

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

FORM 3

AMENDED REPORT 

<b>APPLICATION FOR PERMIT TO DRILL</b>						<b>1. WELL NAME and NUMBER</b> Kushmaul 1-16C4					
<b>2. TYPE OF WORK</b> DRILL NEW WELL <input checked="" type="checkbox"/> REENTER P&A WELL <input type="checkbox"/> DEEPEN WELL <input type="checkbox"/>						<b>3. FIELD OR WILDCAT</b> ALTAMONT					
<b>4. TYPE OF WELL</b> Oil Well <input type="checkbox"/> Coalbed Methane Well: NO <input type="checkbox"/>						<b>5. UNIT or COMMUNITIZATION AGREEMENT NAME</b>					
<b>6. NAME OF OPERATOR</b> EP ENERGY E&P COMPANY, L.P.						<b>7. OPERATOR PHONE</b> 713 997-5038					
<b>8. ADDRESS OF OPERATOR</b> 1001 Louisiana, Houston, TX, 77002						<b>9. OPERATOR E-MAIL</b> maria.gomez@epenergy.com					
<b>10. MINERAL LEASE NUMBER (FEDERAL, INDIAN, OR STATE)</b> Fee			<b>11. MINERAL OWNERSHIP</b> FEDERAL <input type="checkbox"/> INDIAN <input type="checkbox"/> STATE <input type="checkbox"/> FEE <input checked="" type="checkbox"/>			<b>12. SURFACE OWNERSHIP</b> FEDERAL <input type="checkbox"/> INDIAN <input type="checkbox"/> STATE <input type="checkbox"/> FEE <input checked="" type="checkbox"/>					
<b>13. NAME OF SURFACE OWNER (if box 12 = 'fee')</b> Ronald J. Kushmaul						<b>14. SURFACE OWNER PHONE (if box 12 = 'fee')</b> 208-664-1855					
<b>15. ADDRESS OF SURFACE OWNER (if box 12 = 'fee')</b> 11206 North 15th Street, Coeur d'Alene, ID 83814						<b>16. SURFACE OWNER E-MAIL (if box 12 = 'fee')</b>					
<b>17. INDIAN ALLOTTEE OR TRIBE NAME (if box 12 = 'INDIAN')</b>			<b>18. INTEND TO COMMINGLE PRODUCTION FROM MULTIPLE FORMATIONS</b> YES <input type="checkbox"/> (Submit Commingling Application) NO <input checked="" type="checkbox"/>			<b>19. SLANT</b> VERTICAL <input checked="" type="checkbox"/> DIRECTIONAL <input type="checkbox"/> HORIZONTAL <input type="checkbox"/>					
<b>20. LOCATION OF WELL</b>		<b>FOOTAGES</b>		<b>QTR-QTR</b>	<b>SECTION</b>	<b>TOWNSHIP</b>	<b>RANGE</b>	<b>MERIDIAN</b>			
LOCATION AT SURFACE		915 FNL 701 FEL		NENE	16	3.0 S	4.0 W	U			
Top of Uppermost Producing Zone		915 FNL 701 FEL		NENE	16	3.0 S	4.0 W	U			
At Total Depth		915 FNL 701 FEL		NENE	16	3.0 S	4.0 W	U			
<b>21. COUNTY</b> DUCHESNE			<b>22. DISTANCE TO NEAREST LEASE LINE (Feet)</b> 701			<b>23. NUMBER OF ACRES IN DRILLING UNIT</b> 640					
			<b>25. DISTANCE TO NEAREST WELL IN SAME POOL (Applied For Drilling or Completed)</b> 4000			<b>26. PROPOSED DEPTH</b> MD: 11900 TVD: 11900					
<b>27. ELEVATION - GROUND LEVEL</b> 5984			<b>28. BOND NUMBER</b> 400JU0708			<b>29. SOURCE OF DRILLING WATER / WATER RIGHTS APPROVAL NUMBER IF APPLICABLE</b> Duchesne City/East Duchesne Water District					
<b>Hole, Casing, and Cement Information</b>											
String	Hole Size	Casing Size	Length	Weight	Grade & Thread	Max Mud Wt.	Cement	Sacks	Yield	Weight	
Cond	20	13.375	0 - 800	54.5	J-55 LT&C	8.8	Class G	1000	1.15	15.8	
Surf	12.25	9.625	0 - 3300	40.0	N-80 LT&C	9.5	35/65 Poz	439	3.16	11.0	
							Premium Lite High Strength	191	1.33	14.2	
I1	8.75	7	0 - 9170	29.0	P-110 LT&C	10.5	Premium Lite High Strength	383	2.31	12.0	
							Premium Lite High Strength	91	1.91	12.5	
L1	6.125	4.5	8970 - 11900	13.5	P-110 LT&C	12.0	50/50 Poz	216	1.61	12.3	
<b>ATTACHMENTS</b>											
<b>VERIFY THE FOLLOWING ARE ATTACHED IN ACCORDANCE WITH THE UTAH OIL AND GAS CONSERVATION GENERAL RULES</b>											
<input checked="" type="checkbox"/> WELL PLAT OR MAP PREPARED BY LICENSED SURVEYOR OR ENGINEER					<input checked="" type="checkbox"/> COMPLETE DRILLING PLAN						
<input checked="" type="checkbox"/> AFFIDAVIT OF STATUS OF SURFACE OWNER AGREEMENT (IF FEE SURFACE)					<input type="checkbox"/> FORM 5. IF OPERATOR IS OTHER THAN THE LEASE OWNER						
<input type="checkbox"/> DIRECTIONAL SURVEY PLAN (IF DIRECTIONALLY OR HORIZONTALLY DRILLED)					<input checked="" type="checkbox"/> TOPOGRAPHICAL MAP						
<b>NAME</b> Maria S. Gomez			<b>TITLE</b> Principal Regulatory Analyst			<b>PHONE</b> 713 997-5038					
<b>SIGNATURE</b>			<b>DATE</b> 09/18/2012			<b>EMAIL</b> maria.gomez@epenergy.com					
<b>API NUMBER ASSIGNED</b> 43013517250000			<b>APPROVAL</b>   Permit Manager								

**Kushmaul 1-16C4  
Sec. 16, T3S, R4W  
DUCHESNE COUNTY, UT**

**EP ENERGY E&P COMPANY, L.P.**

**DRILLING PROGRAM**

**1. Estimated Tops of Important Geologic Markers**

<u>Formation</u>	<u>Depth</u>
Green River (GRRV)	4,202'
Green River (GRTN1)	5,152'
Mahogany Bench	6,055'
L. Green River	7,352'
Wasatch	9,272'
T.D. (Permit)	11,900'

**2. Estimated Depths of Anticipated Water, Oil, Gas or Mineral Formations:**

<u>Substance</u>	<u>Formation</u>	<u>Depth</u>
	Green River (GRRV)	4,202'
	Green River (GRTN1)	5,152'
	Mahogany Bench	6,055'
Oil	L. Green River	7,352'
Oil	Wasatch	9,272'

**3. Pressure Control Equipment: (Schematic Attached)**

A 4.5" by 20.0" rotating head on structural pipe from surface to 800'. A 4.5" by 13 3/8" Smith Rotating Head and 5M Annular from 800' to 3,300' on Conductor. A 5M BOP stack, 5M Annular, and 5M kill lines and choke manifold used from 3,300' to 9,170'. A 10M BOE w/rotating head, 5M annular, blind rams & mud cross from 9,170' to TD. The BOPE and related equipment will meet the requirements of the 5M and 10M system.

**OPERATORS MINIMUM SPECIFICATIONS FOR BOPE:**

The surface casing will be equipped with a flanged casing head of 5M psi working pressure. An 11" 5M x 11" 10M spool, 11" x 10M psi BOP and 5M psi Annular will be nipped up on the surface casing and tested to 250 psi low test / 3,000 psi high test for 10 minutes each prior to drilling out. The surface casing will be tested to 1,000 psi. for 30 mins. Intermediate casing will be tested to the greater of 1500 psi or 0.22 psi/ft. The choke manifold equipment, upper Kelly cock, floor safety valves will be tested to 5M psi. The annular preventer will be tested to 250 psi low test and 4,000 psi high test. The 10M BOP will be installed

with 3 ½" pipe rams, blind rams, mud cross and rotating head from intermediate shoe to TD. The BOPE will be hydraulically operated.

In addition, the BOP equipment will be tested after running intermediate casing, after any repairs to the equipment and at least once every 30 days. Pipe and blind rams will be activated on each trip, annular preventer will be activated weekly and weekly BOP drills will be held with each crew.

**Statement on Accumulator System and Location of Hydraulic Controls:**

Precision Rig # 404 is expected to be used to drill the proposed well. Operations will commence after approval of this application. Manual and/or hydraulic controls will be in compliance with 5M and 10M psi systems.

**Auxiliary Equipment:**

- A) Pason monitoring systems with gas monitor 800' – TD.
- B) Mud logger with gas monitor – 3,300' to TD
- C) Choke manifold with one manual and one hydraulic operated choke
- D) Full opening floor valve with drill pipe thread
- E) Upper and lower Kelly cock
- F) Shaker, de-sander and de-silter, and centrifuge.

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

Please refer to the attached Wellbore Diagram.

All casing will meet or exceed the following design safety factors:

- Burst = 1.00
- Collapse = 1.125
- Tension = 1.2 (including 100k# overpull)

Cement design calculations will be based on: 25% excess over gauge hole in the liner section, 10% excess over gauge hole in the intermediate section, and 75% excess on the lead and 50% excess on the tail over gauge hole volume for the surface hole. Actual volumes pumped will be a minimum of the volumes stated above, however, actual hole size will be based on caliper logs in the liner and intermediate sections. Gauge hole will be used for the surface section.

5. **Drilling Fluids Program:**

Proposed Mud Program:

Interval	Type	Mud Weight
Surface	Air	8.8 – 9.5
Intermediate	WBM	9.5 – 10.5
Production	WBM	10.5 – 12.0

Anticipated mud weights are based on actual offset well bottom-hole pressure data. Mud weights utilized may be somewhat higher to allow for trip margin and to provide hole stability for running logs and casing.

Visual mud monitoring equipment will be utilized.

6. **Evaluation Program:**

Logs:

Mud Log: 3,300' - TD.

Open Hole Logs: Gamma Ray, Neutron-Density, Resistivity, Sonic, from base of surface casing to TD.

