES, L.L.C.

Company:	Berry Petroleum Company	**Local Co-ordinate Reference:**	Well Federal 4H-3-65
Project:	Duchesne Co., UT (UT27C)	**TVD Reference:**	WELL @ 7516.00usft
Reference Site:	Sec.2-T6S-R5W	**MD Reference:**	WELL @ 7516.00usft
Site Error:	0.00 usft	**North Reference:**	True
Reference Well:	Federal 4H-3-65	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDMDBBW
Reference Design:	Design #1	**Offset TVD Reference:**	Reference Datum

Reference Design #1

Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	Stations	**Error Model:**	ISCWSA
Depth Range:	Unlimited	**Scan Method:**	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 9,999.98 usft	**Error Surface:**	Elliptical Conic
Warning Levels Evaluated at:	2.00 **Sigma**	**Casing Method:**	Not applied

Survey Tool Program **Date** 10/17/11

From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.00	12,042.41	Design #1 (Wellbore #1)	MWD	MWD - Standard

Summary

Site Name / Offset Well - Wellbore - Design	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Sec.2-T6S-R5W						
Fed 3-2D-65 (Existing) - Wellbore #1 - Wellbore #1	100.00	93.93	38.28	38.08	200.106	CC
Fed 3-2D-65 (Existing) - Wellbore #1 - Wellbore #1	444.07	438.07	39.27	37.85	27.750	ES
Fed 3-2D-65 (Existing) - Wellbore #1 - Wellbore #1	600.00	590.44	45.16	43.05	21.435	SF
Fed 6-2-65 (Existing) - Wellbore #1 - Wellbore #1	5,248.67	5,228.67	19.75	2.21	1.126	Level 2, CC
Fed 6-2-65 (Existing) - Wellbore #1 - Wellbore #1	5,250.00	5,230.00	19.75	2.21	1.126	Level 2, ES
Fed 6-2-65 (Existing) - Wellbore #1 - Wellbore #1	5,275.00	5,254.99	19.84	2.22	1.126	Level 2, SF

Offset Design Sec.2-T6S-R5W - Fed 3-2D-65 (Existing) - Wellbore #1 - Wellbore #1

Survey Program: 352-MWD

Offset Site Error: 0.00 usft

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Azimuth from North (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.00	0.00	0.00	6.00	0.00	0.00	-17.51	36.43	-11.49	38.66				
100.00	100.00	93.93	99.93	0.09	0.10	-17.51	36.50	-11.52	38.28	38.08	0.19	200.106	CC
200.00	200.00	193.85	199.85	0.31	0.21	-17.53	36.77	-11.62	38.56	38.04	0.52	73.606	
300.00	300.00	293.77	299.77	0.54	0.32	-17.57	37.22	-11.78	39.04	38.19	0.86	45.586	
400.00	400.00	394.15	400.15	0.76	0.46	-17.65	37.63	-11.97	39.49	38.26	1.23	32.159	
444.07	444.07	438.07	444.07	0.86	0.55	-17.70	37.41	-11.94	39.27	37.85	1.41	27.750	ES
500.00	500.00	493.07	499.06	0.99	0.71	-17.10	38.06	-11.71	39.83	38.18	1.66	24.053	
600.00	600.00	590.44	596.25	1.21	0.90	-14.55	43.56	-11.30	45.16	43.05	2.11	21.435	SF
700.00	700.00	687.08	692.21	1.44	1.15	-9.69	54.79	-9.36	56.12	53.54	2.58	21.719	
800.00	800.00	782.00	785.67	1.66	1.44	-5.91	71.17	-7.37	72.97	69.87	3.10	23.549	
900.00	900.00	875.53	876.86	1.89	1.81	-4.41	91.96	-7.10	95.09	91.41	3.68	25.846	
1,000.00	1,000.00	967.00	965.17	2.11	2.23	-3.90	115.74	-7.88	121.13	116.82	4.31	28.100	
1,100.00	1,100.00	1,059.35	1,053.24	2.34	2.71	-4.15	143.38	-10.40	151.17	146.17	5.01	30.180	
1,200.00	1,200.00	1,157.21	1,146.51	2.56	3.19	-4.67	172.76	-14.10	181.40	175.68	5.71	31.756	
1,300.00	1,300.00	1,256.33	1,241.49	2.79	3.67	-4.60	201.04	-16.18	210.01	203.60	6.41	32.766	
1,400.00	1,400.00	1,356.84	1,338.28	3.01	4.16	-4.59	228.00	-18.32	236.91	229.80	7.11	33.320	
1,500.00	1,500.00	1,451.52	1,429.65	3.24	4.62	-4.52	252.77	-20.00	263.14	255.34	7.80	33.748	
1,600.00	1,600.00	1,548.89	1,523.45	3.46	5.11	-4.07	278.91	-19.84	289.90	281.41	8.50	34.115	
1,700.00	1,700.00	1,647.33	1,618.49	3.69	5.58	-3.64	304.52	-19.38	315.84	306.65	9.19	34.362	
1,800.00	1,800.00	1,748.76	1,716.61	3.91	6.06	-3.29	330.27	-19.00	341.16	331.27	9.89	34.486	
1,900.00	1,900.00	1,848.15	1,813.10	4.14	6.52	-2.93	354.04	-18.09	365.00	354.43	10.57	34.534	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

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Received: December 21, 2011

Great White Directional

Anticollision Report

GREAT WHITE DIRECTIONAL SERVICES, L.L.C.

Company:	Berry Petroleum Company	**Local Co-ordinate Reference:**	Well Federal 4H-3-65
Project:	Duchesne Co., UT (UT27C)	**TVD Reference:**	WELL @ 7516.00usft
Reference Site:	Sec.2-T6S-R5W	**MD Reference:**	WELL @ 7516.00usft
Site Error:	0.00 usft	**North Reference:**	True
Reference Well:	Federal 4H-3-65	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDMDBBW
Reference Design:	Design #1	**Offset TVD Reference:**	Reference Datum

Offset Design Sec.2-T6S-R5W - Fed 3-2D-65 (Existing) - Wellbore #1 - Wellbore #1

Offset Site Error: 0.00 usft

Offset Well Error: 0.00 usft

Survey Program: 352-MWD

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Azimuth from North (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
2,000.00	2,000.00	1,950.44	1,912.70	4.36	6.98	-2.54	377.30	-16.72	387.63	376.39	11.24	34.478	
2,100.00	2,100.00	2,042.85	2,002.60	4.59	7.39	-2.33	398.70	-16.23	410.74	398.86	11.88	34.575	
2,200.00	2,200.00	2,131.85	2,088.91	4.81	7.82	-2.12	420.40	-15.57	435.11	422.59	12.52	34.745	
2,300.00	2,300.00	2,233.50	2,187.11	5.03	8.31	-1.81	446.60	-14.15	460.86	447.63	13.24	34.816	
2,400.00	2,400.00	2,345.77	2,296.35	5.26	8.81	-1.59	472.45	-13.09	483.86	469.91	13.96	34.671	
2,500.00	2,500.00	2,440.59	2,388.94	5.48	9.22	-1.57	492.89	-13.51	505.43	490.85	14.58	34.659	
2,600.00	2,600.00	2,529.99	2,476.00	5.71	9.62	-1.44	513.16	-12.89	528.08	512.88	15.20	34.735	
2,700.00	2,700.00	2,603.32	2,546.91	5.93	9.98	-1.28	531.80	-11.91	553.53	537.75	15.78	35.075	
2,800.00	2,800.00	2,702.07	2,641.89	6.16	10.48	-0.92	558.67	-8.94	580.68	564.18	16.51	35.181	
2,900.00	2,900.00	2,790.00	2,726.28	6.38	10.95	-0.70	583.29	-7.15	608.65	591.47	17.19	35.417	
3,000.00	3,000.00	2,874.66	2,806.97	6.61	11.42	-0.44	608.76	-4.63	638.65	620.77	17.88	35.724	
3,100.00	3,100.00	2,961.76	2,890.06	6.83	11.91	-0.27	634.83	-3.04	668.65	650.07	18.58	35.982	
3,200.00	3,200.00	3,027.09	2,951.66	7.06	12.31	-0.26	656.59	-3.00	701.99	682.79	19.20	36.557	
3,300.00	3,300.00	3,111.63	3,030.40	7.28	12.86	-0.30	687.34	-3.54	738.33	718.36	19.97	36.964	
3,400.00	3,400.00	3,217.42	3,129.24	7.51	13.54	-0.38	725.04	-4.86	773.96	753.10	20.86	37.094	
3,500.00	3,500.00	3,323.20	3,228.59	7.73	14.19	-0.52	761.30	-6.88	808.26	786.52	21.74	37.185	
3,600.00	3,600.00	3,430.99	3,330.41	7.96	14.84	-0.63	796.60	-8.81	841.03	818.43	22.60	37.215	
3,700.00	3,700.00	3,524.68	3,419.15	8.18	15.39	-0.69	826.64	-10.00	873.10	849.73	23.37	37.358	
3,800.00	3,800.00	3,629.14	3,518.19	8.41	16.00	-0.74	859.80	-11.16	904.87	880.67	24.20	37.392	
3,900.00	3,900.00	3,737.15	3,621.05	8.63	16.62	-0.83	892.72	-12.96	935.38	910.35	25.03	37.367	
4,000.00	4,000.00	3,846.76	3,725.85	8.86	17.22	-0.86	924.80	-13.89	964.68	938.83	25.85	37.319	
4,100.00	4,100.00	3,977.98	3,852.10	9.08	17.90	-0.74	960.53	-12.34	992.09	965.34	26.75	37.093	
4,200.00	4,200.00	4,116.34	3,986.91	9.31	18.52	-0.68	991.63	-11.78	1,014.33	986.75	27.58	36.775	
4,300.00	4,300.00	4,205.56	4,074.04	9.53	18.90	-0.60	1,010.75	-10.63	1,035.76	1,007.58	28.18	36.753	
4,400.00	4,400.00	4,280.29	4,146.83	9.75	19.23	-0.52	1,027.62	-9.27	1,058.39	1,029.65	28.73	36.834	
4,500.00	4,500.00	4,355.93	4,220.03	9.98	19.59	-0.42	1,046.57	-7.71	1,083.40	1,054.00	29.40	36.959	
4,600.00	4,600.00	4,460.27	4,320.77	10.20	20.10	-0.31	1,073.73	-5.78	1,109.46	1,079.41	30.04	36.927	
4,700.00	4,700.00	4,567.94	4,425.22	10.43	20.61	-0.19	1,099.72	-3.53	1,133.53	1,102.76	30.77	36.837	
4,800.00	4,800.00	4,648.14	4,502.84	10.65	20.99	-0.11	1,119.87	-2.21	1,158.62	1,127.25	31.38	36.925	
4,900.00	4,900.00	4,727.25	4,579.19	10.88	21.39	-0.07	1,140.55	-1.32	1,184.82	1,152.82	31.99	37.032	
5,000.00	5,000.00	4,836.28	4,684.28	11.10	21.94	-0.13	1,169.54	-2.68	1,211.41	1,178.65	32.76	36.973	
5,100.00	5,100.00	4,953.37	4,797.51	11.33	22.51	-0.14	1,199.35	-3.03	1,236.92	1,203.36	33.55	36.864	
5,200.00	5,200.00	5,046.34	4,887.60	11.55	22.95	-0.09	1,222.2[illegible]	-1.93	1,261.56	1,227.35	34.21	36.872	
5,248.67	5,248.67	5,093.90	4,933.68	11.66	23.18	-0.05	1,234.05	-1.07	1,273.62	1,239.07	34.55	36.865	
5,250.00	5,250.00	5,095.22	4,934.95	11.67	23.19	0.05	1,234.37	-1.05	1,273.94	1,249.35	24.60	51.795	
5,275.00	5,274.99	5,120.00	4,958.96	11.72	23.30	0.00	1,240.50	-0.75	1,279.99	1,255.24	24.75	51.722	
5,300.00	5,299.90	5,141.15	4,979.45	11.77	23.41	0.10	1,245.74	-0.56	1,285.81	1,260.91	24.89	51.653	
5,325.00	5,324.68	5,161.52	4,999.17	11.82	23.50	0.26	1,250.84	-0.42	1,291.43	1,266.40	25.04	51.578	
5,350.00	5,349.24	5,186.00	5,022.85	11.87	23.62	0.47	1,257.05	-0.30	1,296.88	1,271.69	25.19	51.480	
5,375.00	5,373.53	5,202.95	5,039.24	11.93	23.71	0.73	1,261.39	-0.22	1,302.10	1,276.77	25.32	51.416	
5,400.00	5,397.48	5,224.18	5,059.75	11.99	23.81	1.06	1,266.86	-0.05	1,307.11	1,281.64	25.46	51.330	
5,425.00	5,421.02	5,245.04	5,079.89	12.05	23.91	1.44	1,272.26	0.18	1,311.89	1,286.29	25.60	51.247	
5,450.00	5,444.09	5,265.94	5,100.07	12.11	24.02	1.87	1,277.70	0.46	1,316.47	1,290.74	25.73	51.161	
5,475.00	5,466.62	5,286.55	5,119.96	12.18	24.12	2.36	1,283.10	0.71	1,320.84	1,294.98	25.86	51.071	
5,500.00	5,488.55	5,306.69	5,139.39	12.25	24.22	2.89	1,288.39	0.93	1,325.01	1,299.02	25.99	50.975	
5,525.00	5,509.83	5,326.43	5,158.43	12.34	24.32	3.47	1,293.60	1.11	1,329.01	1,302.88	26.13	50.866	
5,550.00	5,530.39	5,345.71	5,177.02	12.43	24.42	4.09	1,298.71	1.22	1,332.83	1,306.57	26.27	50.742	
5,575.00	5,550.18	5,364.44	5,195.08	12.54	24.51	4.75	1,303.69	1.24	1,336.51	1,310.10	26.42	50.596	
5,600.00	5,569.14	5,385.42	5,215.29	12.65	24.62	5.44	1,309.28	1.20	1,340.06	1,313.47	26.58	50.408	
5,625.00	5,587.23	5,410.41	5,239.41	12.79	24.75	6.17	1,315.86	1.10	1,343.41	1,316.62	26.78	50.159	
5,650.00	5,604.38	5,434.33	5,262.51	12.94	24.86	6.93	1,322.04	0.98	1,346.58	1,319.58	27.00	49.869	
5,675.00	5,620.57	5,439.00	5,267.03	13.12	24.89	7.76	1,323.24	0.96	1,349.70	1,322.52	27.18	49.659	

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CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Received: December 21, 2011

Great White Directional

Anticollision Report

GREAT WHITE DIRECTIONAL SERVICES, L.L.C.