7. **Abnormal Conditions:**

Maximum anticipated bottomhole pressure calculated at 11,900' TD equals approximately 7,426 psi. This is calculated based on a 0.624 psi/foot gradient (12.0 ppg mud density at TD).

Maximum anticipated surface pressure equals approximately 4,808 psi (bottomhole pressure minus the pressure of a partially evacuated hole calculated at 0.22 psi/ft).

Maximum anticipated surface pressure based on frac gradient at 7" casing shoe is 0.8 psi/ft at 9,170' = 7,336 psi

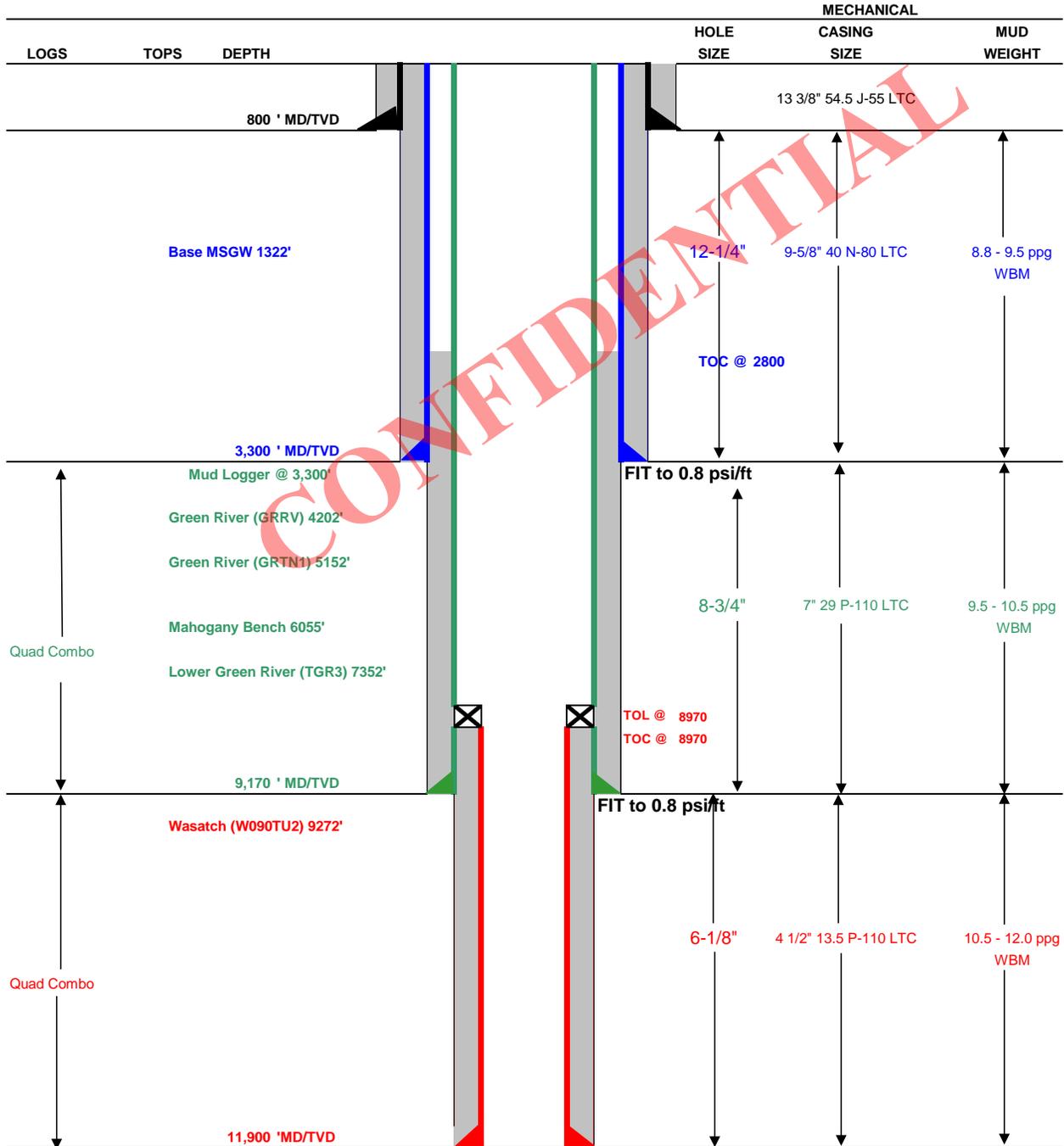
BOPE and casing design will be based on the lesser of the two MASPs which is 4,808 psi.

8. **OPERATOR REQUESTS THAT THE PROPOSED WELL BE PLACED ON CONFIDENTIAL STATUS.**



Drilling Schematic

<b>Company Name:</b> EP ENERGY	<b>Date:</b> September 17, 2012
<b>Well Name:</b> Kushmaul 1-16C4	<b>TD:</b> 11,900
<b>Field, County, State:</b> Altamont - Bluebell, Duchesne, Utah	<b>AFE #:</b>
<b>Surface Location:</b> Sec 16 T3S R4W 915' FNL 701' FEL	<b>BHL:</b> Straight Hole
<b>Objective Zone(s):</b> Green River, Wasatch	<b>Elevation:</b> 5983
<b>Rig:</b> Precision 404	<b>Spud (est.):</b>
<b>BOPE Info:</b> 5.0 x 13 3/8 rotating head from 800' to 3,300' 11 5M BOP stack and 5M kill lines and choke manifold used from 3,300' to 9,170' 11 10M BOE w/rotating head, 5M annular, 3.5 rams, blind rams & mud cross from 9,170' to TD	



**DRILLING PROGRAM**

CASING PROGRAM	SIZE	INTERVAL		WT.	GR.	CPLG.	BURST	COLLAPSE	TENSION
CONDUCTOR	13 3/8"	0	800	54.5	J-55	LTC	2,730	1,140	1,399
SURFACE	9-5/8"	0	3300	40.00	N-80	LTC	3,090	5,750	820
INTERMEDIATE	7"	0	9170	29.00	P-110	LTC	11,220	8,530	797
PRODUCTION LINER	4 1/2"	8970	11900	13.50	P-110	LTC	12,410	10,680	338

CEMENT PROGRAM		FT. OF FILL	DESCRIPTION	SACKS	EXCESS	WEIGHT	YIELD
CONDUCTOR		800	Class G + 3% CACL2	1000	100%	15.8 ppg	1.15
SURFACE	Lead	2,800	Boral Craig POZ 35%, Mountain G 65%, Bentonite Wyoming 8%, Silicate 5 lbm/sk, Pol-E Flake 0.125 lbm/sk, Kwik Seal 0.25 lb/sk	439	75%	11.0 ppg	3.16
	Tail	500	Halco-light premium+3 lb/sk Silicate+0.3% Econolite+1% Salt+0.25 lbm/sk Kol-Seal+0.24 lb/sk Kwik Seal+ HR-5	191	50%	14.2 ppg	1.33
INTERMEDIATE	Lead	5,370	Halco-Light-Premium+4% Bentonite+0.4% Econolite+0.2% Halad322+3 lb/sk Silicalite Compacted+0.8% HR-5+ 0.125 lb/sk Poly-E-Flake	383	10%	12.0 ppg	2.31
	Tail	1,000	Halco-Light-Premium+0.2% Econolite+0.3% Versaset+0.2% Halad322+0.8% HR-5+ 0.3% SuperCBL+ 0.125 lb/sk Poly-E-Flake	91	10%	12.5 ppg	1.91
PRODUCTION LINER		2,930	Halco- 50/50 Poz Premium Cement+20% SSA-1+0.3% Super CBL+ 0.3% Halad-344+0.3% Halad-413+ 0.2% SCR-100+ 0.125 lb/sk Poly-E-Flake + 3 lb/sk Silicat	216	25%	12.30	1.61

FLOAT EQUIPMENT & CENTRALIZERS	
CONDUCTOR	PDC drillable guide shoe, 1 joint, PDC drillable float collar. Thread lock all float equipment. Install bow spring centralizers on the bottom 3 joints of casing.
SURFACE	PDC drillable guide shoe, 1 joint casing, PDC drillable float collar & Stage collar. Thread lock all float equipment. Install bow spring centralizers on the bottom 3 joints of casing & every 3rd joint thereafter.
INTERMEDIATE	PDC drillable 10M,P-110 float shoe, 1 joint, PDC drillable 10M, P-110 float collar. Thread lock all float equipment. Maker joint at 8,000'.
LINER	Float shoe, 1 joint, float collar. Thread lock all FE. Maker joints every 1000'.

PROJECT ENGINEER(S): Joe Cawthorn 713-997-5929MANAGER: Tommy Gaydos

**EP ENERGY E&P COMPANY, L.P.**  
**KUSHMAUL 1-16C4**  
**SECTION 16, T3S, R4W, U.S.B.&M.**

PROCEED NORTH ON PAVED STATE HIGHWAY 87 FROM THE INTERSECTION OF HIGHWAY 87 WITH U.S. HIGHWAY 40 IN DUCHESNE, UTAH APPROXIMATELY 4.53 MILES TO AN INTERSECTION;

TURN RIGHT AND TRAVEL EAST ON GRAVEL COUNTY ROAD 2.27 MILES TO AN INTERSECTION AND THE BEGINNING OF THE ACCESS ROAD;

CONTINUE EASTERLY AND SOUTHEASTERLY 0.70 MILES ALONG A TWO TRACK ROAD TO THE PROPOSED LOCATION;

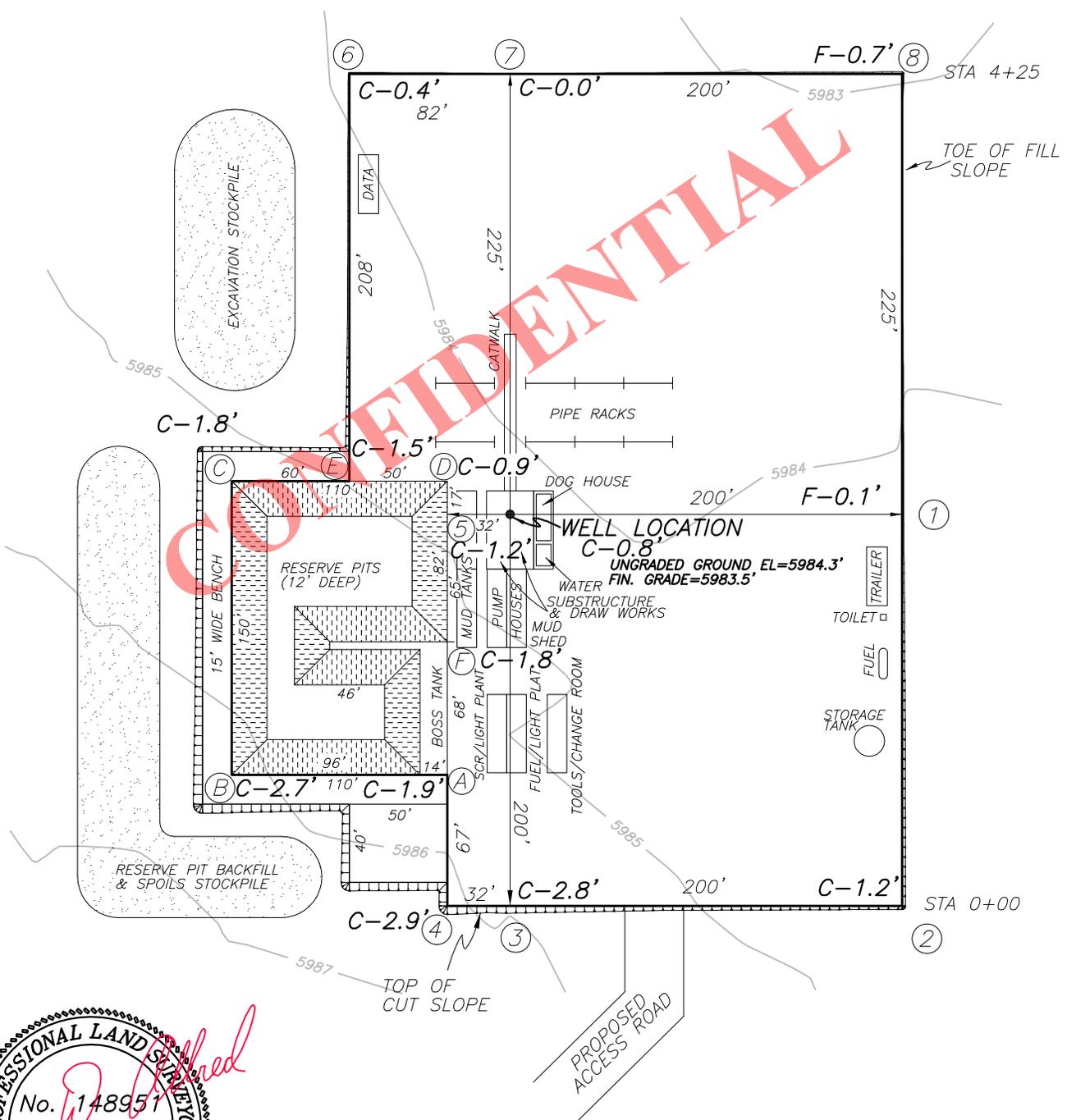
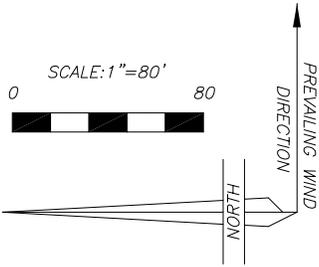
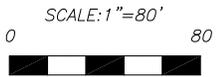
TOTAL DISTANCE FROM DUCHESNE, UTAH TO THE PROPOSED WELL LOCATION IS APPROXIMATELY 7.50 MILES.

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# EP ENERGY E & P COMPANY, L.P.

FIGURE #1

LOCATION LAYOUT FOR  
KUSHMAUL 1-16C4  
SECTION 16, T3S, R4W, U.S.B.&M.  
915' FNL, 701' FEL

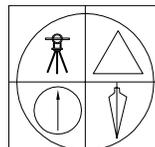


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*Jerry D. Allred*  
PROFESSIONAL LAND SURVEYOR  
No. 148957  
JERRY D. ALLRED  
14 SEP '12  
STATE OF UTAH

REV 14 SEP 2012  
8 JUN 2012

01-128-301



**JERRY D. ALLRED & ASSOCIATES**  
SURVEYING CONSULTANTS  
1235 NORTH 700 EAST--P.O. BOX 975  
DUCHESNE, UTAH 84021  
(435) 738-5352

# EP ENERGY E & P COMPANY, L.P.

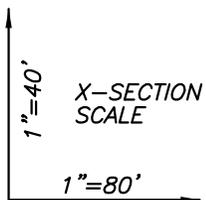
FIGURE #2

LOCATION LAYOUT FOR

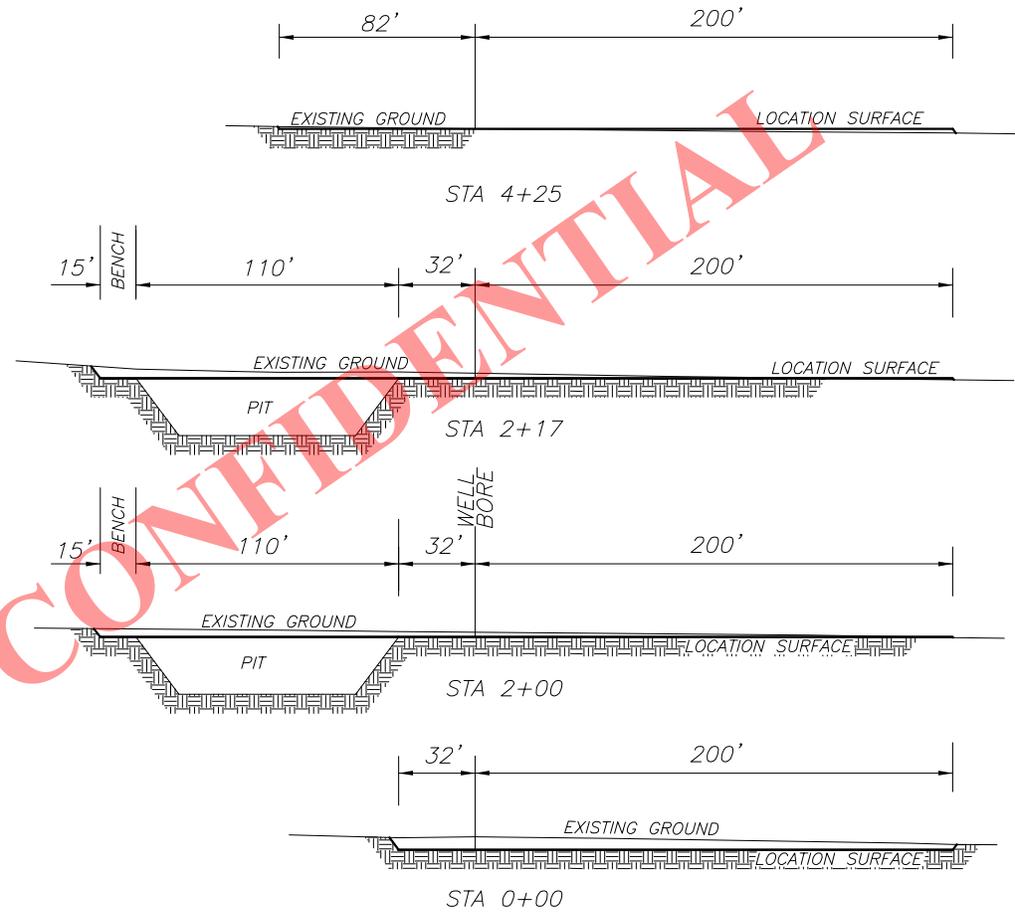
KUSHMAUL 1-16C4

SECTION 16, T3S, R4W, U.S.B.&M.

915' FNL, 701' FEL



NOTE: ALL CUT/FILL  
SLOPES ARE 1½:1  
UNLESS OTHERWISE  
NOTED



APPROXIMATE QUANTITIES

TOTAL CUT (INCLUDING PIT) = 9445 CU. YDS.

PIT CUT = 4572 CU. YDS.

TOPSOIL STRIPPING: (6") = 2512 CU. YDS.

REMAINING LOCATION CUT = 2361 CU. YDS

TOTAL FILL = 421 CU. YDS.

LOCATION SURFACE GRAVEL=1374 CU. YDS. (4" DEEP)

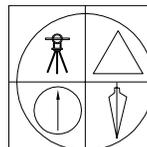
ACCESS ROAD GRAVEL=997 CU. YDS.