Company:	Berry Petroleum Company	**Local Co-ordinate Reference:**	Well Federal 4H-3-65
Project:	Duchesne Co., UT (UT27C)	**TVD Reference:**	WELL @ 7516.00usft
Reference Site:	Sec.2-T6S-R5W	**MD Reference:**	WELL @ 7516.00usft
Site Error:	0.00 usft	**North Reference:**	True
Reference Well:	Federal 4H-3-65	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDMDBBW
Reference Design:	Design #1	**Offset TVD Reference:**	Reference Datum

Offset Design Sec.2-T6S-R5W - Fed 3-2D-65 (Existing) - Wellbore #1 - Wellbore #1

Survey Program: 352-MWD

Offset Site Error: 0.00 usft

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Azimuth from North (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,700.00	5,635.73	5,458.60	5,285.96	13.31	24.99	8.60	1,328.31	0.87	1,352.76	1,325.32	27.43	49.309	
5,725.00	5,649.83	5,468.51	5,295.52	13.53	25.04	9.49	1,330.92	0.85	1,355.90	1,328.22	27.68	48.986	
5,750.00	5,662.83	5,477.69	5,304.37	13.77	25.08	10.40	1,333.36	0.85	1,359.09	1,331.15	27.95	48.628	
5,775.00	5,674.70	5,486.11	5,312.48	14.04	25.13	11.34	1,335.63	0.85	1,362.36	1,334.11	28.24	48.239	
5,800.00	5,685.40	5,502.00	5,327.76	14.34	25.21	12.29	1,339.97	0.89	1,365.73	1,337.13	28.60	47.754	
5,825.00	5,694.90	5,502.00	5,327.76	14.66	25.21	13.29	1,339.97	0.89	1,369.12	1,340.21	28.91	47.359	
5,850.00	5,703.18	5,502.00	5,327.76	15.00	25.21	14.32	1,339.97	0.89	1,372.65	1,343.41	29.24	46.937	
5,875.00	5,710.21	5,513.29	5,338.62	15.37	25.27	15.32	1,343.09	0.95	1,376.25	1,346.58	29.67	46.392	
5,900.00	5,715.98	5,518.30	5,343.43	15.76	25.29	16.35	1,344.48	0.98	1,379.96	1,349.88	30.08	45.877	
5,925.00	5,720.46	5,522.36	5,347.32	16.18	25.31	17.39	1,345.61	1.01	1,383.78	1,353.27	30.51	45.351	
5,950.00	5,723.66	5,525.47	5,350.31	16.61	25.33	18.44	1,346.48	1.04	1,387.70	1,356.74	30.96	44.819	
5,975.00	5,725.55	5,527.62	5,352.38	17.05	25.34	19.48	1,347.09	1.06	1,391.72	1,360.29	31.43	44.285	
6,000.00	5,726.13	5,528.83	5,353.54	17.52	25.35	20.53	1,347.43	1.07	1,395.83	1,363.93	31.90	43.752	
6,006.59	5,726.07	5,529.00	5,353.70	17.64	25.35	20.81	1,347.47	1.07	1,396.93	1,364.90	32.03	43.612	
6,100.00	5,724.52	5,530.81	5,355.43	19.50	25.36	24.66	1,347.98	1.09	1,415.54	1,381.71	33.83	41.839	
6,200.00	5,722.86	5,532.70	5,357.25	21.67	25.37	28.63	1,348.51	1.11	1,441.91	1,405.98	35.93	40.127	
6,300.00	5,721.20	5,534.55	5,359.02	23.97	25.38	32.44	1,349.03	1.13	1,474.61	1,436.44	38.17	38.638	
6,400.00	5,719.55	5,536.35	5,360.76	26.37	25.39	36.05	1,349.54	1.15	1,513.21	1,472.72	40.49	37.369	
6,500.00	5,717.89	5,538.12	5,362.45	28.84	25.40	39.45	1,350.04	1.16	1,557.29	1,514.39	42.90	36.304	
6,600.00	5,716.23	5,539.84	5,364.10	31.37	25.41	42.64	1,350.52	1.18	1,606.38	1,561.03	45.35	35.419	
6,700.00	5,714.57	5,541.53	5,365.72	33.94	25.42	45.62	1,351.00	1.20	1,660.05	1,612.20	47.86	34.689	
6,800.00	5,712.91	5,543.17	5,367.30	36.55	25.42	48.40	1,351.47	1.22	1,717.87	1,667.48	50.39	34.090	
6,900.00	5,711.26	5,544.78	5,368.84	39.18	25.43	50.98	1,351.92	1.24	1,779.43	1,726.48	52.96	33.602	
7,000.00	5,709.60	5,546.36	5,370.35	41.84	25.44	53.37	1,352.37	1.26	1,844.36	1,788.82	55.54	33.201	
7,100.00	5,707.94	5,547.90	5,371.83	44.52	25.45	55.60	1,352.80	1.28	1,912.32	1,854.17	58.15	32.885	
7,200.00	5,706.28	5,549.41	5,373.28	47.21	25.46	57.66	1,353.23	1.30	1,982.99	1,922.2[illegible]	60.[illegible]	32.629	
7,300.00	5,704.62	5,550.89	5,374.69	49.91	25.47	59.57	1,353.65	1.32	2,056.09	1,992.68	63.41	32.425	
7,400.00	5,702.97	5,552.33	5,376.08	52.63	25.47	61.34	1,354.06	1.34	2,131.38	2,065.32	66.06	32.265	
7,500.00	5,701.31	5,565.00	5,388.22	55.35	25.54	62.92	1,357.68	1.54	2,208.67	2,139.82	68.86	32.077	
7,600.00	5,699.65	5,565.00	5,388.22	58.09	25.54	64.46	1,357.68	1.54	2,287.67	2,216.16	71.51	31.991	
7,700.00	5,697.99	5,565.00	5,388.22	60.83	25.54	65.90	1,357.68	1.54	2,368.26	2,294.09	74.17	31.930	
7,800.00	5,696.33	5,565.00	5,388.22	63.57	25.54	67.24	1,357.68	1.54	2,450.28	2,373.44	76.84	31.890	
7,900.00	5,694.68	5,565.00	5,388.22	66.32	25.54	68.49	1,357.68	1.54	2,533.59	2,454.08	79.51	31.866	
8,000.00	5,693.02	5,565.00	5,388.22	69.08	25.54	69.[illegible]	1,357.68	1.54	2,618.07	2,535.88	82.18	31.856	
8,100.00	5,691.36	5,565.00	5,388.22	71.84	25.54	70.7[illegible]	1,357.68	1.54	2,703.61	2,618.74	84.86	31.858	
8,200.00	5,689.70	5,565.00	5,388.22	74.60	25.54	71.7[illegible]	1,357.68	1.54	2,790.11	2,702.56	87.55	31.870	
8,300.00	5,688.04	5,565.00	5,388.22	77.37	25.54	72.75	1,357.68	1.54	2,877.48	2,787.25	90.23	31.889	
8,400.00	5,686.39	5,565.87	5,389.05	80.13	25.55	73.65	1,357.93	1.55	2,965.65	2,872.72	92.94	31.910	
8,500.00	5,684.73	5,569.57	5,392.60	82.91	25.56	74.48	1,358.99	1.61	3,054.55	2,958.86	95.69	31.921	
8,600.00	5,683.07	5,573.39	5,396.26	85.68	25.59	75.27	1,360.09	1.67	3,144.12	3,045.67	98.45	31.935	
8,700.00	5,681.41	5,577.34	5,400.04	88.46	25.61	76.01	1,361.22	1.73	3,234.29	3,133.07	101.22	31.953	
8,800.00	5,679.75	5,581.43	5,403.96	91.23	25.63	76.71	1,362.38	1.79	3,325.03	3,221.03	104.00	31.973	
8,900.00	5,678.10	5,585.65	5,408.00	94.01	25.65	77.37	1,363.58	1.85	3,416.27	3,309.50	106.78	31.994	
9,000.00	5,676.44	5,590.02	5,412.19	96.80	25.67	77.99	1,364.82	1.91	3,508.00	3,398.43	109.57	32.017	
9,100.00	5,674.78	5,594.54	5,416.53	99.58	25.70	78.58	1,366.10	1.98	3,600.16	3,487.79	112.36	32.040	
9,200.00	5,673.12	5,599.23	5,421.02	102.36	25.72	79.14	1,367.43	2.04	3,692.72	3,577.56	115.17	32.064	
9,300.00	5,671.46	5,604.08	5,425.68	105.15	25.75	79.68	1,368.80	2.10	3,785.66	3,667.69	117.98	32.089	
9,400.00	5,669.81	5,609.12	5,430.52	107.94	25.78	80.18	1,370.22	2.16	3,878.95	3,758.16	120.79	32.112	
9,500.00	5,668.15	5,614.35	5,435.54	110.72	25.80	80.67	1,371.69	2.21	3,972.56	3,848.95	123.62	32.136	
9,600.00	5,666.49	5,619.79	5,440.75	113.51	25.83	81.13	1,373.21	2.27	4,066.48	3,940.03	126.45	32.159	
9,700.00	5,664.83	5,625.44	5,446.18	116.30	25.86	81.56	1,374.79	2.33	4,160.67	4,031.38	129.29	32.182	
9,800.00	5,663.18	5,630.06	5,450.61	119.09	25.89	81.98	1,376.08	2.37	4,255.12	4,123.02	132.11	32.209	

CONFIDENTIAL
Returned Unapproved

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Received: December 21, 2011

Company:	Berry Petroleum Company	**Local Co-ordinate Reference:**	Well Federal 4H-3-65
Project:	Duchesne Co., UT (UT27C)	**TVD Reference:**	WELL @ 7516.00usft
Reference Site:	Sec.2-T6S-R5W	**MD Reference:**	WELL @ 7516.00usft
Site Error:	0.00 usft	**North Reference:**	True
Reference Well:	Federal 4H-3-65	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDMDBBW
Reference Design:	Design #1	**Offset TVD Reference:**	Reference Datum

Offset Design Sec.2-T6S-R5W - Fed 3-2D-65 (Existing) - Wellbore #1 - Wellbore #1

Offset Site Error: 0.00 usft
Offset Well Error: 0.00 usft

Survey Program: 352-MWD

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Azimuth from North (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
9,900.00	5,661.52	5,632.77	5,453.22	121.88	25.90	82.39	1,376.84	2.40	4,349.83	4,214.93	134.90	32.245	
10,000.00	5,659.86	5,635.48	5,455.82	124.68	25.92	82.79	1,377.59	2.42	4,444.76	4,307.07	137.69	32.281	
10,100.00	5,658.20	5,638.19	5,458.42	127.47	25.93	83.16	1,378.35	2.45	4,539.91	4,399.42	140.49	32.316	
10,200.00	5,656.54	5,640.89	5,461.02	130.26	25.94	83.52	1,379.10	2.47	4,635.26	4,491.97	143.28	32.351	
10,300.00	5,654.89	5,643.59	5,463.61	133.06	25.96	83.87	1,379.85	2.50	4,730.80	4,584.72	146.08	32.385	
10,400.00	5,653.23	5,646.28	5,466.20	135.85	25.97	84.20	1,380.60	2.52	4,826.52	4,677.64	148.88	32.419	
10,500.00	5,651.57	5,648.97	5,468.78	138.65	25.99	84.52	1,381.35	2.55	4,922.41	4,770.72	151.68	32.452	
10,600.00	5,649.91	5,651.65	5,471.36	141.44	26.00	84.83	1,382.09	2.57	5,018.45	4,863.97	154.49	32.485	
10,700.00	5,648.25	5,654.33	5,473.93	144.24	26.01	85.12	1,382.83	2.60	5,114.65	4,957.36	157.29	32.517	
10,800.00	5,646.60	5,657.01	5,476.50	147.04	26.03	85.41	1,383.58	2.62	5,210.99	5,050.89	160.10	32.549	
10,900.00	5,644.94	5,659.68	5,479.06	149.83	26.04	85.68	1,384.32	2.64	5,307.47	5,144.56	162.91	32.580	
11,000.00	5,643.28	5,662.34	5,481.62	152.63	26.06	85.95	1,385.05	2.67	5,404.07	5,238.35	165.72	32.610	
11,100.00	5,641.62	5,665.00	5,484.18	155.43	26.07	86.20	1,385.79	2.69	5,500.79	5,332.26	168.53	32.640	
11,200.00	5,639.96	5,667.66	5,486.73	158.23	26.08	86.45	1,386.53	2.72	5,597.62	5,426.28	171.34	32.670	
11,300.00	5,638.31	5,670.31	5,489.28	161.03	26.10	86.69	1,387.26	2.74	5,694.57	5,520.41	174.15	32.698	
11,400.00	5,636.65	5,672.96	5,491.82	163.82	26.11	86.92	1,387.99	2.77	5,791.61	5,614.64	176.97	32.727	
11,500.00	5,634.99	5,675.60	5,494.36	166.62	26.13	87.14	1,388.72	2.79	5,888.76	5,708.97	179.79	32.754	
11,600.00	5,633.33	5,678.24	5,496.90	169.42	26.14	87.35	1,389.45	2.81	5,985.99	5,803.39	182.60	32.781	
11,700.00	5,631.67	5,680.87	5,499.43	172.22	26.15	87.56	1,390.18	2.84	6,083.32	5,897.89	185.42	32.808	
11,800.00	5,630.02	5,683.50	5,501.96	175.02	26.17	87.76	1,390.91	2.86	6,180.73	5,992.48	188.24	32.834	
11,900.00	5,628.36	5,686.12	5,504.48	177.82	26.18	87.96	1,391.63	2.89	6,278.22	6,087.15	191.07	32.859	
12,000.00	5,626.70	5,688.74	5,507.00	180.62	26.19	88.15	1,392.35	2.91	6,375.78	6,181.90	193.89	32.884	
12,042.41	5,626.00	5,689.85	5,508.06	181.81	26.20	88.23	1,392.66	2.92	6,417.19	6,222.10	195.09	32.893	
12,042.74	5,625.99	5,689.86	5,508.07	181.82	26.20	88.23	1,392.66	2.92	6,417.51	6,222.42	195.09	32.893	

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Returned Unapproved

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Received: December 21, 2011

Great White Directional

Anticollision Report

GREAT WHITE DIRECTIONAL SERVICES, L.L.C.

Company:	Berry Petroleum Company	**Local Co-ordinate Reference:**	Well Federal 4H-3-65
Project:	Duchesne Co., UT (UT27C)	**TVD Reference:**	WELL @ 7516.00usft
Reference Site:	Sec.2-T6S-R5W	**MD Reference:**	WELL @ 7516.00usft
Site Error:	0.00 usft	**North Reference:**	True
Reference Well:	Federal 4H-3-65	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDMDBBW
Reference Design:	Design #1	**Offset TVD Reference:**	Reference Datum