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SURVEYING CONSULTANTS

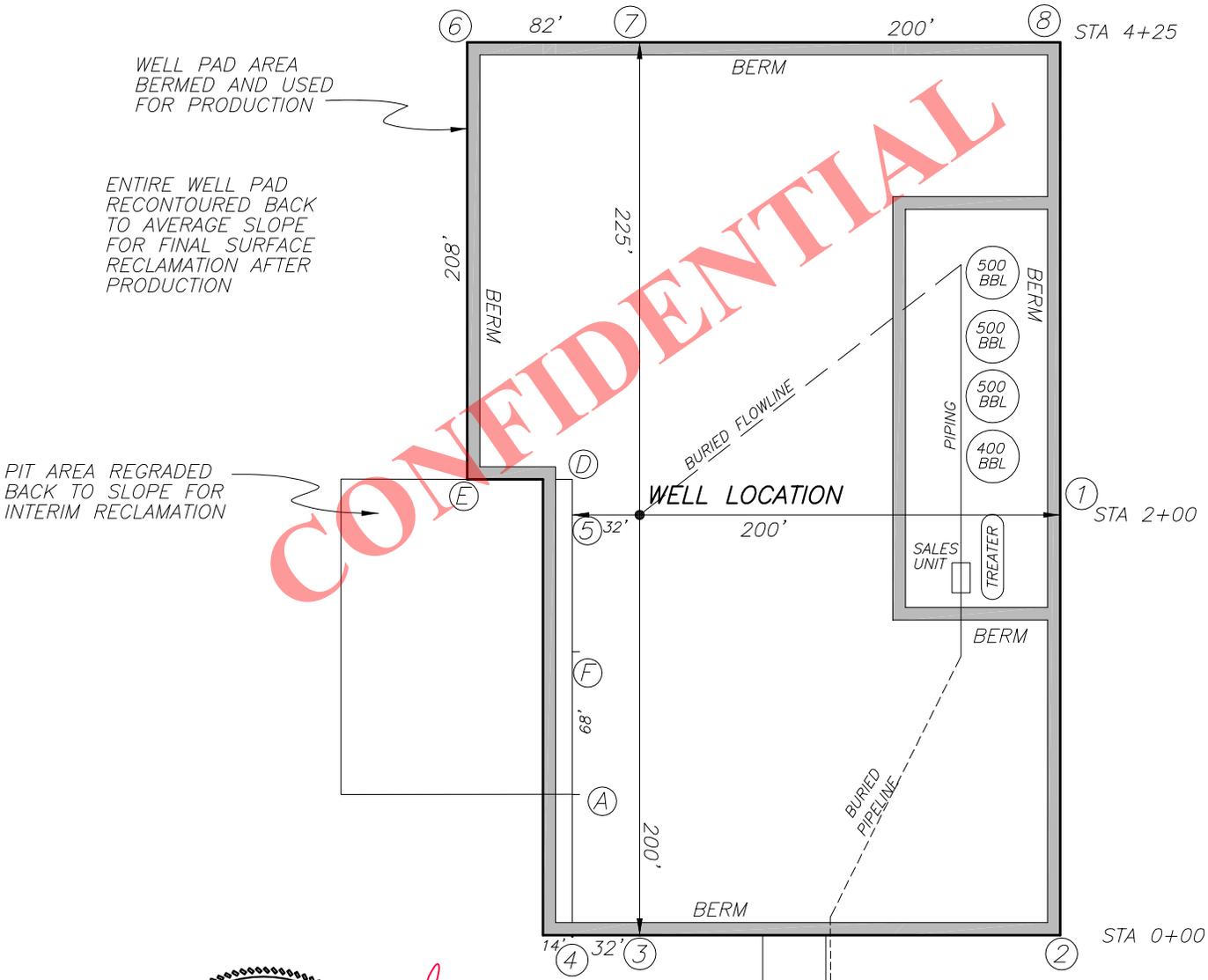
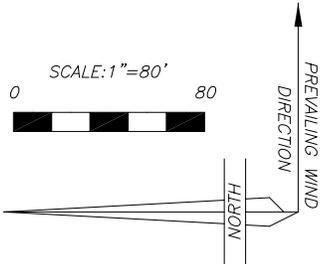
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DUCHESNE, UTAH 84021  
(435) 738-5352

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# EP ENERGY E & P COMPANY, L.P.

FIGURE #3

LOCATION LAYOUT FOR  
 KUSHMAUL 1-16C4  
 SECTION 16, T3S, R4W, U.S.B.&M.  
 915' FNL, 701' FEL



WELL PAD AREA  
 BERMED AND USED  
 FOR PRODUCTION

ENTIRE WELL PAD  
 RECONTOURED BACK  
 TO AVERAGE SLOPE  
 FOR FINAL SURFACE  
 RECLAMATION AFTER  
 PRODUCTION

PIT AREA REGRADED  
 BACK TO SLOPE FOR  
 INTERIM RECLAMATION

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Jerry D. Allred

PROFESSIONAL LAND SURVEYOR  
 No. 148951  
 JERRY D. ALLRED  
 14 SEP '12  
 STATE OF UTAH

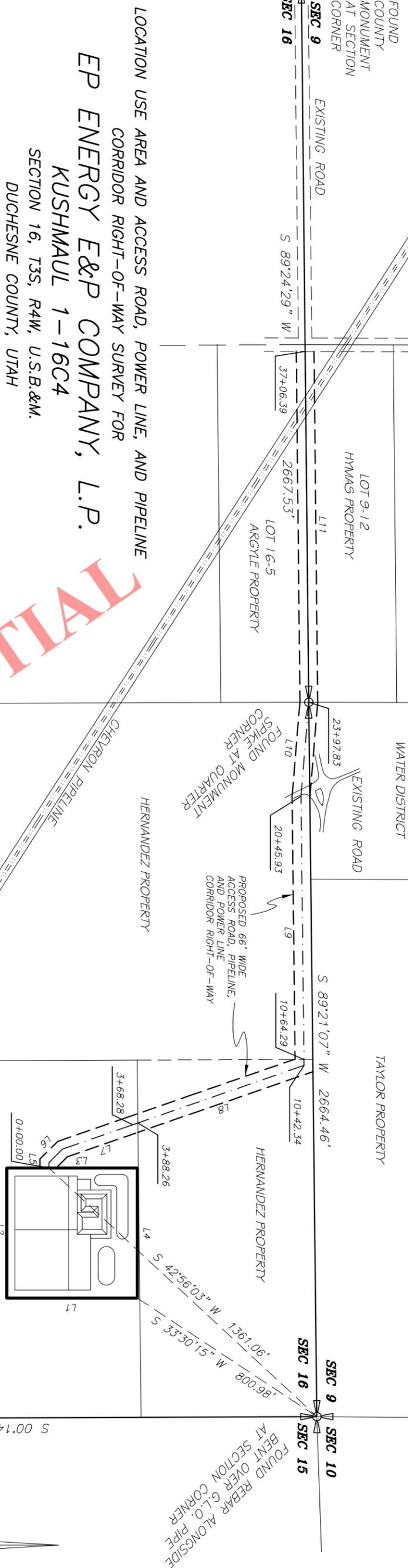
	<b>JERRY D. ALLRED &amp; ASSOCIATES</b> SURVEYING CONSULTANTS 1235 NORTH 700 EAST--P.O. BOX 975 DUCHESNE, UTAH 84021 (435) 738-5352
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S 00°15'49" E 5245.03'  
TO SECTION CORNER

FOUND COUNTY MOUNTMENT AT SECTION CORNER  
SEC 8  
SEC 9  
SEC 16  
SEC 17



LOCATION USE AREA AND ACCESS ROAD, POWER LINE, AND PIPELINE  
CORRIDOR RIGHT-OF-WAY SURVEY FOR  
**EP ENERGY E&P COMPANY, L.P.**  
**KUSHMAUL 1-16C4**  
SECTION 16, T3S, R4W, U.S.B.&M.  
DUCHESSNE COUNTY, UTAH

USE AREA BOUNDARY

Commencing at the Northeast Corner of Section 16, Township 3 South, Range 4 West of the Uintah Special Base and Meridian:  
Thence South 33°30'15" West 800.98 feet to the TRUE POINT OF BEGINNING;  
Thence South 00°00'26" East 485.00 feet;  
Thence South 89°59'34" West 485.00 feet;  
Thence North 00°00'26" West 485.00 feet;  
Thence North 89°59'34" East 485.00 feet to the TRUE POINT OF BEGINNING, containing 5.40 acres.

ACCESS ROAD, PIPELINE, AND POWER LINE CORRIDOR RIGHT-OF-WAY DESCRIPTION

A 66 feet wide, access road, pipeline, and power line corridor right-of-way over portions of Sections 9 and 16, Township 3 South, Range 4 West of the Uintah Special Base and Meridian, the centerline of which is further described as follows:  
Commencing at the Northeast Corner of said Section 16:  
Thence South 42°56'03" West 1361.06 feet to the TRUE POINT OF BEGINNING, said point being on the West line of the EP Energy E&P Company Kushmaul 1-16C4 well location surface use area boundary;  
Thence North 89°56'01" West 20.18 feet;  
Thence North 44°39'31" West 71.81 feet;  
Thence North 19°11'52" West 276.29 feet;  
Thence North 19°10'51" West 674.06 feet;  
Thence South 89°21'07" West 1003.59 feet;  
Thence North 85°16'01" West 351.89 feet to the North Quarter Corner of said Section 16;  
Thence South 89°24'29" West 1308.56 feet along the North line of said Section to the East side of an existing road. Said right-of-way being 3706.39 feet in length with the sidelines being shortened or elongated to intersect said use area boundary and said road right-of-way line.

LINE	BEARING	DISTANCE
L1	S 00°00'26" E	485.00'
L2	S 89°59'34" W	485.00'
L3	N 00°00'26" W	485.00'
L4	N 89°59'34" E	485.00'
L5	N 89°56'01" W	20.18'
L6	N 44°39'31" W	71.81'
L7	N 19°11'52" W	276.29'
L8	N 19°10'51" W	674.06'
L9	S 89°21'07" W	1003.59'
L10	N 85°16'01" W	351.89'
L11	S 89°24'29" W	1308.56'

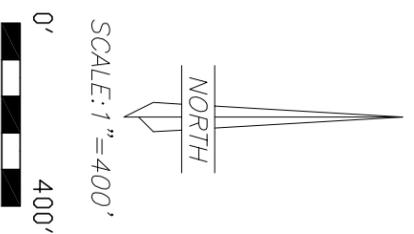
**SURVEYOR'S CERTIFICATE**

This is to certify that this plat was prepared from the field notes and electronic data collector files of an actual survey made by me, or under my personal supervision, of the use area and access road, power line, and pipeline corridor right-of-way shown hereon, and that the monuments indicated were found or set during said survey, and that this plat accurately represents said survey to the best of my knowledge.

Jerry D. Allred, Professional Land Surveyor,  
Certificate 148951 (Utah)

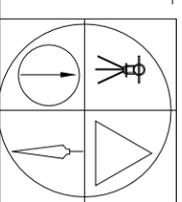


**EP ENERGY E & P COMPANY, L.P.**  
SURFACE USE AREA  
KUSHMAUL 1-16C4  
5.40 ACRES



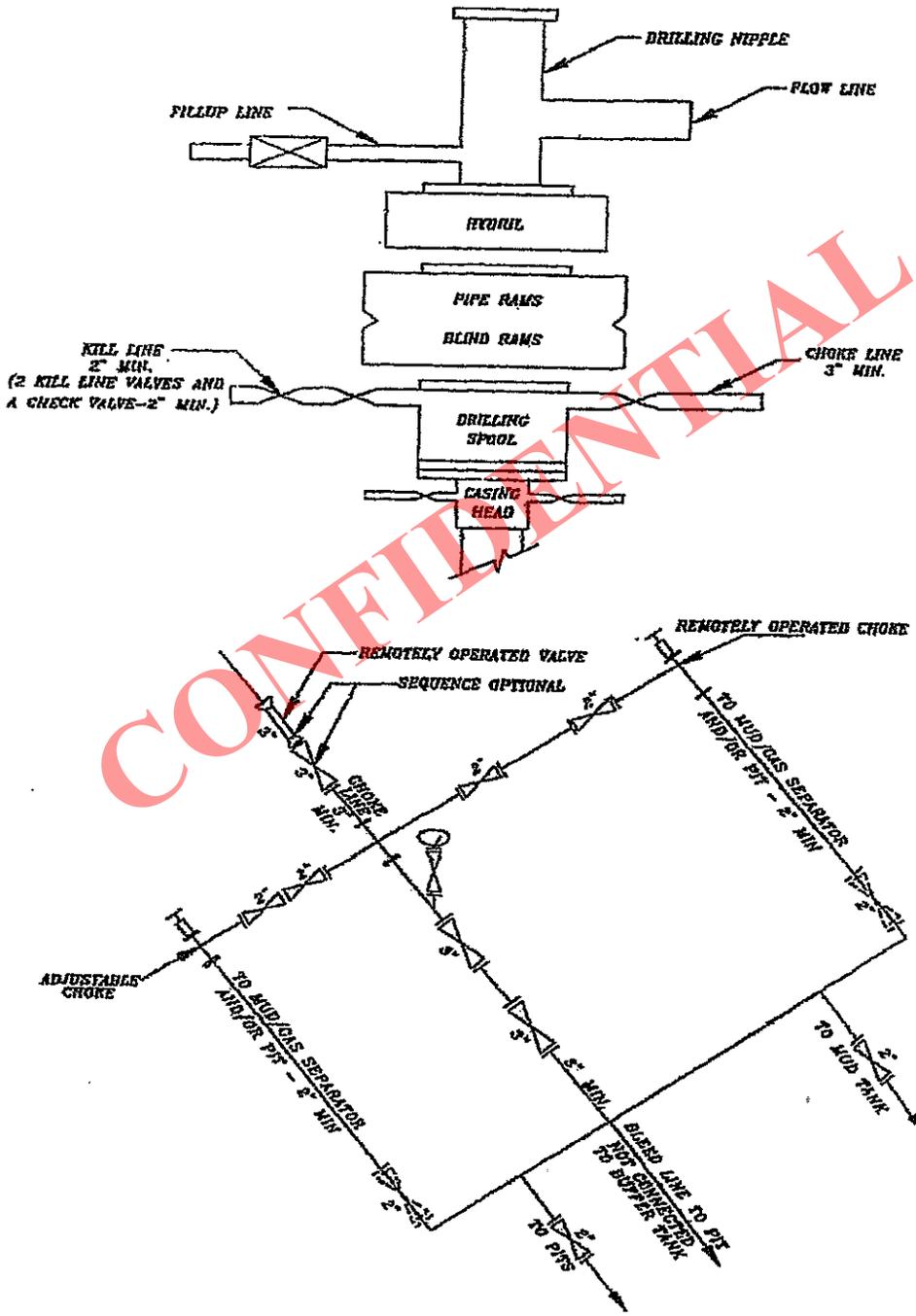
THIS SURVEY WAS PERFORMED USING GLOBAL POSITIONING SYSTEM PROCEDURES AND EQUIPMENT  
THE BASIS OF BEARINGS IS GEODETIC NORTH DERIVED FROM G.P.S. OBSERVATIONS AT THE SECTION CORNER LOCATED AT LAT. 40°15'22.90258"N AND LONG. 110°23'21.19760"W USING THE UTAH STATE G.P.S. VIRTUAL REFERENCE STATION CONTROL NETWORK MAINTAINED AND OPERATED BY THE AUTOMATED GEOGRAPHIC REFERENCE CENTER

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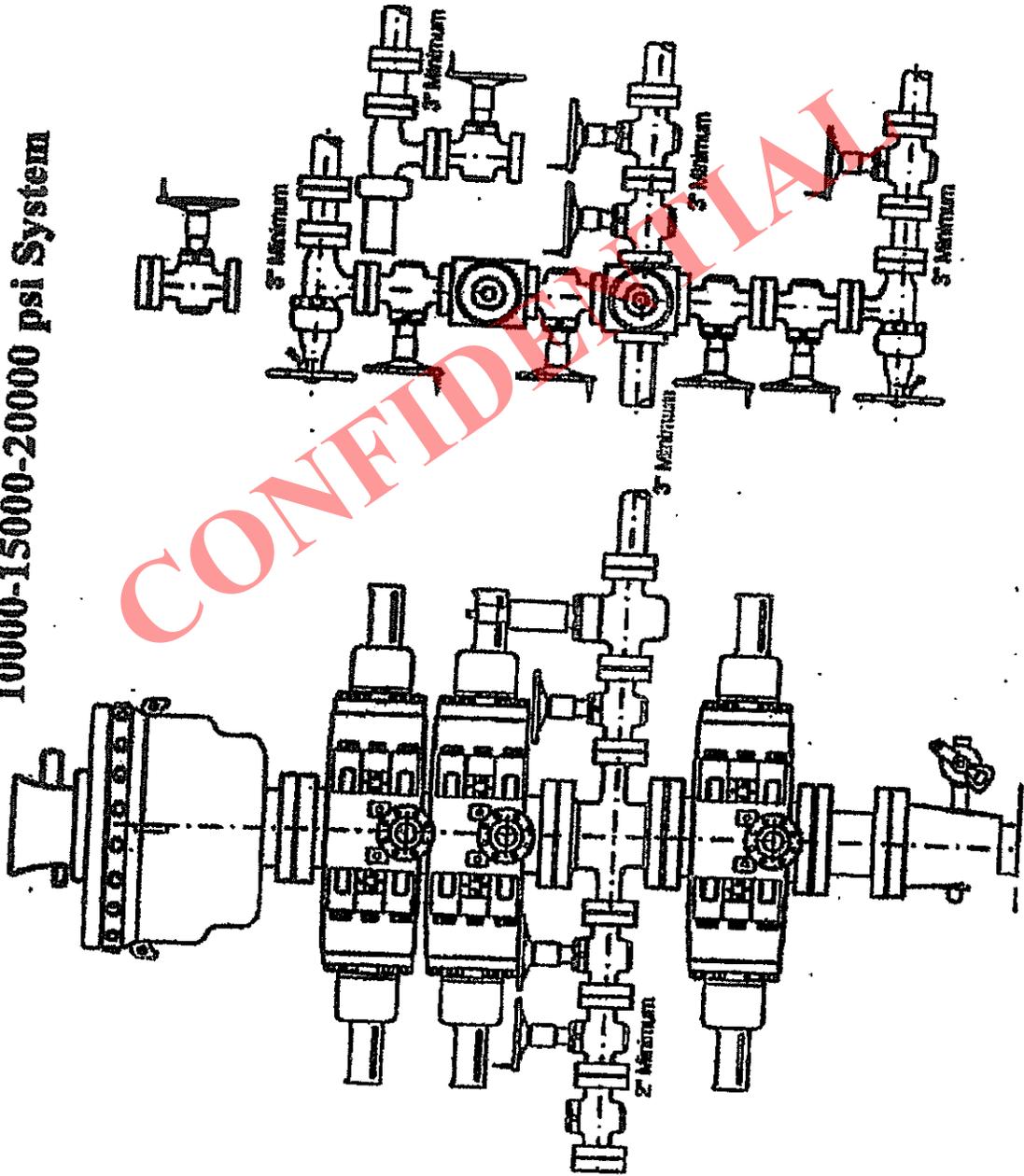


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# 5M BOP STACK and CHOKE MANIFOLD SYSTEM



10000-15000-20000 psi System

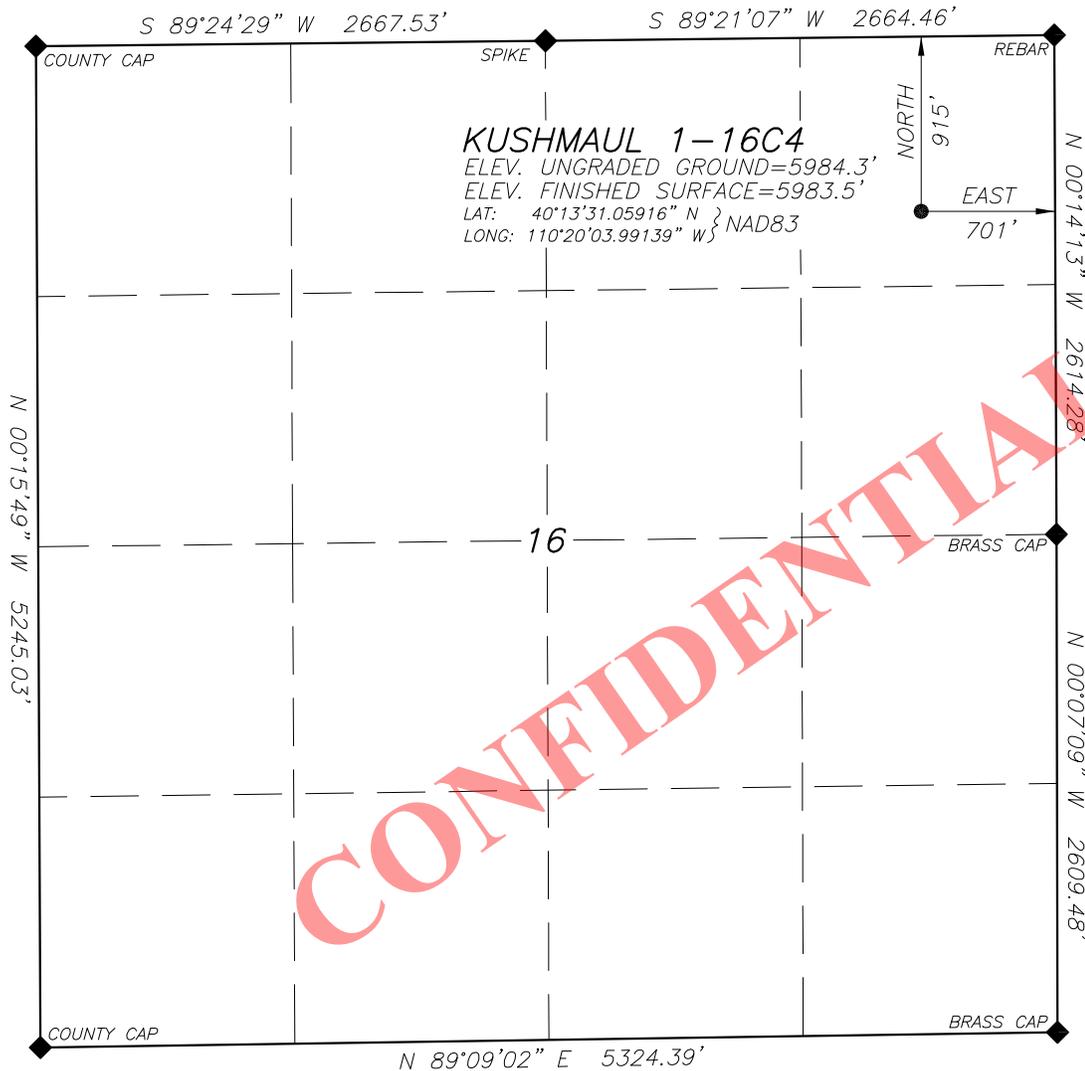


# EP ENERGY E & P COMPANY, L.P.

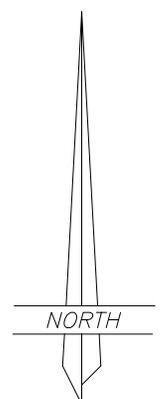
## WELL LOCATION

### KUSHMAUL 1-16C4

LOCATED IN THE NE¼ OF THE NE¼ OF SECTION 16, T3S, R4W, U.S.B.&M. DUCHESNE COUNTY, UTAH



CONFIDENTIAL



SCALE: 1" = 1000'