Offset Design Sec.2-T6S-R5W - Fed 6-2-65 (Existing) - Wellbore #1 - Wellbore #1

Offset Site Error: 0.00 usft

Offset Well Error: 0.00 usft

Survey Program: 5980-MWD

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Azimuth from North (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.00	0.00	0.00	20.00	0.00	0.00	16.48	18.94	5.60	28.11				
100.00	100.00	80.00	100.00	0.09	0.09	16.48	18.94	5.60	19.75	19.57	0.18	109.728	
200.00	200.00	180.00	200.00	0.31	0.20	16.48	18.94	5.60	19.75	19.24	0.52	38.194	
300.00	300.00	280.00	300.00	0.54	0.31	16.48	18.94	5.60	19.75	18.90	0.85	23.121	
400.00	400.00	380.00	400.00	0.76	0.43	16.48	18.94	5.60	19.75	18.56	1.19	16.578	
500.00	500.00	480.00	500.00	0.99	0.54	16.48	18.94	5.60	19.75	18.22	1.53	12.922	
600.00	600.00	580.00	600.00	1.21	0.65	16.48	18.94	5.60	19.75	17.89	1.87	10.587	
700.00	700.00	680.00	700.00	1.44	0.76	16.48	18.94	5.60	19.75	17.55	2.20	8.967	
800.00	800.00	780.00	800.00	1.66	0.88	16.48	18.94	5.60	19.75	17.21	2.54	7.776	
900.00	900.00	880.00	900.00	1.89	0.99	16.48	18.94	5.60	19.75	16.88	2.88	6.865	
1,000.00	1,000.00	980.00	1,000.00	2.11	1.10	16.48	18.94	5.60	19.75	16.54	3.21	6.145	
1,100.00	1,100.00	1,080.00	1,100.00	2.34	1.21	16.48	18.94	5.60	19.75	16.20	3.55	5.562	
1,200.00	1,200.00	1,180.00	1,200.00	2.56	1.33	16.48	18.94	5.60	19.75	15.86	3.89	5.079	
1,300.00	1,300.00	1,280.00	1,300.00	2.79	1.44	16.48	18.94	5.60	19.75	15.53	4.23	4.674	
1,400.00	1,400.00	1,380.00	1,400.00	3.01	1.55	16.48	18.94	5.60	19.75	15.19	4.56	4.329	
1,500.00	1,500.00	1,480.00	1,500.00	3.24	1.66	16.48	18.94	5.60	19.75	14.85	4.90	4.031	
1,600.00	1,600.00	1,580.00	1,600.00	3.46	1.78	16.48	18.94	5.60	19.75	14.52	5.24	3.772	
1,700.00	1,700.00	1,680.00	1,700.00	3.69	1.89	16.48	18.94	5.60	19.75	14.18	5.57	3.543	
1,800.00	1,800.00	1,780.00	1,800.00	3.91	2.00	16.48	18.94	5.60	19.75	13.84	5.91	3.341	
1,900.00	1,900.00	1,880.00	1,900.00	4.14	2.11	16.48	18.94	5.60	19.75	13.50	6.25	3.161	
2,000.00	2,000.00	1,980.00	2,000.00	4.36	2.23	16.48	18.94	5.60	19.75	13.17	6.59	2.999	
2,100.00	2,100.00	2,080.00	2,100.00	4.59	2.34	16.48	18.94	5.60	19.75	12.83	6.92	2.853	
2,200.00	2,200.00	2,180.00	2,200.00	4.81	2.45	16.48	18.94	5.60	19.75	12.49	7.26	2.721	
2,300.00	2,300.00	2,280.00	2,300.00	5.03	2.56	16.48	18.94	5.60	19.75	12.15	7.60	2.601	
2,400.00	2,400.00	2,380.00	2,400.00	5.26	2.67	16.48	18.94	5.60	19.75	11.82	7.93	2.489	
2,500.00	2,500.00	2,480.00	2,500.00	5.48	2.79	16.48	18.94	5.60	19.75	11.46	8.27	2.388	
2,600.00	2,600.00	2,580.00	2,600.00	5.71	2.90	16.48	18.94	5.60	19.75	11.14	8.61	2.294	
2,700.00	2,700.00	2,680.00	2,700.00	5.93	3.01	16.48	18.94	5.60	19.75	10.81	8.95	2.208	
2,800.00	2,800.00	2,780.00	2,800.00	6.16	3.12	16.48	18.94	5.60	19.75	10.47	9.28	2.128	
2,900.00	2,900.00	2,880.00	2,900.00	6.38	3.24	16.48	18.94	5.60	19.75	10.13	9.62	2.053	
3,000.00	3,000.00	2,980.00	3,000.00	6.61	3.35	16.48	18.94	5.60	19.75	9.79	9.96	1.984	
3,100.00	3,100.00	3,080.00	3,100.00	6.83	3.46	16.48	18.94	5.60	19.75	9.46	10.29	1.919	
3,200.00	3,200.00	3,180.00	3,200.00	7.06	3.57	16.48	18.94	5.60	19.75	9.12	10.63	1.858	
3,300.00	3,300.00	3,280.00	3,300.00	7.28	3.69	16.48	18.94	5.60	19.75	8.78	10.97	1.801	
3,400.00	3,400.00	3,380.00	3,400.00	7.51	3.80	16.48	18.94	5.60	19.75	8.45	11.31	1.747	
3,500.00	3,500.00	3,480.00	3,500.00	7.73	3.94	16.48	18.94	5.60	19.75	8.11	11.64	1.696	
3,600.00	3,600.00	3,580.00	3,600.00	7.96	4.02	16.48	18.94	5.60	19.75	7.77	11.98	1.649	
3,700.00	3,700.00	3,680.00	3,700.00	8.19	4.14	16.48	18.94	5.60	19.75	7.43	12.32	1.604	
3,800.00	3,800.00	3,780.00	3,800.00	8.41	4.25	16.48	18.94	5.60	19.75	7.10	12.65	1.561	
3,900.00	3,900.00	3,880.00	3,900.00	8.63	4.36	16.48	18.94	5.60	19.75	6.76	12.99	1.520	
4,000.00	4,000.00	3,980.00	4,000.00	8.86	4.47	16.48	18.94	5.60	19.75	6.42	13.33	1.482	Level 3
4,100.00	4,100.00	4,080.00	4,100.00	9.08	4.59	16.48	18.94	5.60	19.75	6.09	13.67	1.445	Level 3
4,200.00	4,200.00	4,180.00	4,200.00	9.31	4.70	16.48	18.94	5.60	19.75	5.75	14.00	1.411	Level 3
4,300.00	4,300.00	4,280.00	4,300.00	9.53	4.81	16.48	18.94	5.60	19.75	5.41	14.34	1.377	Level 3
4,400.00	4,400.00	4,380.00	4,400.00	9.75	4.92	16.48	18.94	5.60	19.75	5.07	14.68	1.346	Level 3
4,500.00	4,500.00	4,480.00	4,500.00	9.98	5.03	16.48	18.94	5.60	19.75	4.74	15.01	1.316	Level 3
4,600.00	4,600.00	4,580.00	4,600.00	10.20	5.15	16.48	18.94	5.60	19.75	4.40	15.35	1.287	Level 3
4,700.00	4,700.00	4,680.00	4,700.00	10.43	5.26	16.48	18.94	5.60	19.75	4.06	15.69	1.259	Level 3
4,800.00	4,800.00	4,780.00	4,800.00	10.65	5.37	16.48	18.94	5.60	19.75	3.73	16.03	1.233	Level 2
4,900.00	4,900.00	4,880.00	4,900.00	10.88	5.48	16.48	18.94	5.60	19.75	3.39	16.36	1.207	Level 2
5,000.00	5,000.00	4,980.00	5,000.00	11.10	5.60	16.48	18.94	5.60	19.75	3.05	16.70	1.183	Level 2
5,100.00	5,100.00	5,080.00	5,100.00	11.33	5.71	16.48	18.94	5.60	19.75	2.71	17.04	1.159	Level 2

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CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Received: December 21, 2011

Great White Directional

Anticollision Report

GREAT WHITE DIRECTIONAL SERVICES, L.L.C.

Company:	Berry Petroleum Company	**Local Co-ordinate Reference:**	Well Federal 4H-3-65
Project:	Duchesne Co., UT (UT27C)	**TVD Reference:**	WELL @ 7516.00usft
Reference Site:	Sec.2-T6S-R5W	**MD Reference:**	WELL @ 7516.00usft
Site Error:	0.00 usft	**North Reference:**	True
Reference Well:	Federal 4H-3-65	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDMDBBW
Reference Design:	Design #1	**Offset TVD Reference:**	Reference Datum

Offset Design Sec.2-T6S-R5W - Fed 6-2-65 (Existing) - Wellbore #1 - Wellbore #1

Offset Site Error: 0.00 usft

Survey Program: 5980-MWD **Offset Well Error:** 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Azimuth from North (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,200.00	5,200.00	5,180.00	5,200.00	11.55	5.82	16.48	18.94	5.60	19.75	2.38	17.37	1.137	Level 2
5,248.67	5,248.67	5,228.67	5,248.67	11.66	5.88	16.48	18.94	5.60	19.75	2.21	17.54	1.126	Level 2, CC
5,250.00	5,250.00	5,230.00	5,250.00	11.67	5.88	16.49	18.94	5.60	19.75	2.21	17.54	1.126	Level 2, ES
5,275.00	5,274.99	5,254.99	5,274.99	11.72	5.91	18.57	18.94	5.60	19.84	2.22	17.62	1.126	Level 2, SF
5,300.00	5,299.90	5,279.90	5,299.90	11.77	5.93	24.27	18.94	5.60	20.22	2.53	17.70	1.143	Level 2
5,325.00	5,324.68	5,304.68	5,324.68	11.82	5.96	33.03	18.94	5.60	21.26	3.50	17.76	1.197	Level 2
5,350.00	5,349.24	5,329.24	5,349.24	11.87	5.99	43.54	18.94	5.60	23.42	5.63	17.79	1.317	Level 3
5,375.00	5,373.53	5,353.53	5,373.53	11.93	6.02	54.07	18.94	5.60	27.09	9.33	17.76	1.525	
5,400.00	5,397.48	5,377.48	5,397.48	11.99	6.04	63.29	18.94	5.60	32.45	14.77	17.68	1.835	
5,425.00	5,421.02	5,401.02	5,421.02	12.05	6.07	70.70	18.94	5.60	39.47	21.92	17.55	2.249	
5,450.00	5,444.09	5,424.09	5,444.09	12.11	6.10	76.42	18.94	5.60	48.06	30.67	17.39	2.764	
5,475.00	5,466.62	5,446.62	5,466.62	12.18	6.12	80.79	18.94	5.60	58.11	40.91	17.20	3.379	
5,500.00	5,488.55	5,468.55	5,488.55	12.25	6.15	84.13	18.94	5.60	69.51	52.53	16.98	4.093	
5,525.00	5,509.83	5,489.83	5,509.83	12.34	6.17	86.72	18.94	5.60	82.18	65.43	16.74	4.908	
5,550.00	5,530.39	5,510.39	5,530.39	12.43	6.19	88.75	18.94	5.60	96.04	79.56	16.49	5.826	
5,575.00	5,550.18	5,530.18	5,550.18	12.54	6.21	90.36	18.94	5.60	111.04	94.83	16.21	6.850	
5,600.00	5,569.14	5,549.14	5,569.14	12.65	6.24	91.66	18.94	5.60	127.10	111.18	15.92	7.986	
5,625.00	5,587.23	5,567.23	5,587.23	12.79	6.26	92.72	18.94	5.60	144.17	128.57	15.61	9.237	
5,650.00	5,604.38	5,584.38	5,604.38	12.94	6.28	93.60	18.94	5.60	162.20	146.91	15.29	10.609	
5,675.00	5,620.57	5,600.57	5,620.57	13.12	6.29	94.33	18.94	5.60	181.13	166.17	14.96	12.106	
5,700.00	5,635.73	5,615.73	5,635.73	13.31	6.31	94.94	18.94	5.60	200.90	186.27	14.63	13.731	
5,725.00	5,649.83	5,629.83	5,649.83	13.53	6.33	95.46	18.94	5.60	221.45	207.15	14.30	15.484	
5,750.00	5,662.83	5,642.83	5,662.83	13.77	6.34	95.91	18.94	5.60	242.72	228.74	13.98	17.365	
5,775.00	5,674.70	5,654.70	5,674.70	14.04	6.35	96.29	18.94	5.60	264.66	250.98	13.67	19.356	
5,800.00	5,685.40	5,665.40	5,685.40	14.34	6.37	96.63	18.94	5.60	287.19	273.80	13.39	21.450	
5,825.00	5,694.90	5,674.90	5,694.90	14.66	6.38	96.92	18.94	5.60	310.26	297.12	13.15	23.603	
5,850.00	5,703.18	5,683.18	5,703.18	15.00	6.39	97.18	18.94	5.60	333.80	320.84	12.96	25.755	
5,875.00	5,710.21	5,690.21	5,710.21	15.37	6.39	97.40	18.94	5.60	357.75	344.88	12.87	27.794	
5,900.00	5,715.98	5,695.98	5,715.98	15.76	6.40	97.60	18.94	5.60	382.04	369.10	12.95	29.510	
5,925.00	5,720.46	5,700.46	5,720.46	16.18	6.41	97.78	18.94	5.60	406.60	393.26	13.34	30.471	
5,950.00	5,723.66	5,703.66	5,723.66	16.61	6.41	97.94	18.94	5.60	431.37	416.85	14.52	29.708	
5,975.00	5,725.55	5,705.55	5,725.55	17.05	6.41	98.08	18.94	5.60	456.27	438.23	18.04	25.290	
6,000.00	5,726.13	5,706.13	5,726.13	17.52	6.41	98.21	18.94	5.60	481.24	457.34	23.90	20.139	
6,006.59	5,726.07	5,706.07	5,726.07	17.64	6.41	98.24	18.94	5.60	487.82	465.00	22.82	21.381	
6,100.00	5,724.52	5,704.52	5,724.52	19.50	6.41	98.61	18.94	5.60	581.15	557.11	24.04	24.171	
6,200.00	5,722.86	5,702.86	5,722.86	21.67	6.41	98.90	18.94	5.60	681.09	655.73	25.37	26.851	
6,300.00	5,721.20	5,701.20	5,721.20	23.97	6.41	99.11	18.94	5.60	781.04	754.39	26.65	29.306	
6,400.00	5,719.55	5,699.55	5,719.55	26.37	6.41	99.27	18.94	5.60	881.00	853.13	27.87	31.607	
6,500.00	5,717.89	5,697.89	5,717.89	28.84	6.40	99.40	18.94	5.60	980.96	951.94	29.02	33.802	
6,600.00	5,716.23	5,696.23	5,716.23	31.37	6.40	99.51	18.94	5.60	1,080.93	1,050.84	30.09	35.924	
6,700.00	5,714.57	5,694.57	5,714.57	33.94	6.40	99.60	18.94	5.60	1,180.90	1,149.82	31.08	37.992	
6,800.00	5,712.91	5,692.91	5,712.91	36.55	6.40	99.67	18.94	5.60	1,280.88	1,248.87	32.01	40.019	
6,900.00	5,711.26	5,691.26	5,711.26	39.18	6.40	99.74	18.94	5.60	1,380.85	1,347.99	32.87	42.014	
7,000.00	5,709.60	5,689.60	5,709.60	41.84	6.39	99.79	18.94	5.60	1,480.83	1,447.16	33.67	43.980	
7,100.00	5,707.94	5,687.94	5,707.94	44.52	6.39	99.84	18.94	5.60	1,580.81	1,546.38	34.43	45.919	
7,200.00	5,706.28	5,686.28	5,706.28	47.21	6.39	99.88	18.94	5.60	1,680.79	1,645.65	35.14	47.832	
7,300.00	5,704.62	5,684.62	5,704.62	49.91	6.39	99.92	18.94	5.60	1,780.77	1,744.95	35.82	49.718	
7,400.00	5,702.97	5,682.97	5,702.97	52.63	6.39	99.95	18.94	5.60	1,880.75	1,844.28	36.46	51.578	
7,500.00	5,701.31	5,681.31	5,701.31	55.35	6.38	99.98	18.94	5.60	1,980.73	1,943.64	37.09	53.409	
7,600.00	5,699.65	5,679.65	5,699.65	58.09	6.38	100.01	18.94	5.60	2,080.71	2,043.02	37.69	55.210	
7,700.00	5,697.99	5,677.99	5,697.99	60.83	6.38	100.04	18.94	5.60	2,180.69	2,142.42	38.27	56.982	
7,800.00	5,696.33	5,676.33	5,696.33	63.57	6.38	100.06	18.94	5.60	2,280.67	2,241.83	38.84	58.722	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

CONFIDENTIAL
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Received: December 21, 2011

Great White Directional

Anticollision Report

GREAT WHITE DIRECTIONAL SERVICES, L.L.C.