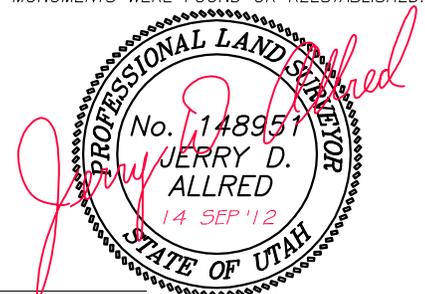
NOTE:  
NAD27 VALUES FOR WELL POSITION:  
LAT: 40.22533713° N  
LONG: 110.33373141° W

#### LEGEND AND NOTES

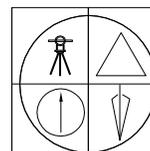
- ◆ CORNER MONUMENTS FOUND AND USED BY THIS SURVEY
- THE GENERAL LAND OFFICE (G.L.O.) PLAT WAS USED FOR REFERENCE AND CALCULATIONS AS WAS THE U.S.G.S. MAP
- THIS SURVEY WAS PERFORMED USING GLOBAL POSITIONING SYSTEM PROCEDURES AND EQUIPMENT
- THE BASIS OF BEARINGS IS GEODETIC NORTH DERIVED FROM G.P.S. OBSERVATIONS AT THE SECTION CORNER LOCATED AT LAT. 40°15'22.90258"N AND LONG. 110°23'21.19760"W USING THE UTAH STATE G.P.S. VIRTUAL REFERENCE STATION CONTROL NETWORK MAINTAINED AND OPERATED BY THE AUTOMATED GEOGRAPHIC REFERENCE CENTER
- BASIS OF ELEVATIONS: NAVD 88 DATUM USING THE UTAH REFERENCE NETWORK CONTROL SYSTEM

#### SURVEYOR'S CERTIFICATE

I HEREBY CERTIFY THAT THIS PLAT WAS PREPARED FROM THE FIELD NOTES AND ELECTRONIC DATA COLLECTOR FILES OF AN ACTUAL SURVEY PERFORMED BY ME, OR UNDER MY PERSONAL SUPERVISION, DURING WHICH THE SHOWN MONUMENTS WERE FOUND OR REESTABLISHED.



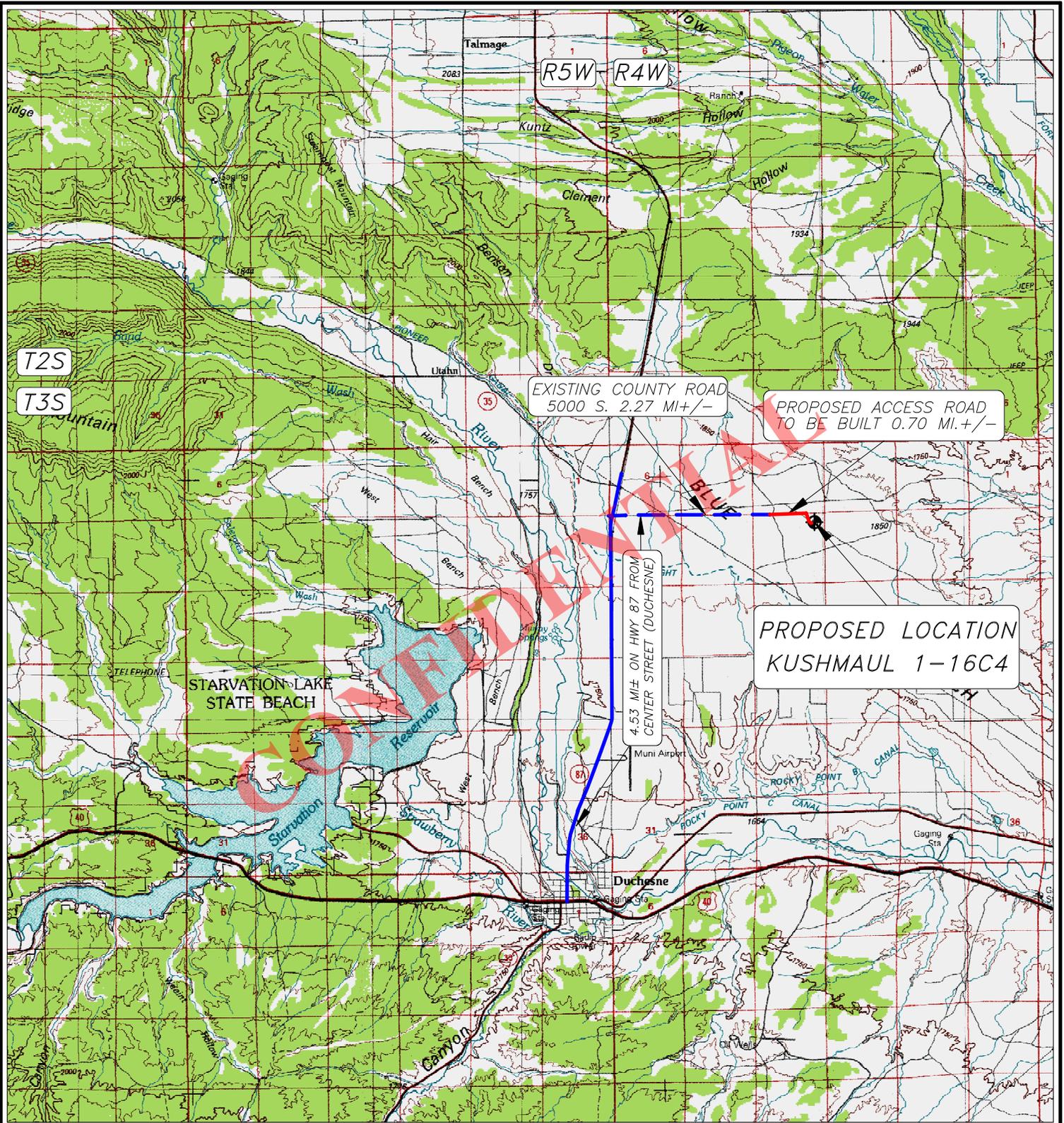
JERRY D. ALLRED, PROFESSIONAL LAND SURVEYOR, CERTIFICATE NO. 148951 (UTAH)



**JERRY D. ALLRED & ASSOCIATES**  
SURVEYING CONSULTANTS

1235 NORTH 700 EAST--P.O. BOX 975  
DUCHESNE, UTAH 84021  
(435) 738-5352

REV 14 SEP 2012  
14 JUN 2012 01-128-301



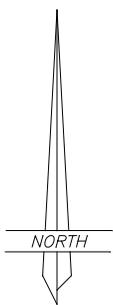
**LEGEND:**

PROPOSED WELL LOCATION

01-128-301

**JERRY D. ALLRED & ASSOCIATES**  
SURVEYING CONSULTANTS

1235 NORTH 700 EAST--P.O. BOX 975  
DUCHESTER, UTAH 84021  
(435) 738-5352



**EP ENERGY E & P COMPANY, L.P.**

KUSHMAUL 1-16C4

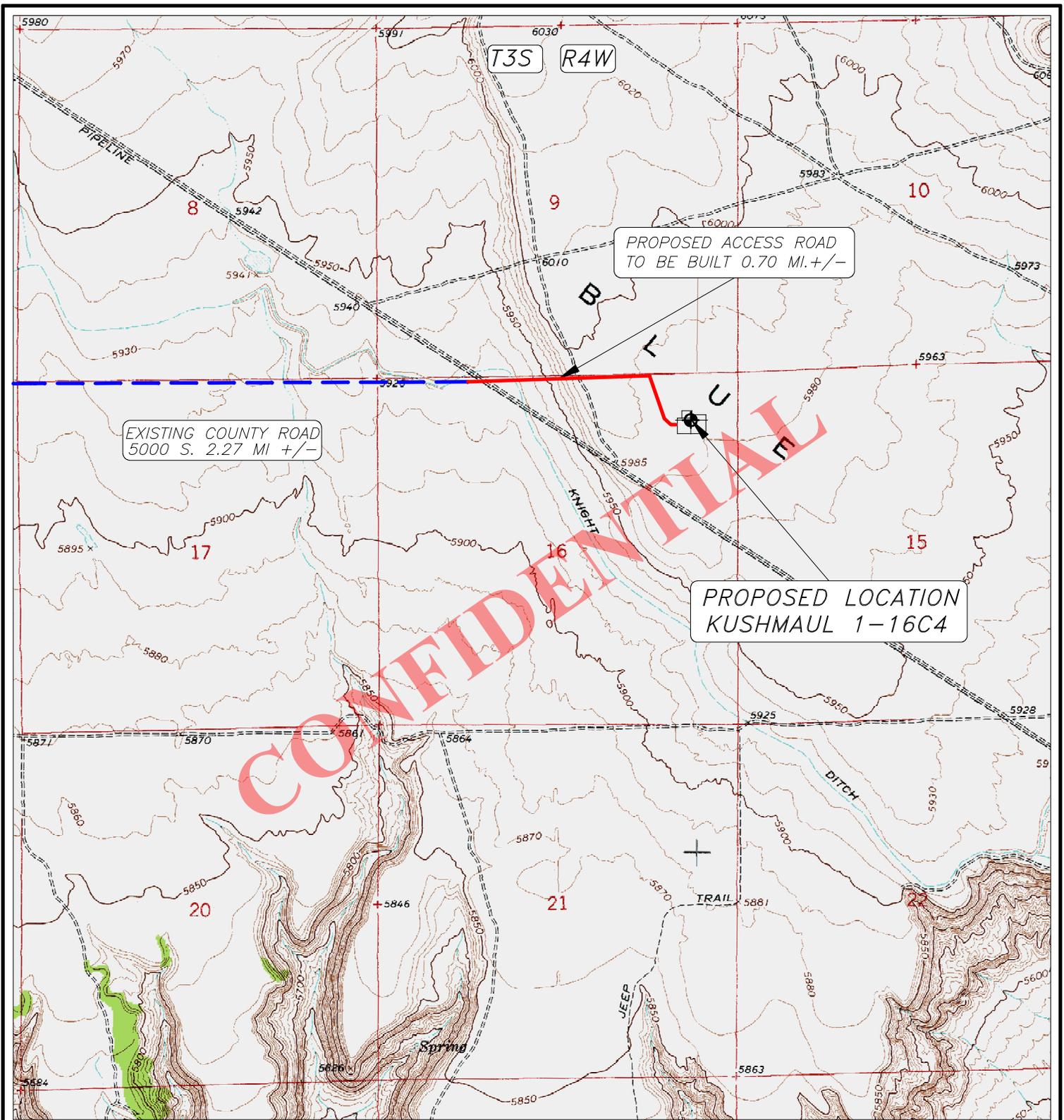
SECTION 16, T3S, R4W, U.S.B.&M.