Company:	Berry Petroleum Company	**Local Co-ordinate Reference:**	Well Federal 4H-3-65
Project:	Duchesne Co., UT (UT27C)	**TVD Reference:**	WELL @ 7516.00usft
Reference Site:	Sec.2-T6S-R5W	**MD Reference:**	WELL @ 7516.00usft
Site Error:	0.00 usft	**North Reference:**	True
Reference Well:	Federal 4H-3-65	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDMDBBW
Reference Design:	Design #1	**Offset TVD Reference:**	Reference Datum

Offset Design Sec.2-T6S-R5W - Fed 6-2-65 (Existing) - Wellbore #1 - Wellbore #1

Survey Program: 5980-MWD

Offset Site Error: 0.00 usft

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Azimuth from North (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
7,900.00	5,694.68	5,674.68	5,694.68	66.32	6.38	100.08	18.94	5.60	2,380.66	2,341.26	39.40	60.429	
8,000.00	5,693.02	5,673.02	5,693.02	69.08	6.38	100.10	18.94	5.60	2,480.64	2,440.70	39.94	62.104	
8,100.00	5,691.36	5,671.36	5,691.36	71.84	6.37	100.12	18.94	5.60	2,580.62	2,540.14	40.48	63.745	
8,200.00	5,689.70	5,669.70	5,689.70	74.60	6.37	100.13	18.94	5.60	2,680.61	2,639.59	41.02	65.351	
8,300.00	5,688.04	5,668.04	5,688.04	77.37	6.37	100.15	18.94	5.60	2,780.59	2,739.04	41.55	66.923	
8,400.00	5,686.39	5,666.39	5,686.39	80.13	6.37	100.16	18.94	5.60	2,880.57	2,838.50	42.08	68.460	
8,500.00	5,684.73	5,664.73	5,684.73	82.91	6.37	100.17	18.94	5.60	2,980.56	2,937.95	42.60	69.962	
8,600.00	5,683.07	5,663.07	5,683.07	85.68	6.36	100.19	18.94	5.60	3,080.54	3,037.41	43.13	71.429	
8,700.00	5,681.41	5,661.41	5,681.41	88.46	6.36	100.20	18.94	5.60	3,180.53	3,136.87	43.65	72.860	
8,800.00	5,679.75	5,659.75	5,679.75	91.23	6.36	100.21	18.94	5.60	3,280.51	3,236.33	44.18	74.257	
8,900.00	5,678.10	5,658.10	5,678.10	94.01	6.36	100.22	18.94	5.60	3,380.49	3,335.79	44.70	75.620	
9,000.00	5,676.44	5,656.44	5,676.44	96.80	6.36	100.23	18.94	5.60	3,480.48	3,435.25	45.23	76.948	
9,100.00	5,674.78	5,654.78	5,674.78	99.58	6.36	100.24	18.94	5.60	3,580.46	3,534.70	45.76	78.243	
9,200.00	5,673.12	5,653.12	5,673.12	102.36	6.35	100.25	18.94	5.60	3,680.45	3,634.16	46.29	79.504	
9,300.00	5,671.46	5,651.46	5,671.46	105.15	6.35	100.25	18.94	5.60	3,780.43	3,733.61	46.83	80.732	
9,400.00	5,669.81	5,649.81	5,669.81	107.94	6.35	100.26	18.94	5.60	3,880.42	3,833.05	47.36	81.928	
9,500.00	5,668.15	5,648.15	5,668.15	110.72	6.35	100.27	18.94	5.60	3,980.40	3,932.50	47.90	83.092	
9,600.00	5,666.49	5,646.49	5,666.49	113.51	6.35	100.28	18.94	5.60	4,080.39	4,031.94	48.45	84.226	
9,700.00	5,664.83	5,644.83	5,664.83	116.30	6.34	100.28	18.94	5.60	4,180.37	4,131.38	48.99	85.329	
9,800.00	5,663.18	5,643.18	5,663.18	119.09	6.34	100.29	18.94	5.60	4,280.36	4,230.82	49.54	86.402	
9,900.00	5,661.52	5,641.52	5,661.52	121.88	6.34	100.30	18.94	5.60	4,380.34	4,330.25	50.09	87.446	
10,000.00	5,659.86	5,639.86	5,659.86	124.68	6.34	100.30	18.94	5.60	4,480.33	4,429.68	50.65	[illegible]	
10,100.00	5,658.20	5,638.20	5,658.20	127.47	6.34	100.31	18.94	5.60	4,580.31	4,529.11	51.21	[illegible]	
10,200.00	5,656.54	5,636.54	5,656.54	130.26	6.33	100.31	18.94	5.60	4,680.30	4,628.53	51.77	[illegible]	
10,300.00	5,654.89	5,634.89	5,654.89	133.06	6.33	100.32	18.94	5.60	4,780.29	4,727.95	[illegible]	[illegible]	
10,400.00	5,653.23	5,633.23	5,653.23	135.85	6.33	100.32	18.94	5.60	4,880.27	[illegible]	[illegible]	92.254	
10,500.00	5,651.57	5,631.57	5,651.57	138.65	6.33	100.33	18.94	5.60	[illegible]	[illegible]	53.47	93.138	
10,600.00	5,649.91	5,629.91	5,649.91	141.44	6.33	100.33	18.94	[illegible]	[illegible]	5,026.20	54.05	93.998	
10,700.00	5,648.25	5,628.25	5,648.25	144.24	6.33	100.33	18.94	[illegible]	5,180.23	5,125.60	54.62	94.835	
10,800.00	5,646.60	5,626.60	5,646.60	147.04	6.32	100.34	18.94	5.60	5,280.21	5,225.01	55.20	95.648	
10,900.00	5,644.94	5,624.94	5,644.94	149.83	6.32	100.34	18.94	[illegible]	5,380.20	5,324.41	55.79	96.439	
11,000.00	5,643.28	5,623.28	5,643.28	152.63	6.32	100.35	[illegible]	5.60	5,480.18	5,423.81	56.38	97.209	
11,100.00	5,641.62	5,621.62	5,641.62	155.43	6.32	100.35	[illegible]	5.60	5,580.17	5,523.20	56.96	97.958	
11,200.00	5,639.96	5,619.96	5,639.96	158.23	6.32	[illegible]	[illegible]	5.60	5,680.15	5,622.60	57.56	98.686	
11,300.00	5,638.31	5,618.31	5,638.31	161.03	6.31	[illegible]	18.94	5.60	5,780.14	5,721.99	58.15	99.395	
11,400.00	5,636.65	5,616.65	5,636.65	163.82	6.31	[illegible]	18.94	5.60	5,880.13	5,821.37	58.75	100.085	
11,500.00	5,634.99	5,614.99	5,634.99	[illegible]	6.31	100.36	18.94	5.60	5,980.11	5,920.76	59.35	100.756	
11,600.00	5,633.33	5,613.33	5,633.33	[illegible]	[illegible]	100.37	18.94	5.60	6,080.10	6,020.14	59.96	101.409	
11,700.00	5,631.67	5,611.67	5,631.67	[illegible]	6.31	100.37	18.94	5.60	6,180.08	6,119.52	60.56	102.044	
11,800.00	5,630.02	5,610.02	5,630.02	[illegible]	6.30	100.37	18.94	5.60	6,280.07	6,218.90	61.17	102.663	
11,900.00	5,628.36	5,608.36	5,628.36	177.82	6.30	100.38	18.94	5.60	6,380.06	6,318.27	61.78	103.266	
12,000.00	5,626.70	5,606.70	5,626.70	180.62	6.30	100.38	18.94	5.60	6,480.04	6,417.64	62.40	103.852	
12,042.41	5,626.00	5,606.00	5,626.00	181.81	6.30	100.38	18.94	5.60	6,522.45	6,459.79	62.66	104.096	
12,042.74	5,625.99	5,605.99	5,625.99	181.82	6.30	100.38	18.94	5.60	6,522.78	6,460.12	62.66	104.100	

CONFIDENTIAL
Returned Unapproved

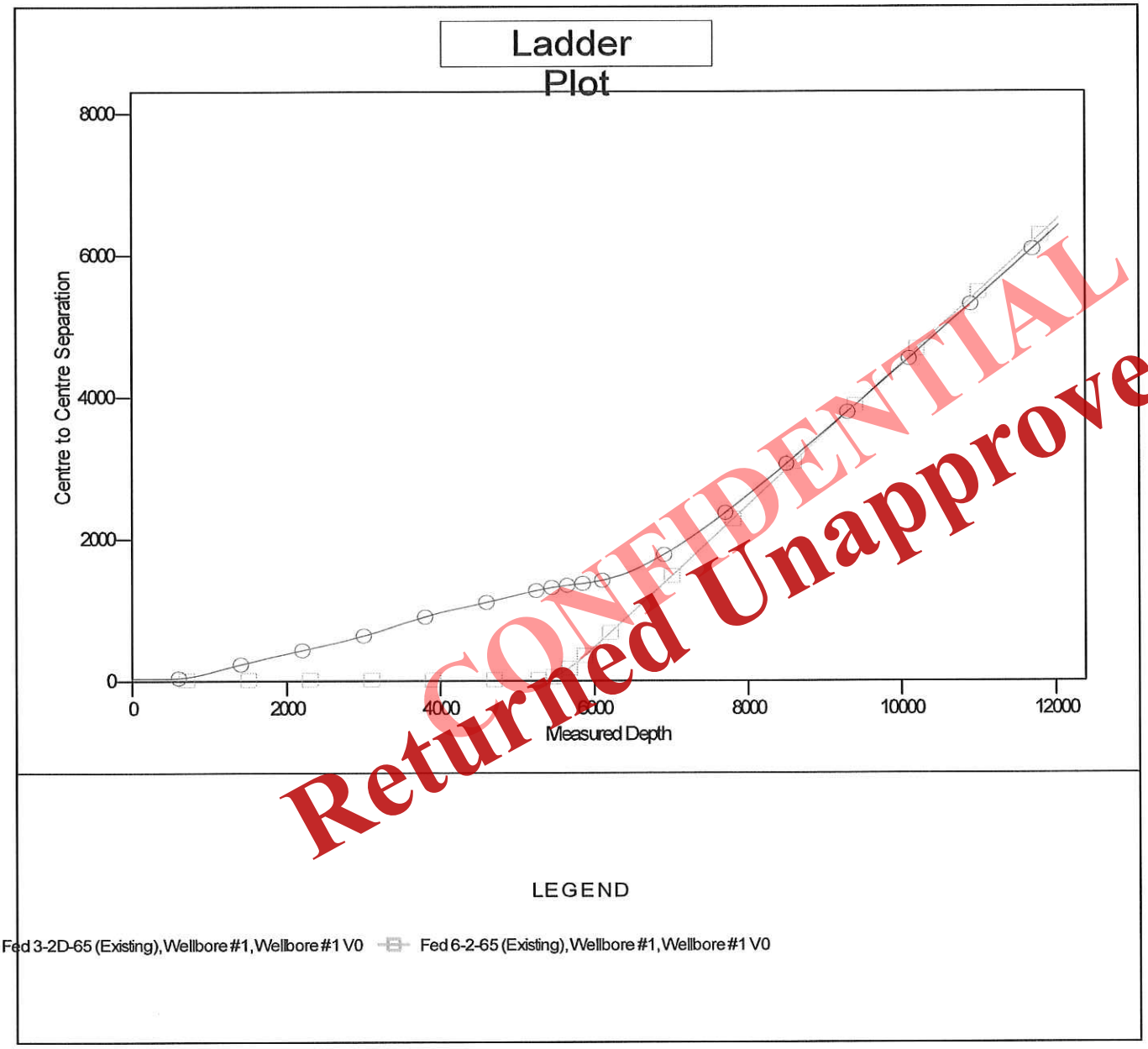
CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Received: December 21, 2011

Company:	Berry Petroleum Company	**Local Co-ordinate Reference:**	Well Federal 4H-3-65
Project:	Duchesne Co., UT (UT27C)	**TVD Reference:**	WELL @ 7516.00usft
Reference Site:	Sec.2-T6S-R5W	**MD Reference:**	WELL @ 7516.00usft
Site Error:	0.00 usft	**North Reference:**	True
Reference Well:	Federal 4H-3-65	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDMDBBW
Reference Design:	Design #1	**Offset TVD Reference:**	Reference Datum

Reference Depths are relative to WELL @ 7516.00usft
Offset Depths are relative to Offset Datum
Central Meridian is 111° 30' 0.000 W

Coordinates are relative to: Federal 4H-3-65
Coordinate System is US State Plane 1927 (Exact solution), Utah Central 4302
Grid Convergence at Surface is: 0.69°



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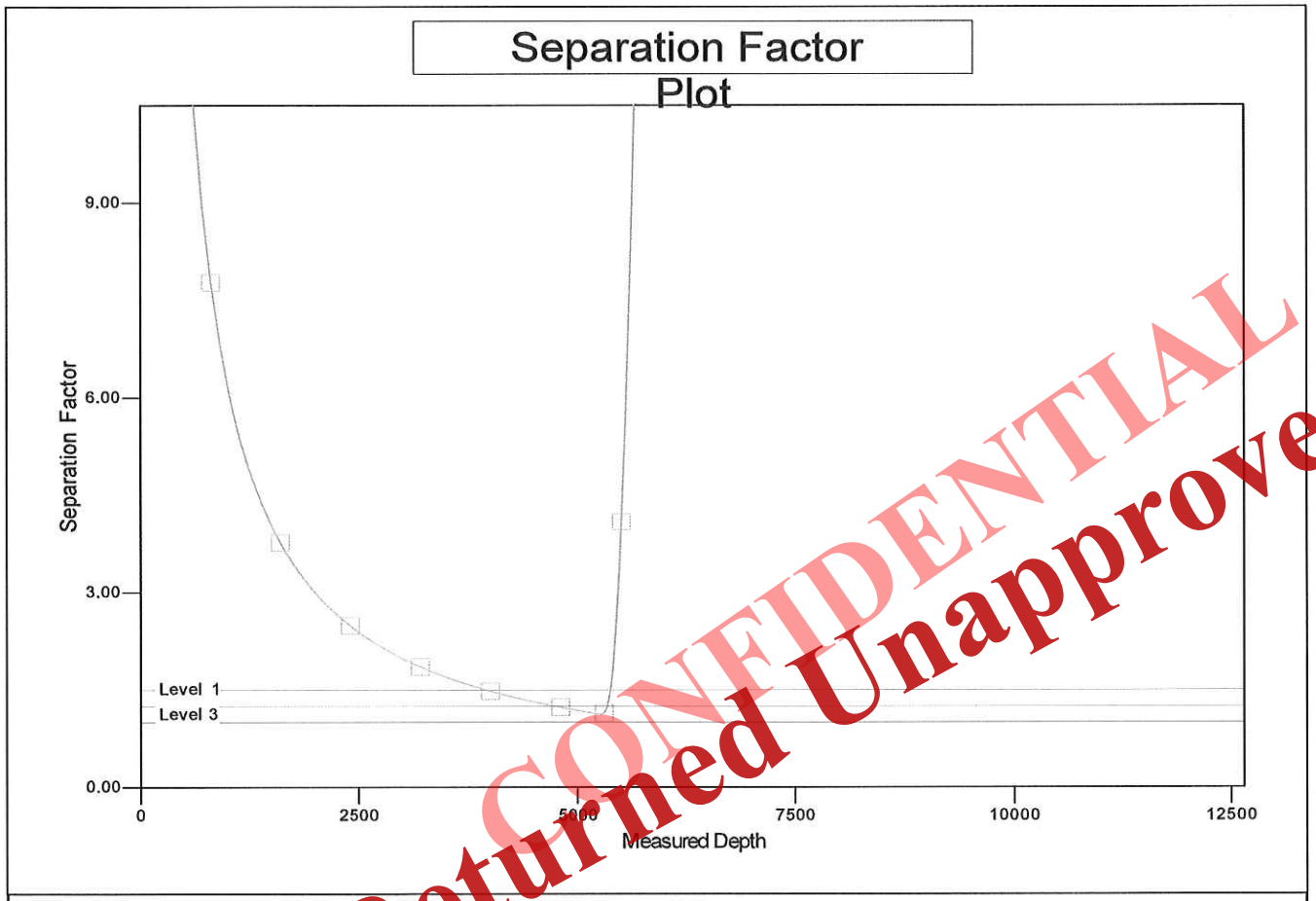
Company:	Berry Petroleum Company	**Local Co-ordinate Reference:**	Well Federal 4H-3-65
Project:	Duchesne Co., UT (UT27C)	**TVD Reference:**	WELL @ 7516.00usft
Reference Site:	Sec.2-T6S-R5W	**MD Reference:**	WELL @ 7516.00usft
Site Error:	0.00 usft	**North Reference:**	True
Reference Well:	Federal 4H-3-65	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDMDBBW
Reference Design:	Design #1	**Offset TVD Reference:**	Reference Datum

Reference Depths are relative to WELL @ 7516.00usft
Offset Depths are relative to Offset Datum
Central Meridian is 111° 30' 0.000 W

Coordinates are relative to: Federal 4H-3-65
Coordinate System is US State Plane 1927 (Exact solution), Utah Central 4302
Grid Convergence at Surface is: 0.69°



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LEGEND

Fed 3-2D-65 (Existing), Wellbore #1, Wellbore #1 V0 — Fed 6-2-65 (Existing), Wellbore #1, Wellbore #1 V0

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BERRY PETROLEUM COMPANY
FEDERAL 4H-3-65
SE ¼, NW ¼, 1994' FNL 1950' FWL, Sec. 2, T6S, R5W, U.S.B.& M.
BHL: NW ¼, NW ¼, 800' FNL, 800' FWL, Sec. 3, T6S, R5W
Duchesne County, Utah

ONSHORE ORDER NO. 1
MULTI POINT SURFACE USE & OPERATIONS PLAN

A Existing Roads

To reach the Berry Petroleum Company well, Federal 4H-3-65, in Section 2-T6S-R5W:

Start in Myton, Utah. And proceed west on US Highway 40, 8.6 miles to the Antelope Creek/Sowers Canyon Road at the Bridgeland turnoff. Turn south and proceed 6.5 to the Sowers Canyon road continue in a southwesterly direction for approx. 11.4 miles to the Federal 6-2-65 from which the 4H-3-65 will be drilled.

The existing oilfield service road may need some surface material to prevent or repair holes in the road due to heavy truck traffic during the drilling and completion operation. If repairs are made the operator will secure material from private sources.

Please see the attached map for additional details.

B New or Reconstructed Access Roads
See Topographic Map "B" for the location of the proposed access road.

On National Forest Service (NFS) lands, access roads will conform to standards outlined in the BLM and Forest Service publication, *Surface Operating Standards and Guidelines for Oil and Gas Exploration and Development* "Gold Book" *4th Edition*, 2006.

Surface disturbance and vehicular traffic will be limited to the approved location and approved access route. Any additional area needed will be approved in advance.

New access roads will be crowned (2 to 3%), ditched, and constructed with a running surface of 22 feet and a maximum disturbed width of 35 feet. Graveling or capping the roadbed will be performed as necessary to provide a well-constructed, safe road. Prior to construction or upgrading, the proposed road shall be cleared of any snow and shall be allowed to dry completely.

The disturbed width needed may be wider than 35 feet to accommodate larger equipment where deep cuts are required for road construction; intersections or sharp curves occur; or, as proposed by the operator. Approval will be required from the Forest Supervisor, Vernal, Utah (FS).

Appropriate water control structures will be installed to control erosion.

Unless otherwise specified, the following specifications will apply:

The road grade in the Project Area will be 10% or less, wherever possible. The 10% grade would only be exceeded in areas where physical terrain or unusual circumstances require it.
Turn-out areas will not be constructed unless they were deemed necessary for safety reasons.

There will be no major cuts and fills, culverts, or bridges. If it becomes necessary to install a culvert at some time after approval of the APD, the operator will submit a Sundry Notice requesting approval of the USFS Authorized Officer.

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The access road will be centerline flagged during time of staking.

There will be no gates, cattle guards, fence cuts, or modifications to existing facilities without prior consent of the FS.

Surfacing material may be necessary, depending upon weather conditions.

The road surface and shoulders will be kept in a safe and usable condition and will be maintained in accordance with the original construction standards. Best efforts will be made such that all drainage ditches and culverts will be kept clear and free flowing and will be maintained according to the original construction standards. The access road ROW will be kept free of trash during operations. All traffic will be confined to the approved running surface. 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 drainages be blocked by the roadbed. Erosion of drainage ditches by runoff water shall be prevented by diverting water off at frequent intervals by means of cutouts. Should mud holes develop, the holes shall be filled in and detours around the holes avoided. When snow is removed from the road during the winter months, the snow should be pushed outside the borrow ditches, and the cutouts kept clear so that snowmelt will be channeled away from the road.

C Location of Existing Wells

See Topographic Map "C" for the location of existing wells within a 1mile radius.

D Location of Tank Batteries, Production Facilities and Production Gathering and Service Lines

A containment dike will be constructed completely around those production facilities which contain fluids (i.e., production tanks, produced water tanks). This dike will be constructed of compacted subsoil, be impervious, hold 100% of the capacity of the largest tank. The site specific APD will address additional capacity if such is needed due to environmental concerns. The use of topsoil for the construction of dikes will not be allowed. If a Spill Prevention, Control, and Countermeasure (SPCC) Plan is required by the Environmental Protection Agency, the containment dike may be expanded with the Authorized Agency Officer's approval to meet SPCC requirements.

The proposed pipeline will tie in at the existing pipeline. Map "D" illustrating the proposed route is attached.

All site security guidelines identified in Federal regulation 43 CFR 3126.7, will be adhered to. All off-lease storage, off-lease measurement, or commingling on-lease or off-lease production will have prior written approval form the Authorized Agency Officer.

Gas meter runs will be located approximately 100 feet from the wellhead. Where necessary, the gas line will be anchored down from the wellhead to the meter.

E Location and Type of Water Supply

Water for the drilling and completion will be pumped or trucked from the Berry source wells located in Sec. 23, T5S, R5W or Sec. 24, T5S, R5W, permit # 43-11041, or from Duchesne City Culinary Water Dock located in Sec. 1, T4S, R5W or from East Duchesne Water, Arcadia Feedlot, Sec. 28, T3S, R3W or Myton (Moon) Pit, SE/NE Sec. 27, T3S, R2W or from Petroglyph Operating Company 08-04 Waterplant, Sec. 8, T5S, R3W or from Kenneth V. & Barbara U.

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Richens source well located in Sec. 34, T3S, R2W, permit # 43-1723 or Brundage Canyon Field produced water or Leo Foy source well located in Sec. 34, T5S, R5W, permit # 43-11324.

F Source of Construction Materials

All construction materials for this location site and access road shall be borrow material accumulated during construction of the location site and access road.

Additional gravel or pit lining material will be obtained from a private source.

The use of materials under Authorized Agency jurisdiction will conform to 43 CFR 3610.2-3.

G Methods of Handling Waste Materials

Drill fluids will be contained in a closed loop system. Cuttings will be contained on site and buried in a pit or used on location or access roads whichever is deemed appropriate by the authorized agency.

After first production, produced wastewater will be trucked to one of the following approved waste water disposal sites: R.N. Industries, Inc. Sec. 4, T2S, R2W, Bluebell; MC & MC Disposal Sec. 12, T6S, R19E, Vernal; LaPoint Recycle & Storage Sec. 12, T5S, R19E, LaPoint or Water Disposal Inc. Sec. 32, T1S, R1W, Roosevelt, used in the operations of the field or, unless prohibited by the Authorized Officer, confined to the approved pit or storage tank for a period not to exceed 90 days. The use of such pit is hereby approved as part of this Application for Permit to Drill.

Production fluids will be contained in leak-proof tanks. All production fluids will be disposed of at approved disposal sites. Produced water, oil, and other byproducts will not be applied to roads or well pads for control of dust or weeds. The indiscriminate dumping of produced fluids on roads, well sites, or other areas will not be allowed.

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

A chemical portable toilet will be furnished with the drilling rig.

Garbage, trash, and other waste materials will be collected in a portable, self-contained, fully enclosed trash cage during operations. Trash will not be burned on location.

All debris and other waste materials not contained in the trash cage will be cleaned up and removed from the location promptly after removal of the completion rig (weather permitting).

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

No chemicals subject to reporting under SARA Title III (hazardous materials) 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, testing, or completing of wells. Furthermore, extremely hazardous substances, as defined in 40 CFR 355, in threshold planning quantities, will not be used, produced, stored, transported, or disposed of in association with the drilling, testing, or completing of wells within these areas.

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H Ancillary Facilities

There are no ancillary facilities planned for at this time and none are foreseen in the future.

I Well site Layout

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

The diagram describes rig orientation, parking areas, and access roads as well as the location of the following:

The stockpiled topsoil which shall not be used for facility berms. All brush removed from the well pad during construction will be stockpiled with the topsoil.

The flare pit, which will be located downwind from the prevailing wind direction.

The access road.

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

39-inch net wire shall be used with at least one strand of barbed wire on top of the net wire. Barbed wire is not necessary if pipe or some type of reinforcement rod is attached to the top of the entire fence.

The net wire shall be no more than two inches above the ground. The barbed wire shall be three inches over the net wire. Total height of the fence shall be at least 42 inches.

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

Standard steel posts shall be used between the corner braces, between the corner posts. Distance between any two posts shall be no greater than 16 feet.

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

J Plans for Restoration of the Surface

The dirt contractor will be provided with approved copies of the Surface Use Plan and these Standard Operating Procedures prior to construction activities.

Upon well completion, within 30 days the location and surrounding area will be cleared of all unused tubing, materials, trash, and debris not required for production.

On lands administered by the Forest Service, abandoned well sites, roads, and other disturbed areas will be restored as near as practical to their original condition. Where applicable, these conditions may include the re-establishment of appropriate soil conditions, and the re-establishment of vegetation as specified.

All disturbed areas will be re-contoured to the approximate natural contours.

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Any drainage rerouted during the construction activities shall be restored to its original line of flow or as near as possible.

Prior to the construction of the location, the top 12 inches of soil material (if present) will be stripped and stockpiled. Placement of the topsoil will be noted on the location plat attached to the site specific APD. Topsoil shall be stockpiled separately from subsoil materials. Topsoil salvaged from the reserve pit shall be stockpiled separately near the reserve pit.

When restoration activities have been completed, the location site and new access road cuts and shoulders shall be reseeded. Prior to reseeding, all disturbed areas, including the old access road, will be scarified and left with a rough surface.

The Authorized Officer or the appropriate surface management agency shall be contacted for the required seed mixture. Seed will be broadcast and the amount of seed mixture per acre will be doubled. The seeded area will then be "walked" with a dozer to assure coverage of the seeds. The seed mixture will reflect the recommendation from the Archeology study done on the site specific APD.

At final abandonment, all casing shall be cut off at the base of the cellar or 3 feet below final restored ground level, whichever is deeper, and cap the casing with a metal plate a minimum of 0.25 inches thick. The cap will be welded in place and the well location and identity will be permanently inscribed on the cap. The cap also will be constructed with a weep hole.

K Well Surface Ownership:

United States Forest Service

L Other information

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 ensure compliance.

The operator will control noxious weeds along access road use authorizations, pipeline route authorizations, well sites or other applicable facilities. A list of noxious weeds may be obtained from the Forest Service, BLM, or the appropriate County Extension Office. On NFS administered land, it is required that a Pesticide Use Proposal be submitted and approved prior to the application of herbicides or other pesticides or possibly hazardous chemicals.

Drilling rigs and/or equipment used during drilling operations on this location will not be stacked or stored on National Forest Service-administered lands after the conclusion of drilling operations or at any other time without authorization by the NFS. If authorization is obtained, such storage is only a temporary measure.

Travel is restricted only to approved travel routes.

Unless previously conducted, a class III archaeological survey will be conducted on all Forest Service lands. All personnel will refrain from collecting artifacts and from disturbing any significant cultural resources in the area. The operator is responsible for informing all persons in the area who are associated with this project that they may be subject to prosecution for knowingly

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disturbing historic or archaeological sites or for collecting artifacts. All vehicular traffic, personnel movement, construction, and restoration activities shall be confined to the areas examined, as referenced in the archaeological report, and to the existing roadways and/or evaluated access routes. If historic or archaeological materials are uncovered during construction, the Operator is to 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 Historic Register of Historic Places;

The mitigation measures the operator will likely have to undertake before the site can be used (assuming in-situ preservation is not necessary); and,

The 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 the mitigation measures are appropriate.

If the operator wishes, at any time, to relocate activities to avoid the expense of mitigation and/or the delays associated with this process, the Authorized Officer and/or the surface owner will assume responsibility for whatever recordation and stabilization of the exposed materials may be required. Otherwise the operator will be responsible for mitigation costs. The Authorized Officer and/or the surface owner 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.

On surface administered by the NFS, all surface use will be conducted in accordance with the STIPULATION FOR LANDS OF THE NATIONAL FOREST SYSTEM UNDER JURISDICTION OF THE DEPARTMENT OF AGRICULTURE, including:

If the surface is owned by another entity (FEE OWNER) and the mineral rights are owned by the BLM, a right-of-way will be obtained from the other entity.

Operator's employees, including subcontractors, will not gather firewood along roads constructed by the operator.

All roads constructed by the operator will have appropriate signs. Signs will be neat and of sound construction. The sign will state: (a) that the land is located within the Ashley National Forest boundary (b) the name of the Operator, (c) that firearms are prohibited, (d) only authorized personnel are permitted.

All well site locations will have appropriate signs indicating the name of the operator, the lease serial number, the well name and number, the survey description of the well (either footages or the quarter/quarter section; the section, township, and range).

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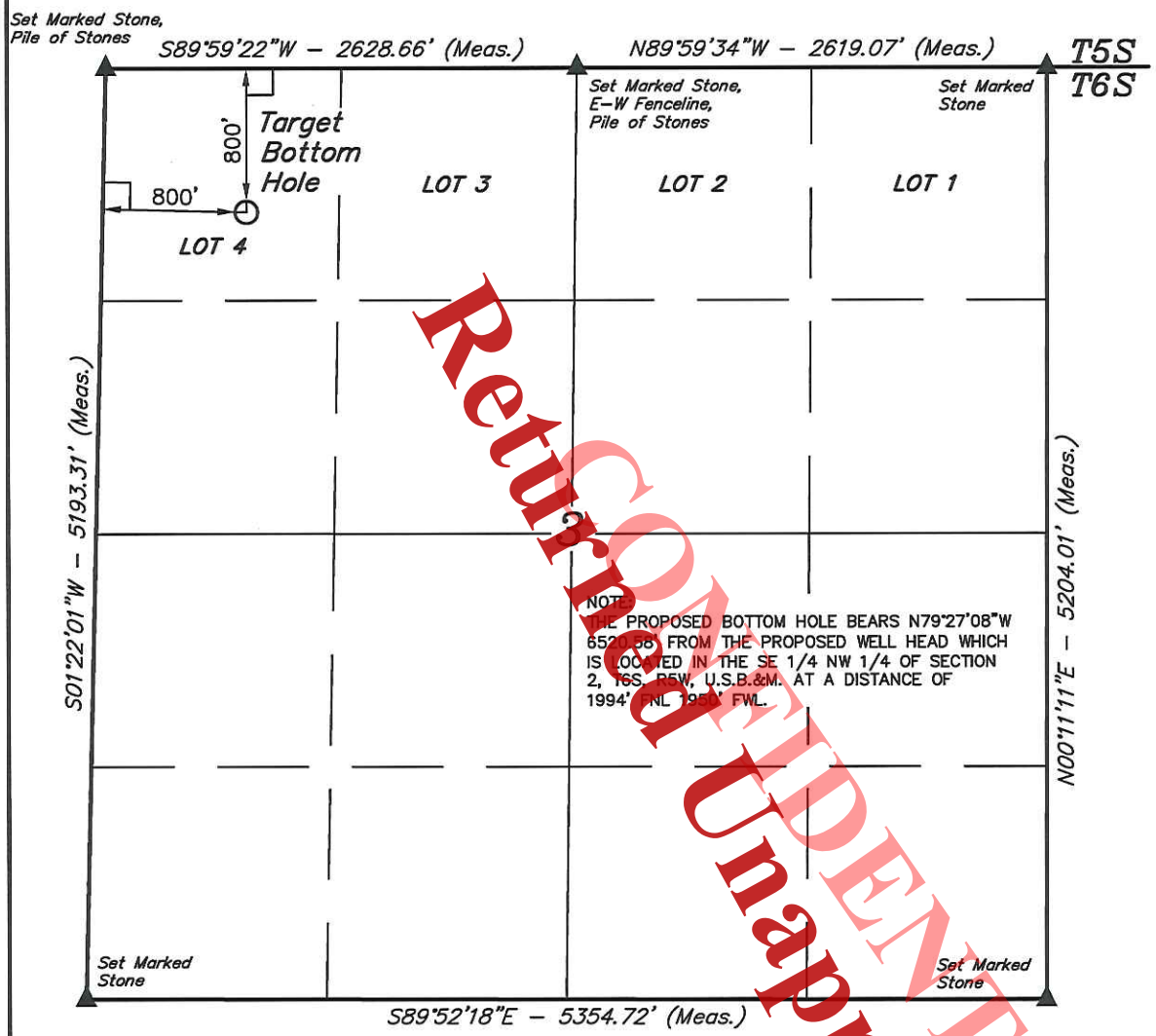
T6S, R5W, U.S.B.&M.