915' FNL 701' FEL

**TOPOGRAPHIC MAP "A"**

SCALE; 1"=10,000'

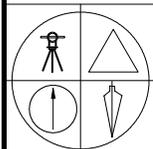
14 SEP 2012



**LEGEND:**

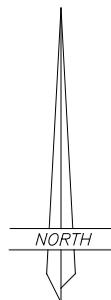
-  PROPOSED WELL LOCATION
-  PROPOSED ACCESS ROAD
-  EXISTING GRAVEL ROAD
-  EXISTING PAVED ROAD

01-128-301



**JERRY D. ALLRED & ASSOCIATES**  
SURVEYING CONSULTANTS

1235 NORTH 700 EAST--P.O. BOX 975  
DUCHESTER, UTAH 84021  
(435) 738-5352



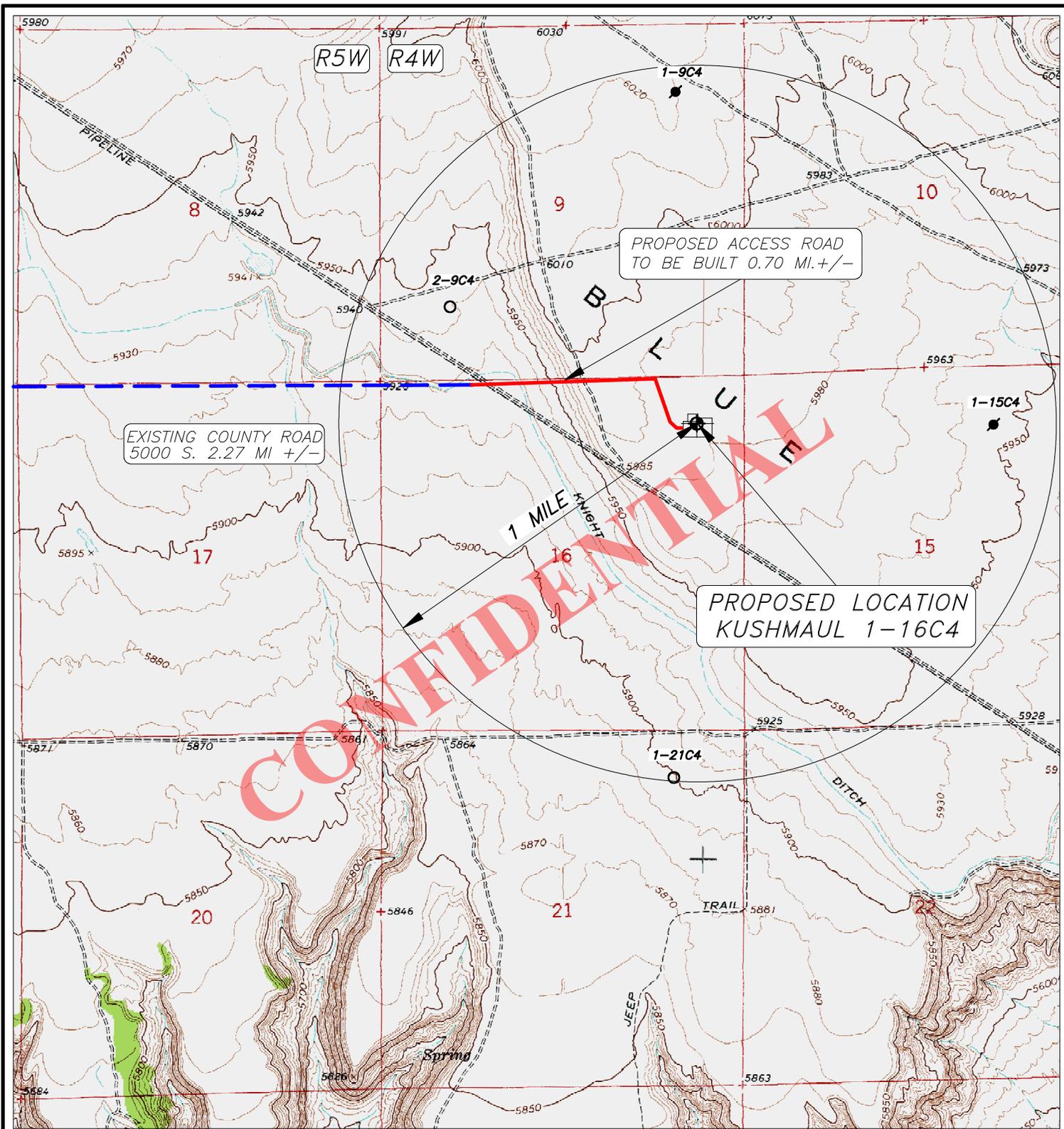
**EP ENERGY E & P COMPANY, L.P.**

KUSHMAUL 1-16C4  
SECTION 16, T3S, R4W, U.S.B.&M.

915' FNL 701' FEL

**TOPOGRAPHIC MAP "B"**

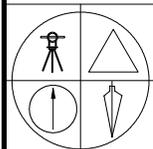
SCALE: 1"=2000'  
14 SEP 2012



**LEGEND:**

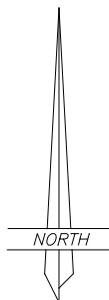
-  PROPOSED WELL LOCATION
-  OTHER WELLS AS LOCATED FROM SUPPLIED MAP

01-128-301



**JERRY D. ALLRED & ASSOCIATES**  
SURVEYING CONSULTANTS

1235 NORTH 700 EAST--P.O. BOX 975  
DUCHESTER, UTAH 84021  
(435) 738-5352



**EP ENERGY E & P COMPANY, L.P.**

KUSHMAUL 1-16C4  
SECTION 16, T3S, R4W, U.S.B.&M.  
915' FNL 701' FEL

**TOPOGRAPHIC MAP "C"**

SCALE: 1"=2000'  
14 SEP 2012

**AFFIDAVIT OF DAMAGE SETTLEMENT AND RELEASE**

Lauren A. Williams personally appeared before me, and, being duly sworn, deposes and says:

1. My name is Lauren A. Williams. I am a Landman for EP Energy E&P Company, L.P., whose address is 1001 Louisiana Street, Houston, Texas 77002 ("EP Energy").
2. EP Energy is the operator of the proposed Kushmaul 1-16C4 well ("the Well") to be located in the S/2 of the NE/4 of the NE/4 of Section 16, Township 3 South, Range 4 West, USM, Duchesne County, Utah (the "Drillsite Location"). The surface owner of the Drillsite location is Ronald J. Kushmaul whose address is 11206 North 15<sup>th</sup> Street, Coeur d'Alene, Idaho 83814-5706 and whose telephone number is 208-664-1855 (the "Surface Owner").
3. EP Energy and the Surface Owner have entered into a Damage Settlement and Release dated September 7, 2012 for the Drillsite Location and to cover any and all injuries or damages of every character and description sustained by the Surface Owner or Surface Owner's property as a result of operations associated with the drilling of the Well.

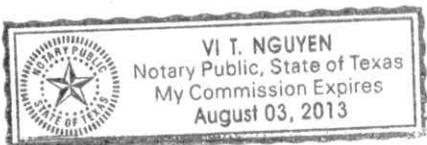
FURTHER AFFIANT SAYETH NOT.

*Lauren Williams*  
 \_\_\_\_\_  
 Lauren A. Williams

**ACKNOWLEDGMENT**

STATE OF TEXAS           §  
                                       §  
 COUNTY OF HARRIS       §

This instrument was acknowledged before me on this the 17<sup>th</sup> day of September, 2012 by Lauren A. Williams as a Landman for EP ENERGY E&P COMPANY, L.P., a Delaware limited partnership, on behalf of said partnership and acknowledged to me that he executed the same as his own free and voluntary act and deed for the uses and purposes therein set forth.



*Vi T. Nguyen*  
 \_\_\_\_\_  
 Notary Public in and for State of Texas

**CONFIDENTIAL**

EP Energy E&P Company, L.P.