BERRY PETROLEUM COMPANY

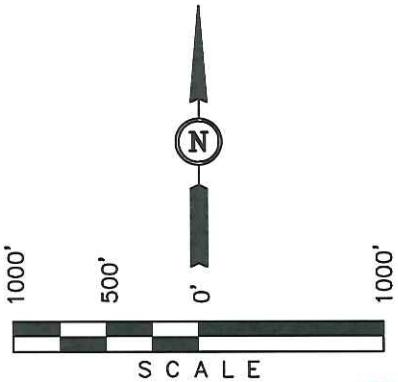
Well location, FEDERAL #4H–3–65 (TARGET BOTTOM HOLE), located as shown in the NW 1/4 NW 1/4 of Section 3, T6S, R5W, U.S.B.&M. Duchesne County, Utah.

BASIS OF ELEVATION

BENCH MARK (M67) LOCATED IN THE SW 1/4 OF SECTION 9, T5S, R4W, U.S.B.&M., TAKEN FROM THE DUCHESNE SE, QUADRANGLE, UTAH, DUCHESNE COUNTY, 7.5 MINUTE QUAD. (TOPOGRAPHIC MAP) PUBLISHED BY THE UNITED STATES DEPARTMENT OF THE INTERIOR, GEOLOGICAL SURVEY. SAID ELEVATION IS MARKED ON CAP AS BEING 6097 FEET.

BASIS OF BEARINGS

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



CERTIFICATE

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

REGISTERED LAND SURVEYOR
REGISTRATION NO. 161319
STATE OF UTAH

REGISTERED LAND SURVEYOR NO. 161319 ROBERT L. KAY STATE OF UTAH 10-13-11

REV: 10–12–11

LEGEND:

└ = 90° SYMBOL

● = PROPOSED WELL HEAD.

▲ = SECTION CORNERS LOCATED.

NAD 83 (TARGET BOTTOM HOLE)	
LATITUDE = 39°59'37.73" (39.993814)	
LONGITUDE = 110°26'25.58" (110.440439)	
NAD 27 (TARGET BOTTOM HOLE)	
LATITUDE = 39°59'37.87" (39.993853)	
LONGITUDE = 110°26'23.03" (110.439731)	

UINTAH ENGINEERING & LAND SURVEYING
85 SOUTH 200 EAST – VERNAL, UTAH 84078
(435) 789–1017

SCALE 1" = 1000'	DATE SURVEYED: 09–16–11	DATE DRAWN: 09–29–11
PARTY G.O. J.C. K.O.	REFERENCES G.L.O. PLAT	
WEATHER WARM	FILE BERRY PETROLEUM COMPANY	

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BERRY PETROLEUM COMPANY

LOCATION LAYOUT FOR

FEDERAL #4H–3–65

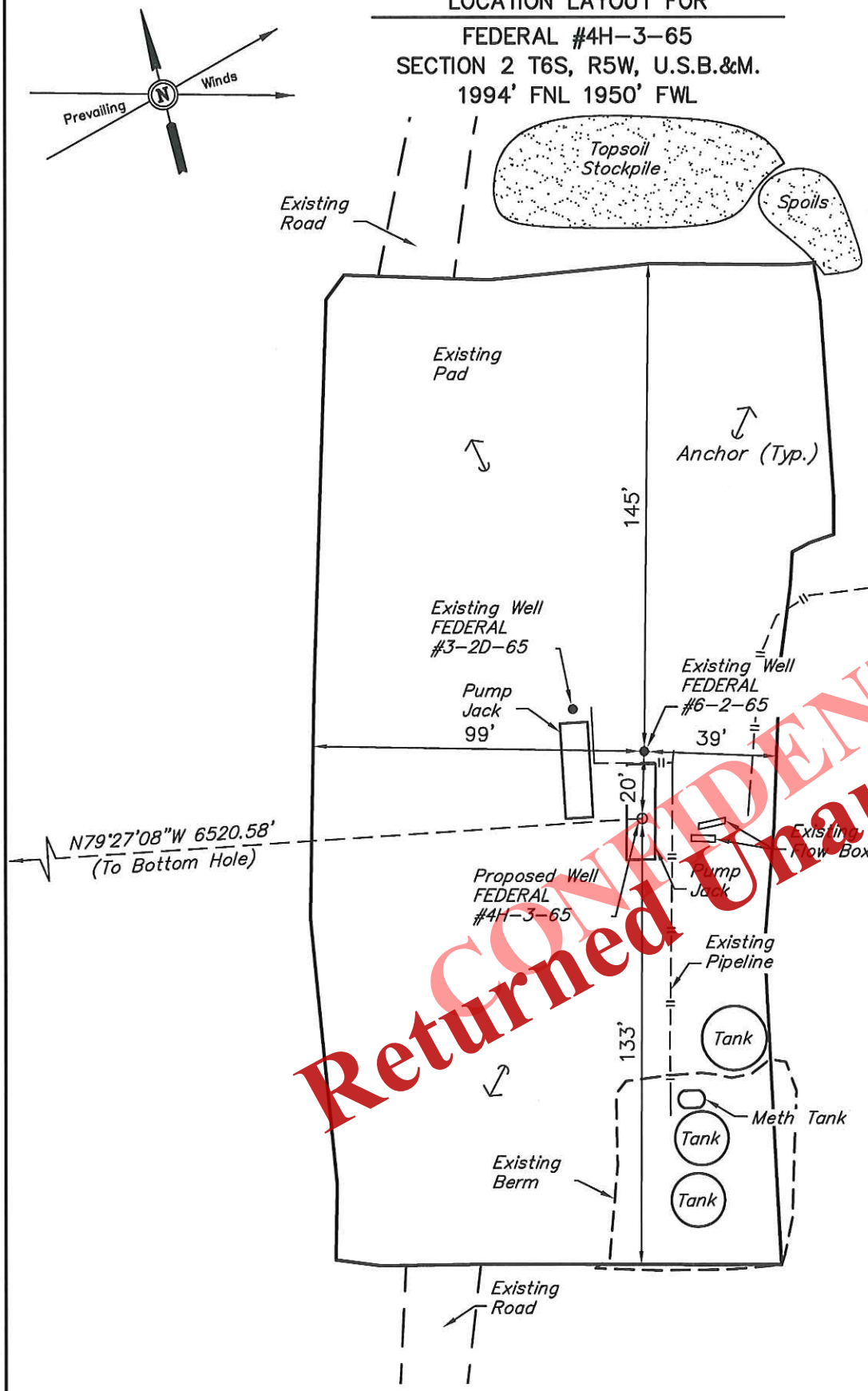
SECTION 2 T6S, R5W, U.S.B.&M.

1994' FNL 1950' FWL

FIGURE #1

SCALE: 1" = 50'
DATE: 09–29–11
DRAWN BY: K.O.
REV: 10–12–11

REGISTERED LAND SURVEYOR No. 161319 ROBERT L. KAY STATE OF UTAH 10–13–11



FINISHED GRADE ELEV. AT LOC. STAKE = 7496.2'

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

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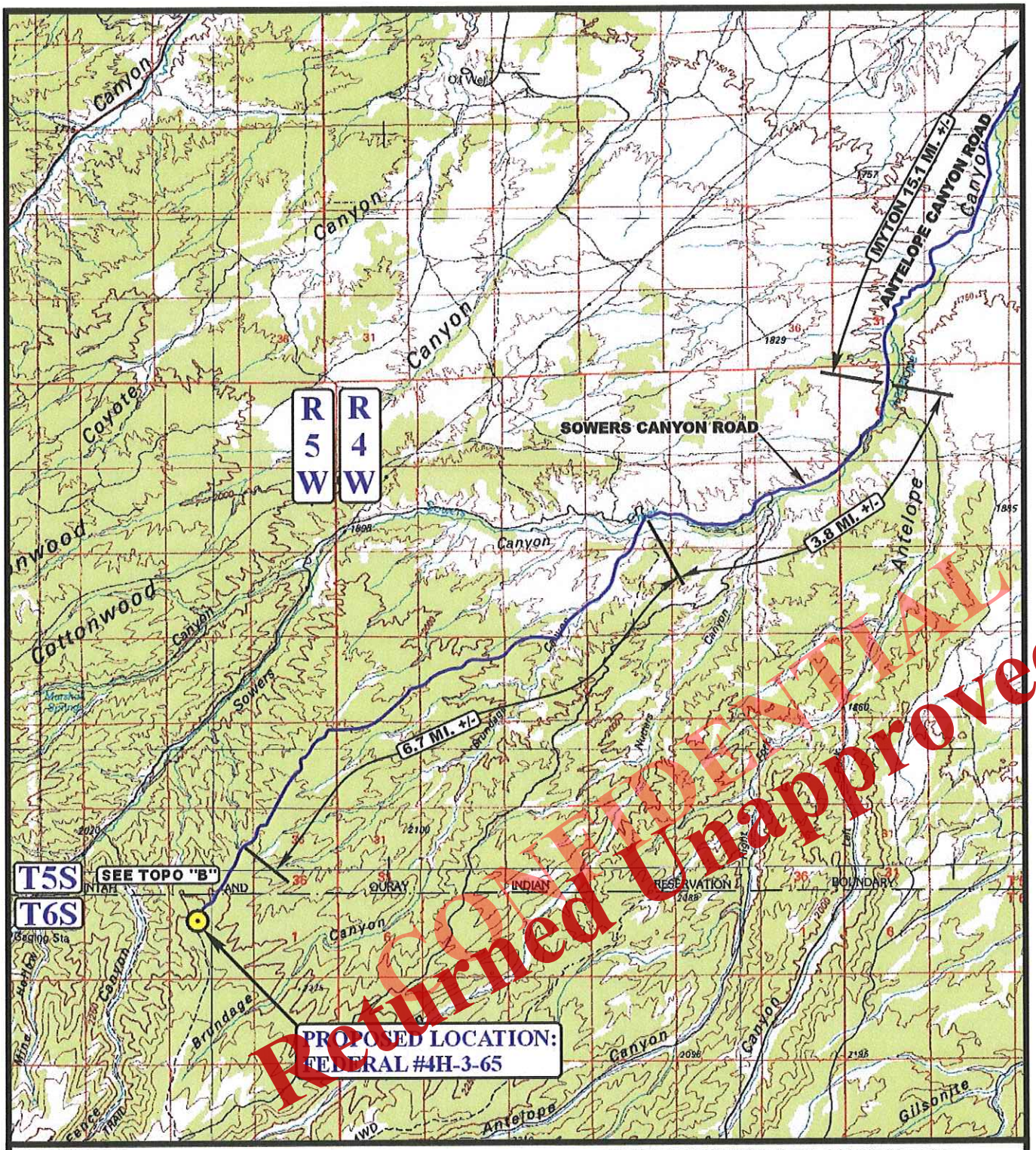

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FINAL

LEGEND:

PROPOSED LOCATION

N

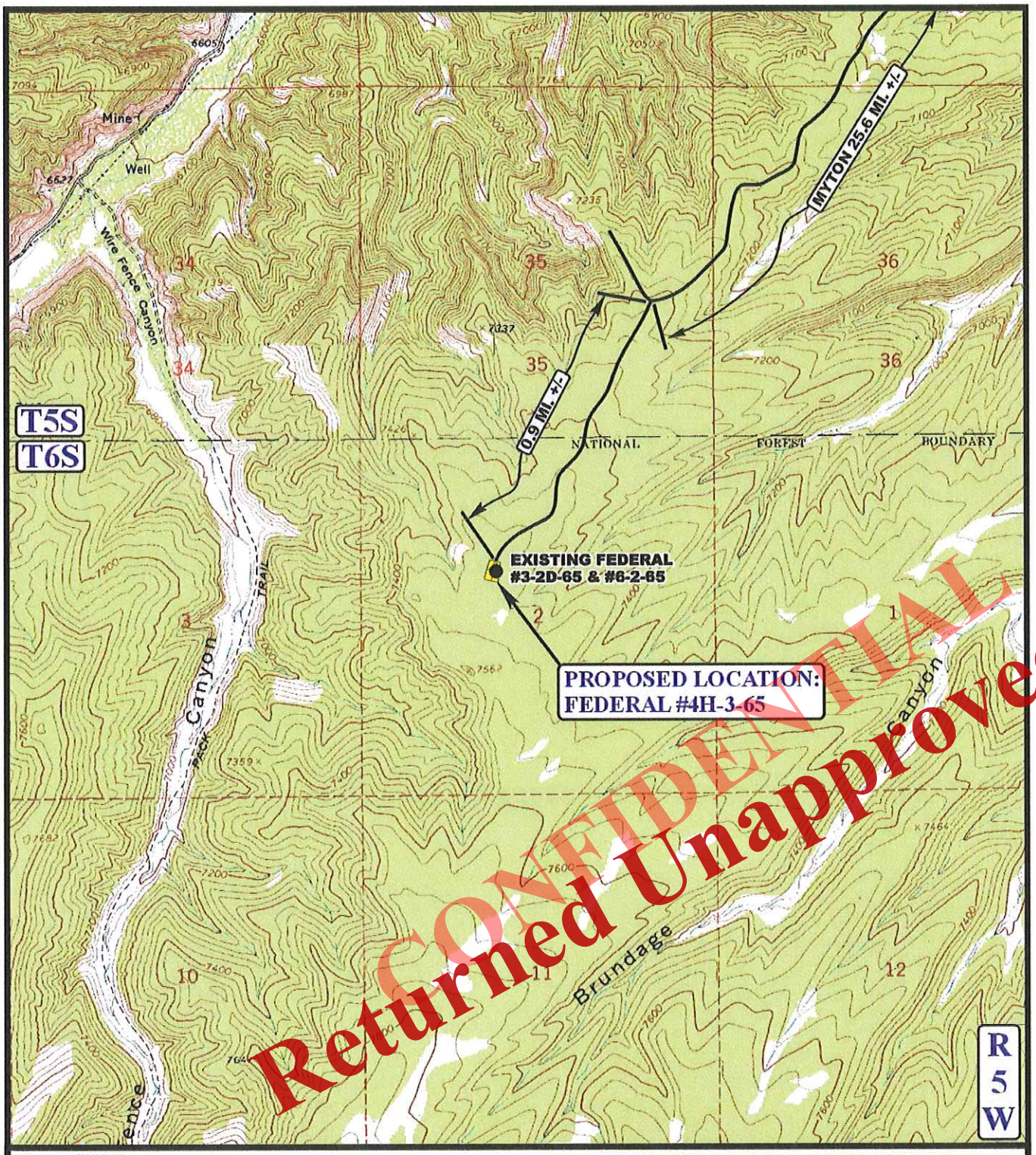
BERRY PETROLEUM COMPANY

FEDERAL #4H-3-65
SECTION 2, T6S, R5W, U.S.B.&M.
1994' FNL 1950' FWL

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

ACCESS ROAD MAP	09 MONTH	26 DAY	11 YEAR	A TOPO
SCALE: 1:100,000	DRAWN BY: B.D.H.	REVISED: 10-12-11		

Received: December 21, 2011



LEGEND:

EXISTING ROAD

N

BERRY PETROLEUM COMPANY

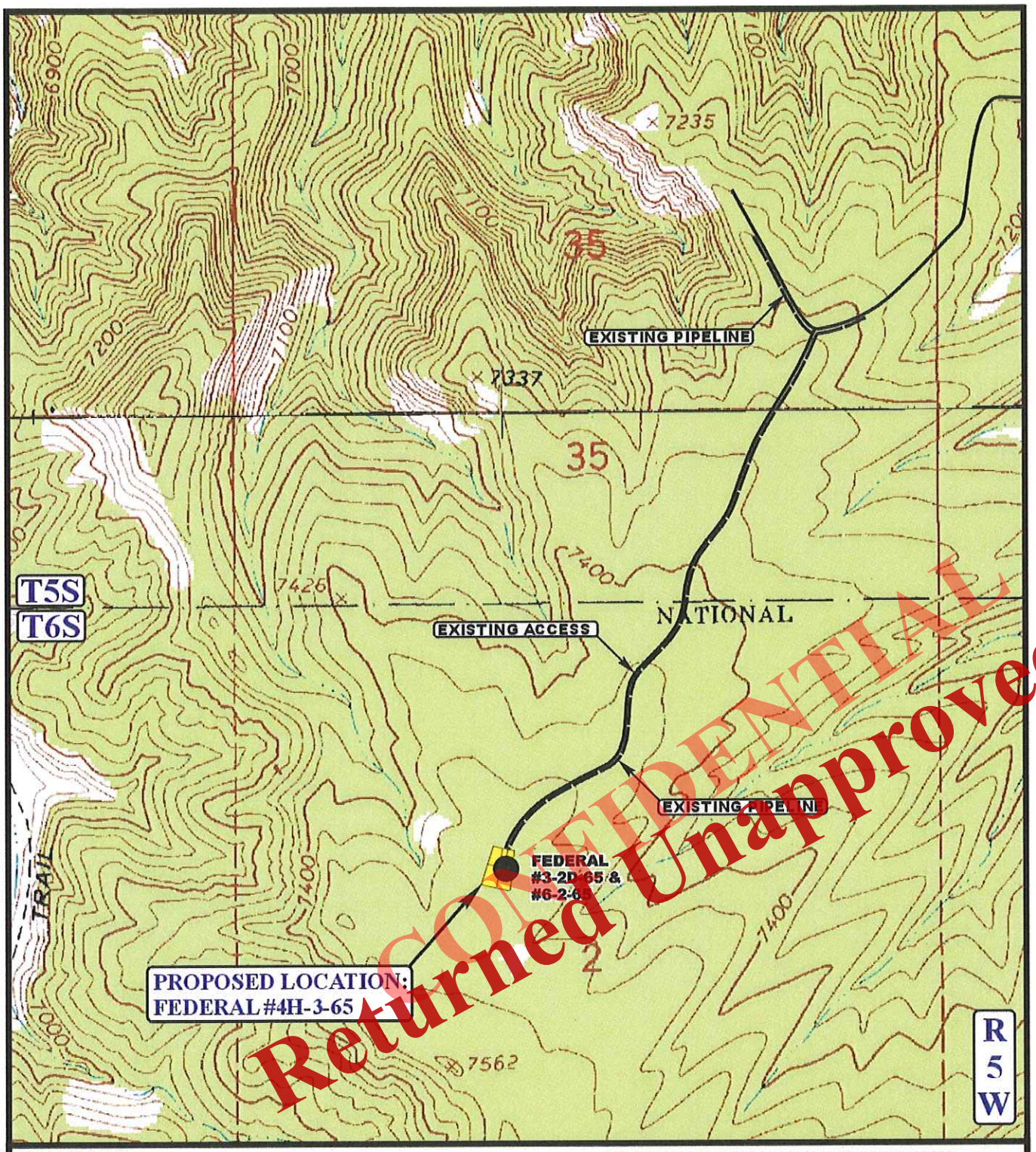
FEDERAL #4H-3-65
SECTION 2, T6S, R5W, U.S.B.&M.
1994' FNL 1950' FWL

UELS

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

ACCESS ROAD MAP	09 MONTH	26 DAY	11 YEAR	B TOPO
SCALE: 1" = 2000'	DRAWN BY: B.D.H.	REVISED: 10-12-11		

Received: December 21, 2011



LEGEND:

EXISTING ROAD

EXISTING PIPELINE

N

BERRY PETROLEUM COMPANY

FEDERAL #4H-3-65

SECTION 2, T6S, R5W, U.S.B.&M.

1994' FNL 1950' FWL

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

TOPOGRAPHIC MAP	09 MONTH	26 DAY	11 YEAR	D TOPO
SCALE: 1" = 1000'	DRAWN BY: B.D.H.	REVISED: 10-12-11		

Received: December 21, 2011

BERRY PETROLEUM COMPANY

FEDERAL #4H-3-65

LOCATED IN DUCHESNE COUNTY, UTAH
SECTION 2, T6S, R5W, U.S.B.&M.

PHOTO: VIEW OF WELL & LOCATION STAKE — CAMERA ANGLE: SOUTHEASTERLY

PHOTO: VIEW OF EXISTING ACCESS — CAMERA ANGLE: SOUTHERLY

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Uintah Engineering & Land Surveying
85 South 200 East Vernal, Utah 84078
(435) 789-1017 * FAX (435) 789-1813
- Since 1964 -

LOCATION PHOTOS	09 MONTH	26 DAY	11 YEAR	PHOTO
TAKEN BY: G.O.	DRAWN BY: B.D.H.	REVISED: 10-12-11		

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Berry Petroleum Company

Brundage Canyon Field

4000 South 4028 West
Rt. 2 Box 7755
Roosevelt, UT 84066

Ph: (435) 722-1325
Fax: (435) 722-1321
www.bry.com

December 13 2011

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

RE: Oil and Gas Conservation General Rules
R649-3-3 Exception to Location and Siting of Wells
Horizontal Test Well - Federal 4H-3-65
T6S-R5W U.S.B. & M.
(SHL) Sec. 2: SE ¼NW ¼, 1,994' FNL, 1,950 FWL
(BHL) Sec. 3: NW ¼NW ¼, 800' FNL, 800' FWL
Duchesne County, Utah, Ashley National Forest Area

Berry Petroleum Company ("Berry") is proposing to drill the Federal 4H-3-65 Uteland Butte horizontal test well ("4H-3-65") referenced above and we are hereby submitting this letter to supplement Berry's Application for Permit to Drill ("APD"). A copy of the Federal APD is attached for your review and this APD had been submitted to the Bureau of Land Management ("BLM") in Vernal, Utah.

The 4H-3-65 will be located on Utah BLM mineral lease UTU-77326 (BPC UT01005), which is owned and operated by Berry and covers 1,920.88 acres as to all of Sections 1, 2, and 3, T6S-R5W and will allow for the drilling of the subject well. Therefore, the establishment of a temporary 640 acre spacing unit per Utah Admin. Rule R649-2(6) is not applicable to the 4H-3-65 because orderly development of the anticipated pool will be accomplished on a lease basis.

The horizontal interval for the 4H-3-65 will cross the section line between Sections 2 and 3 of the aforementioned BLM mineral lease, however no portion of the horizontal interval within the potentially productive Uteland Butte member for the 4H-3-65 will be closer than 660 feet to a drilling/spacing unit boundary, or the boundary line of a lease in accordance with Utah Admin. Rule R649-3-2(3).

The difficulty in planning the horizontal path for the 4H-3-65 in the most potentially productive portion of this BLM lease is the presence of a pre-existing vertical well, the Federal 7-3D-65 Well, located in the SW¼NE¼ of Section 3 T6S-R5W. An unavoidable location situation arises whereby the horizontal interval will be within 1,320 feet of the Federal 7-3D-65 well that is currently producing from the targeted Uteland Butte formation as well as other members of the Lower Green River. **Berry is requesting an Exception to Location and Siting of the 4H-3-65 pursuant to R649-3-2(9) and R649-3-3 due to the aforementioned field constraints.**

If you need further information, you may contact Jerry Gonzalez at (303) 999-4207, or via email at jlg@bry.com.

Respectfully Submitted,

Kathy K. Fieldsted

Kathy K. Fieldsted
Sr. Regulatory & Permitting Technician

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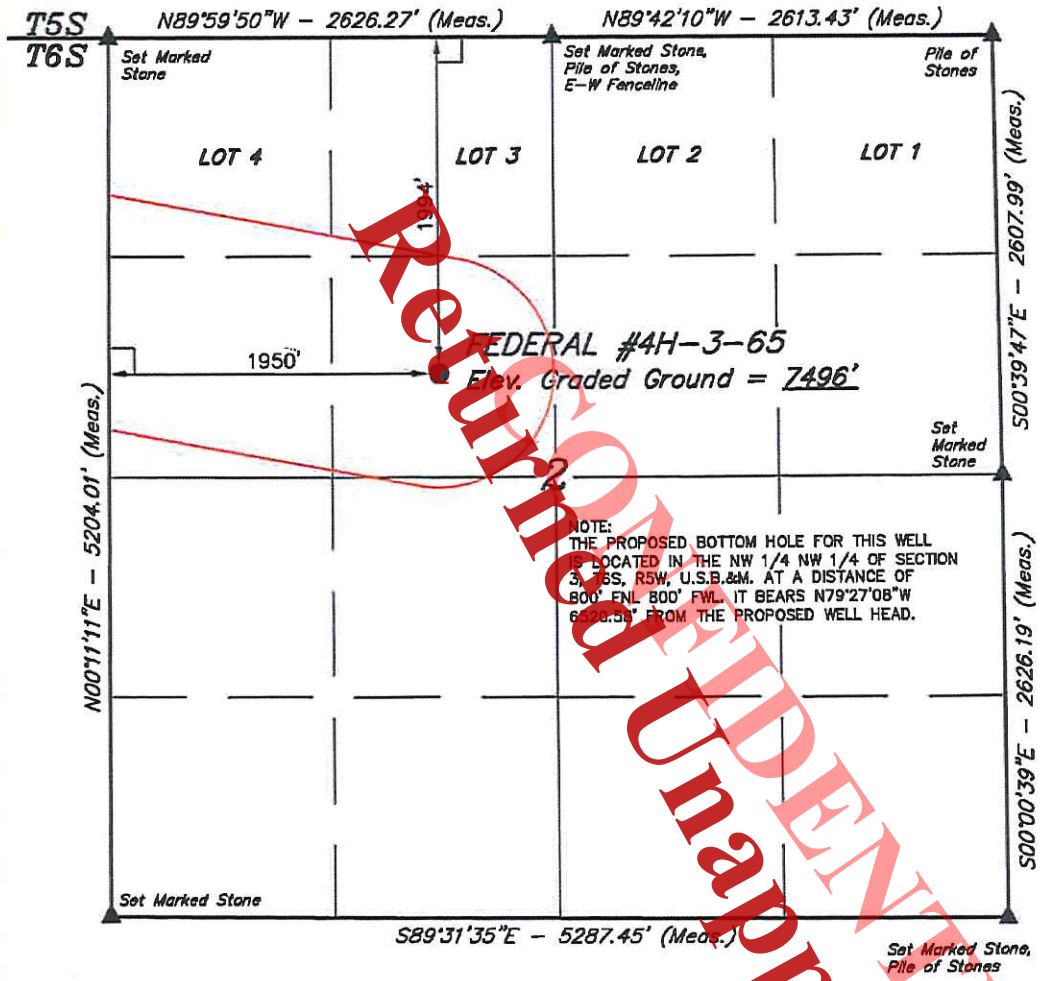
Received: December 21, 2011

T6S, R5W, U.S.B.&M.



NOTE:
THE PROPOSED BOTTOM HOLE FOR THIS WELL IS LOCATED IN THE NW 1/4 NW 1/4 OF SECTION 3, T6S, R5W, U.S.B.&M. AT A DISTANCE OF 800' FNL 800' FWL. IT BEARS N79°27'08"W 6528.56' FROM THE PROPOSED WELL HEAD.

BERRY PETROLEUM COMPANY

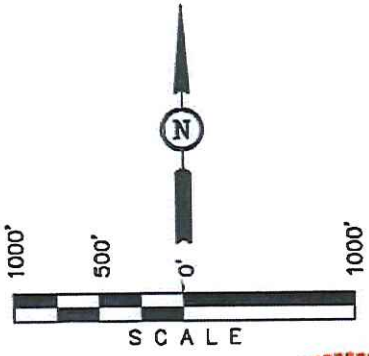
Well location, FEDERAL #4H-3-65 (SURFACE LOCATION), located as shown in the SE 1/4 NW 1/4 of Section 2, T6S, R5W, U.S.B.&M. Duchesne County, Utah.

BASIS OF ELEVATION

BENCH MARK (M67) LOCATED IN THE SW 1/4 OF SECTION 9, T5S, R4W, U.S.B.&M., TAKEN FROM THE DUCHESNE SE, QUADRANGLE, UTAH, DUCHESNE COUNTY, 7.5 MINUTE QUAD. (TOPOGRAPHIC MAP) PUBLISHED BY THE UNITED STATES DEPARTMENT OF THE INTERIOR, GEOLOGICAL SURVEY. SAID ELEVATION IS MARKED ON CAP AS BEING 6097 FEET.

BASIS OF BEARINGS

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



CERTIFICATE

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

REGISTERED LAND SURVEYOR
REGISTRATION NO. 161319
STATE OF UTAH

10-13-11

REV: 10-12-11

LEGEND:

└ = 90° SYMBOL
● = PROPOSED WELL HEAD.
▲ = SECTION CORNERS LOCATED.

NAD 83 (SURFACE LOCATION)	
LATITUDE = 39°59'26.00"	(39.990556)
LONGITUDE = 110°25'03.23"	(110.417564)
NAD 27 (SURFACE LOCATION)	
LATITUDE = 39°59'26.13"	(39.990592)
LONGITUDE = 110°25'00.68"	(110.418856)

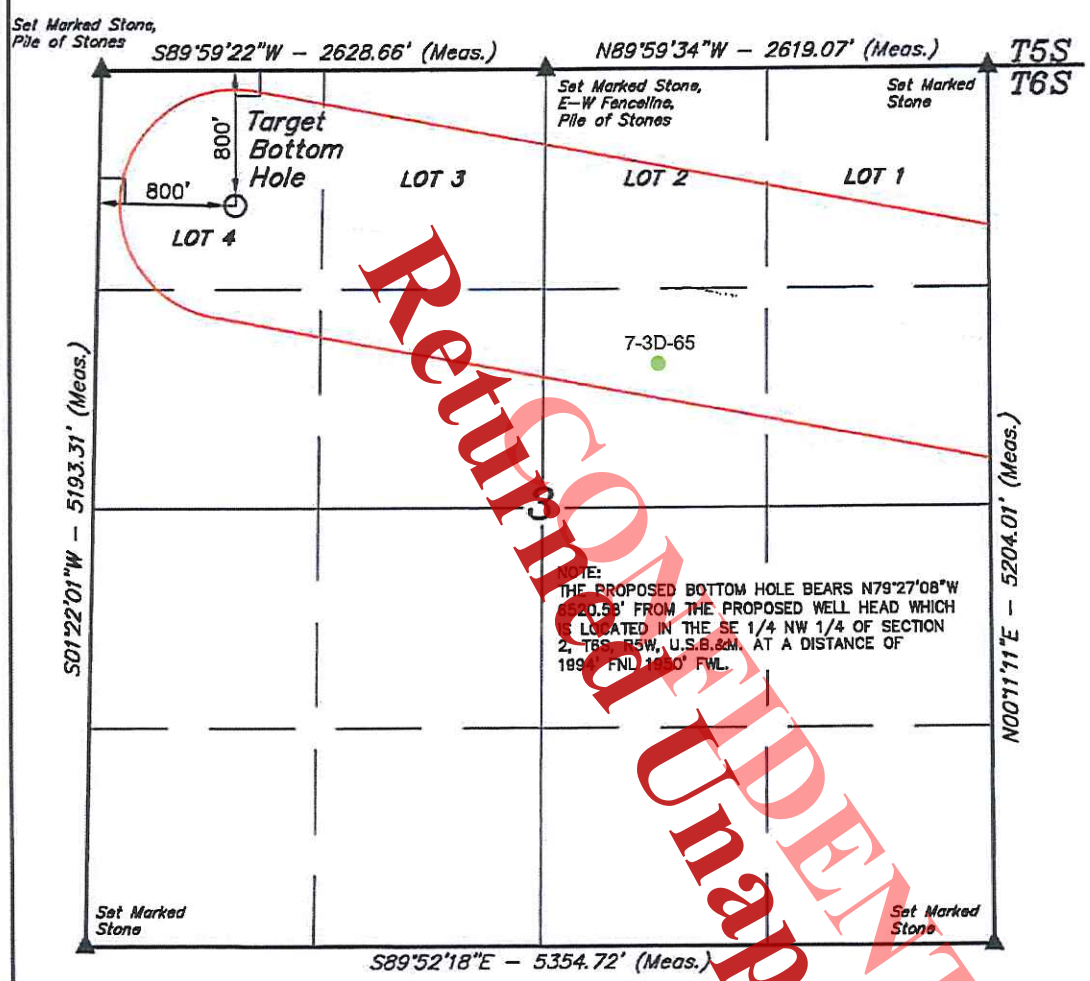
UINTAH ENGINEERING & LAND SURVEYING
85 SOUTH 200 EAST – VERNAL, UTAH 84078
(435) 789-1017

SCALE 1" = 1000'	DATE SURVEYED: 09-16-11	DATE DRAWN: 09-29-11
PARTY G.O. J.C. K.O.	REFERENCES G.L.O. PLAT	
WEATHER WARM	FILE BERRY PETROLEUM COMPANY	

CONFIDENTIAL
Returned Unapproved

Received: December 21, 2011

T6S, R5W, U.S.B.&M.



BERRY PETROLEUM COMPANY

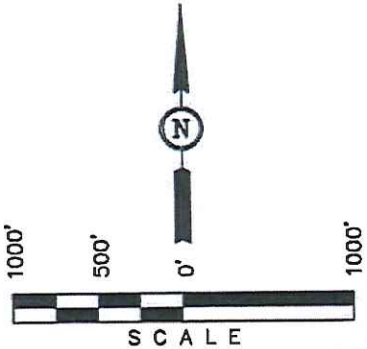
Well location, FEDERAL #4H-3-65 (TARGET BOTTOM HOLE), located as shown in the NW 1/4 NW 1/4 of Section 3, T6S, R5W, U.S.B.&M. Duchesne County, Utah.

BASIS OF ELEVATION

BENCH MARK (M67) LOCATED IN THE SW 1/4 OF SECTION 9, T5S, R4W, U.S.B.&M., TAKEN FROM THE DUCHESNE SE, QUADRANGLE, UTAH, DUCHESNE COUNTY, 7.5 MINUTE QUAD. (TOPOGRAPHIC MAP) PUBLISHED BY THE UNITED STATES DEPARTMENT OF THE INTERIOR, GEOLOGICAL SURVEY. SAID ELEVATION IS MARKED ON CAP AS BEING 6097 FEET.

BASIS OF BEARINGS

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



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REGISTERED LAND SURVEYOR
REGISTRATION NO. 161319
STATE OF UTAH

10-13-11

REV: 10-12-11

LEGEND:

- ⌊ = 90° SYMBOL
- ● = PROPOSED WELL HEAD.
- ▲ = SECTION CORNERS LOCATED.

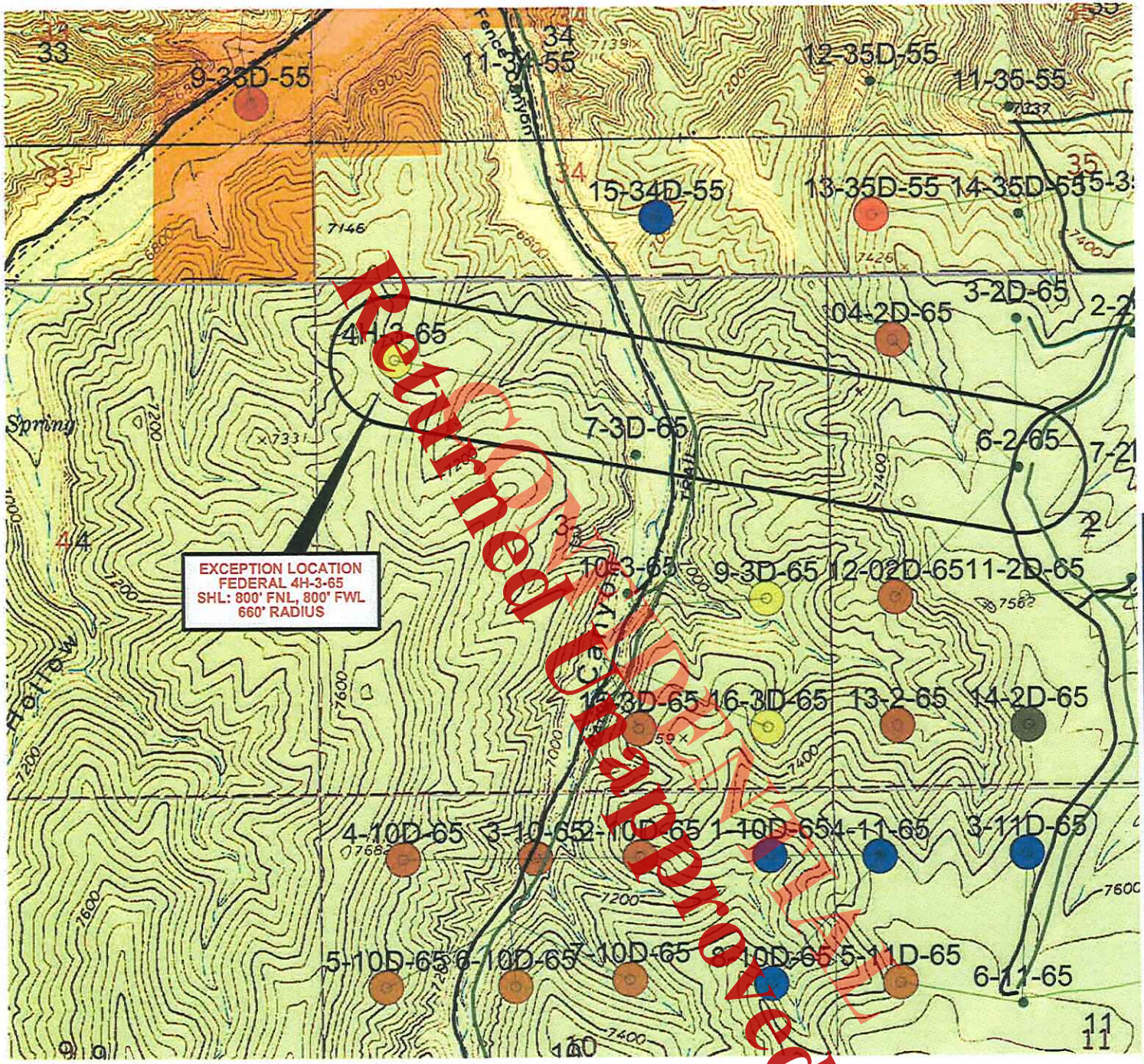
NAD 83 (TARGET BOTTOM HOLE)	
LATITUDE = 39°59'37.73" (39.993814)	
LONGITUDE = 110°26'25.58" (110.440439)	
NAD 27 (TARGET BOTTOM HOLE)	
LATITUDE = 39°59'37.87" (39.993853)	
LONGITUDE = 110°26'23.03" (110.439731)	

UINTAH ENGINEERING & LAND SURVEYING
85 SOUTH 200 EAST – VERNAL, UTAH 84078
(435) 789-1017

SCALE 1" = 1000'	DATE SURVEYED: 09-16-11	DATE DRAWN: 09-29-11
PARTY G.O. J.C. K.O.	REFERENCES G.L.O. PLAT	
WEATHER WARM	FILE BERRY PETROLEUM COMPANY	

CONFIDENTIAL
Returned Unapproved

Received: December 21, 2011



BERRY PETROLEUM COMPANY

Brundage Canyon Project

FEDERAL 4H-3-65

Exception Drilling Location Plat

Sec. 3 T6S R5W - Duchesne Co, UT

0 1,443 2,886
FEET

ATTRIBUTE MAP

- Approved
- WO Arch
- WO BIA
- WO Onsite
- WO Plats
- WO State
- WO Sur Agrmnt
- WO Survey
- Working on APD

WELL SYMBOLS

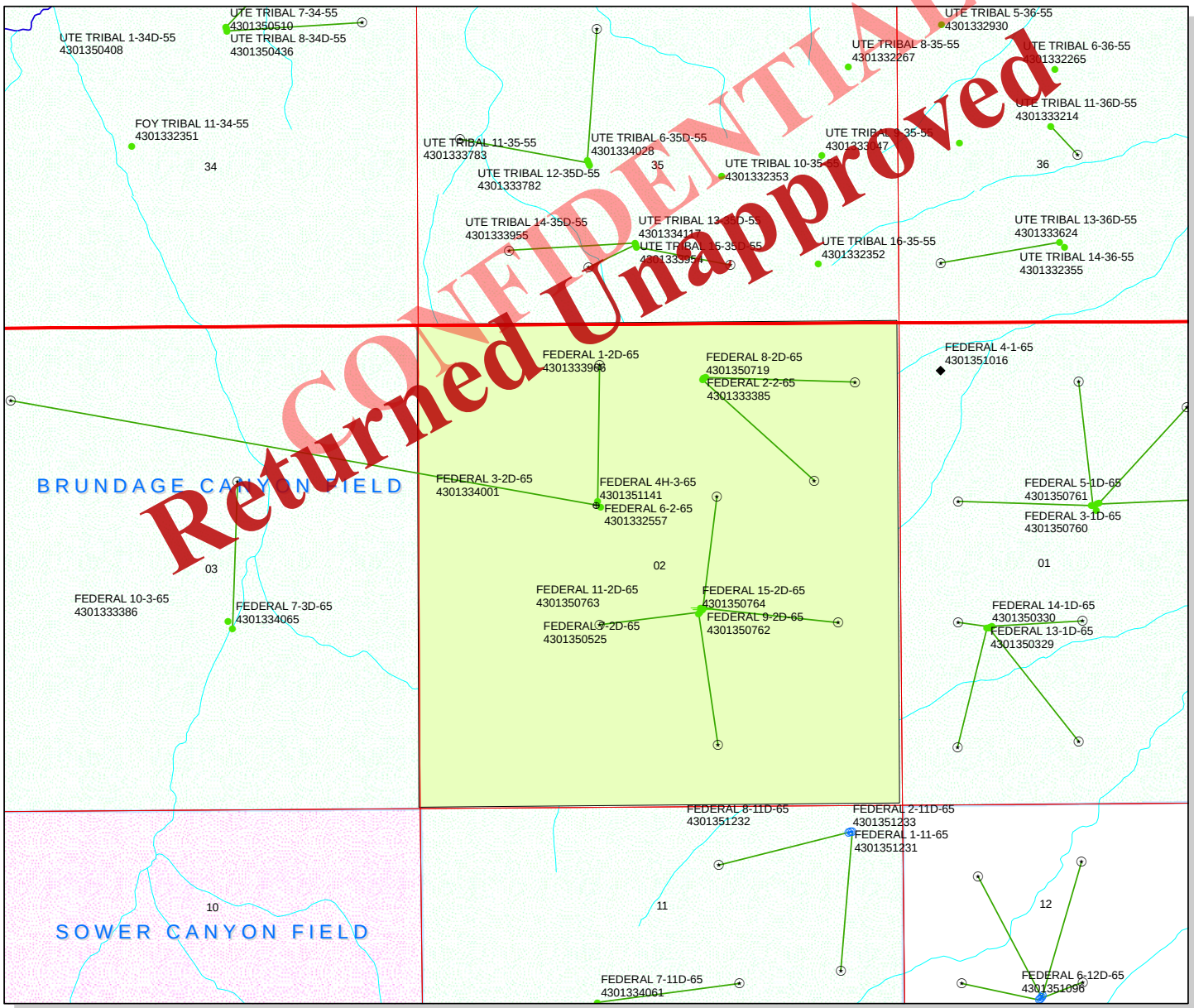
- Drilled 2011
- Location Only
- Oil Well

December 20, 2011

PETRA 12/20/2011 8:41:57 AM

Returned Unapproved

Received: December 21, 2011



CONFIDENTIAL

Returned Unapproved

API Number: 4301351141

Well Name: FEDERAL 4H-3-65

Township T06.0S Range R05.0W Section 02

Meridian: UBM

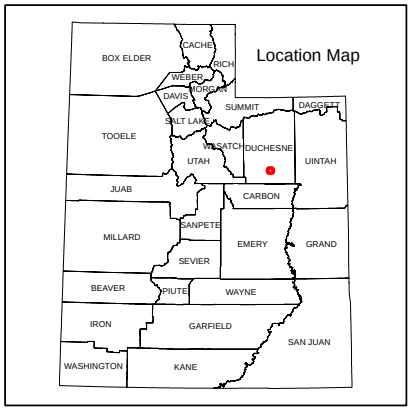
Operator: BERRY PETROLEUM COMPANY

Map Prepared:
Map Produced by Diana Mason

Units
STATUS
- ACTIVE
- EXPLORATORY
- GAS STORAGE
- NF PP OIL
- NF SECONDARY
- PI OIL
- PP GAS
- PP GEOTHERML
- PP OIL
- SECONDARY
- TERMINATED

Fields
STATUS
- Unknown
- ABANDONED
- ACTIVE
- COMBINED
- INACTIVE
- STORAGE
- TERMINATED

Wells Query
Status
- APD - Aproved Permit
- DRL - Spuded (Drilling Commenced)
- GIW - Gas Injection
- GS - Gas Storage
- LOC - New Location
- OPS - Operation Suspended
- PA - Plugged Abandoned
- PGW - Producing Gas Well
- POW - Producing Oil Well
- SGW - Shut-in Gas Well
- SOW - Shut-in Oil Well
- TA - Temp. Abandoned
- TW - Test Well
- WDW - Water Disposal
- WIW - Water Injection Well
- WSW - Water Supply Well
- Bottom Hole Location - OilGasDb



1,400 700 0 1,400 Feet

1:13,484

Received: November 20, 2012

GARY R. HERBERT
Governor

GREGORY S. BELL
Lieutenant Governor

State of Utah
DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER
Executive Director

Division of Oil, Gas and Mining

JOHN R. BAZA
Division Director

November 27, 2012

BERRY PETROLEUM COMPANY
4000 South 4028 West Rt 2 Box
7735
Roosevelt, UT 84066

Re: Application for Permit to Drill - DUCHESNE County, Utah

Ladies and Gentlemen:

The Application for Permit to Drill (APD) for the FEDERAL 4H-3-65 well, API 43013511410000 that was submitted December 21, 2011 is being returned unapproved. If you plan on drilling this well in the future, you must first submit a new application.

Should you have any questions regarding this matter, please call me at (801) 538-5312.

Sincerely,

Diana Mason
Environmental Scientist

Enclosure
cc: Bureau of Land Management, Vernal, Utah

1594 West North Temple, Suite 1210, PO Box 145801, Salt Lake City, UT 84114-5801
telephone (801) 538-5340 • facsimile (801) 359-3940 • TTY (801) 538-7458 • *www.ogm.utah.gov*

UTAH DNR OIL, GAS & MINING