**Related Surface Information**

1. **Current Surface Use:**
  - Livestock Grazing and Oil and Gas Production.
2. **Proposed Surface Disturbance:**
  - The road will be crown and ditch. Water wings will be constructed on the access road as needed.
  - The topsoil will be windrowed and re-spread in the borrow area.
  - New road to be constructed will be approximately .70 miles in length and 66 feet wide.
  - All equipment and vehicles will be confined to the access road, pad and area specified in the APD.
3. **Location Of Existing Wells:**
  - Existing oil, gas wells within one (1) mile radius of proposed well are provided in EXHIBIT C.
4. **Location And Type Of Drilling Water Supply:**
  - Drilling water: Duchesne City Water/East Duchesne Water District
5. **Existing/Proposed Facilities For Productive Well:**
  - There are no existing facilities that will be utilized for this well.
  - A pipeline corridor .70 miles will parallel the proposed access road. The corridor will contain one 4 inch gas line and one 2 inch gas line and one 2 inch Salt Water disposal line. Rehabilitation of unneeded, previously disturbed areas will consist of backfilling and contouring the reserve pit area; backsloping and contouring all cut and fill slopes. These areas will be reseeded. Refer to plans for reclamation of surface for details.
  - Upgrade and maintain access roads and drainage control structures (e.g., culverts, drainage dips, ditching, etc.) as necessary to prevent soil erosion and accommodate safe, year-round traffic.
6. **Construction Materials:**
  - Native soil from road and location will be used for construction materials along with gravel and/or scoria road base material. In the event that conditions should necessitate graveling of all or part of the access road and location, surfacing materials will be purchased from commercial suppliers in the marketing area.
7. **Methods For Handling Waste Disposal:**
  - The reserve pit will be designed to prevent the collection of surface runoff and will be constructed with a minimum of ½ the total depth below the original ground surface on the lowest point with the pit. The pit will be lined with a 20-mil polyethylene to prevent leakage of fluids. The liner will be rolled into place and secured at the ends, i.e. buried on top of the pit berms. Prior to use, the reserve pit will be fenced on three sides; the fourth side will be fenced at the time the rig is removed. Drilling fluids, cuttings and produced water will be contained in the reserve pit (trash will be placed in the trash cage). Fluids in the reserve pit will be allowed to evaporate prior to pit burial.
  - Garbage and other trash will be contained in the portable trash cage and hauled off the location to an authorized disposal site. Any trash on the pad will be cleaned up prior to the rig moving off location and hauled to an authorized disposal site.
  - Sewage will be handled in Portable Toilets.
  - Produced water will be placed in the reserve pit for a period not to exceed ninety days after initial production. Any hydrocarbons produced during completion work will be contained in test tanks and removed from the location at a later date.
  - Water from the reserve pit may be used for drilling of additional wells. The water will be trucked along access roads as approved in pertinent APD's
8. **Ancillary Facilities:**
  - There will be no ancillary facilities associated with this project.

**9. Surface Reclamation Plans:**

Backfilling of the pits will be done when dry. In the event of a dry hole, the location will be re-contoured, the topsoil will be distributed evenly over the entire location, and the seedbed prepared.

- Seed will be planted after September 15<sup>th</sup>, and prior to ground frost, or seed will be planted after the frost has left and before May 15<sup>th</sup>. Slopes to steep for machinery will be hand broadcast and raked with twice the specified amount of seed.
  1. The construction program and design are on the attached cut, fill and cross sectional diagrams.
  2. Prior to construction, all topsoil will be removed from the entire site and stockpiled. Topsoil for this site is the first 6 inches of soil materials.
  3. After the location has been reshaped and after redistributing the topsoil, the operator will rip and scarify the drilling platform and access road on the contour, to a depth of at least 12 inches.
- Rehabilitation will begin upon the completion of the drilling. Complete rehabilitation will depend on weather conditions and the amount of time required to dry the reserve pit.
  1. All rehabilitation work including seeding will be completed as soon as weather and the reserve pit conditions are appropriate.
  2. Landowner will be contacted for rehabilitation requirements.

**10. Surface Ownership:**

Ronald J. Kushmaul  
11206 North 15<sup>th</sup> Street  
Coeur d'Alene, Idaho 83814-5706  
208-664-1855

**Other Information:**

- The surface soil consists of clay, and silt.
- Flora – vegetation consists of the following: Sagebrush, Juniper and prairie grasses.
- Fauna – antelope, deer, coyotes, raptors, small mammals, and domestic grazing animals.
- Current surface uses – Livestock grazing and mineral exploration and production.

• **Operator and Contact Persons:**

**Construction and Reclamation:**

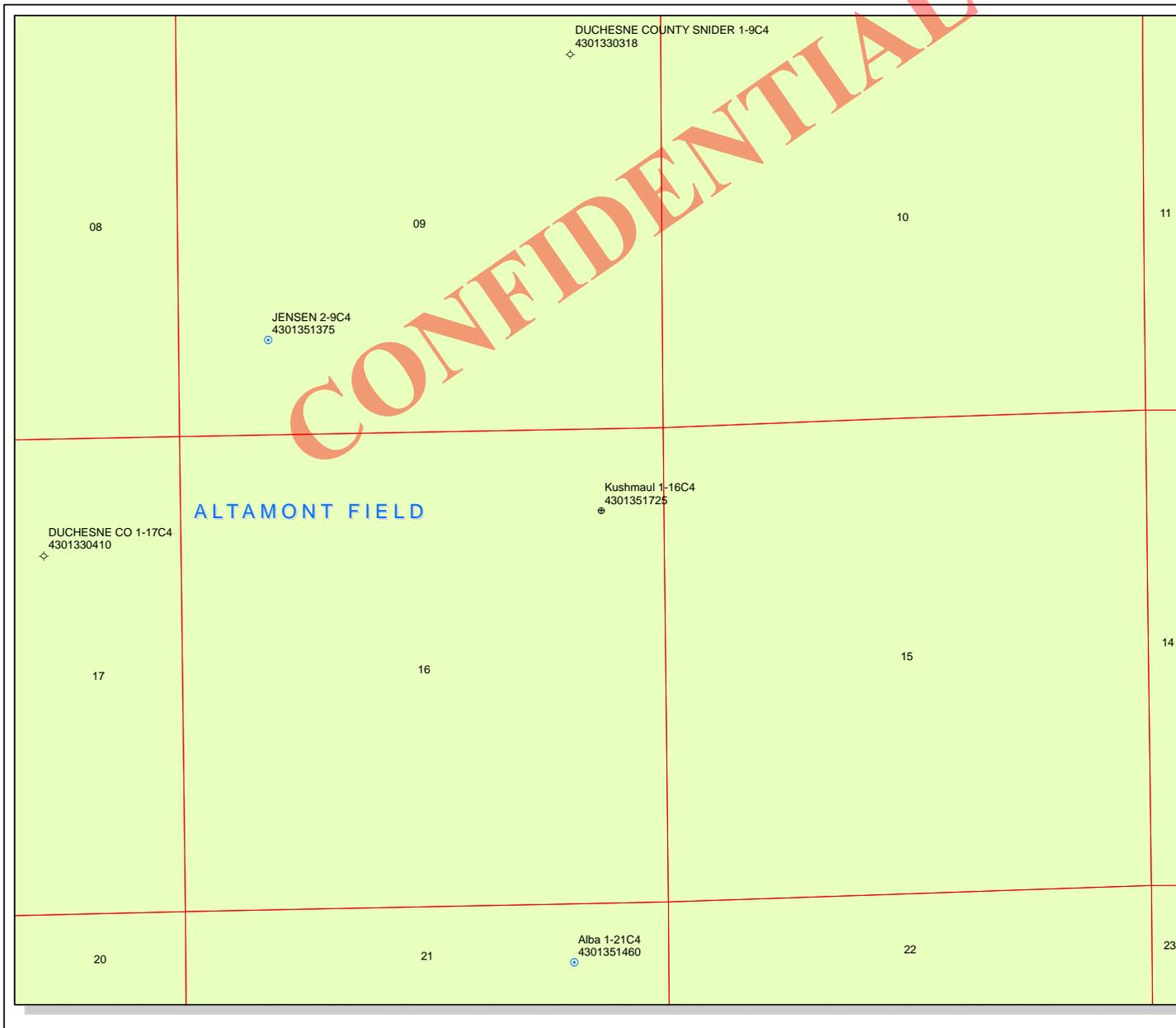
EP Energy E&P Company, L.P.  
Wayne Garner  
PO Box 410  
Altamont, Utah 84001  
435-454-3394 – Office  
435-823-1490 – Cell

**Regarding This APD**

EP Energy E&P Company, L.P.  
Maria S. Gomez  
1001 Louisiana, Rm 2730D  
Houston, Texas 77002  
713-997-5038 – Office

**Drilling**

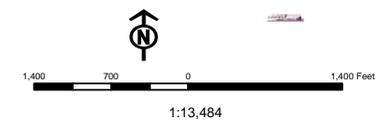
EP Energy E&P Company, L.P.  
Joe Cawthorn – Drilling Engineer  
1001 Louisiana, Rm 2523B  
Houston, Texas 77002  
713-997-5929 – office  
832-465-2882 – Cell



**API Number: 4301351725**  
**Well Name: Kushmaul 1-16C4**  
**Township T03.0S Range R04.0W Section 16**  
**Meridian: UBM**  
 Operator: EP ENERGY E&P COMPANY, L.P.

Map Prepared:  
 Map Produced by Diana Mason

- |               |                                     |
|---------------|-------------------------------------|
| <b>Units</b>  | <b>Wells Query</b>                  |
| <b>STATUS</b> | <b>STATUS</b>                       |
| ACTIVE        | APD - Approved Permit               |
| EXPLORATORY   | DRIL - Spudded (Drilling Commenced) |
| GAS STORAGE   | GIW - Gas Injection                 |
| NF PP OIL     | GS - Gas Storage                    |
| NF SECONDARY  | LOC - New Location                  |
| P1 OIL        | OPS - Operation Suspended           |
| PP GAS        | PA - Plugged Abandoned              |
| PP GEOTHERML  | PGW - Producing Gas Well            |
| PP OIL        | POW - Producing Oil Well            |
| SECONDARY     | SGW - Shut-in Gas Well              |
| TERMINATED    | SOW - Shut-in Oil Well              |
| <b>STATUS</b> | TA - Temp. Abandoned                |
| Unknown       | TW - Test Well                      |
| ABANDONED     | WDW - Water Disposal                |
| ACTIVE        | WW - Water Injection Well           |
| COMBINED      | WSW - Water Supply Well             |
| INACTIVE      | Bottom Hole Location - Oil&GasDb    |
| STORAGE       |                                     |
| TERMINATED    |                                     |



Well Name	EP ENERGY E&P COMPANY, L.P. Kushmaul 1-16C4 43013517250000			
String	Cond	Surf	I1	L1
Casing Size(")	13.375	9.625	7.000	4.500
Setting Depth (TVD)	800	3300	9170	11900
Previous Shoe Setting Depth (TVD)	0	800	3300	9170
Max Mud Weight (ppg)	8.8	9.5	10.5	12.0
BOPE Proposed (psi)	1000	1000	5000	10000
Casing Internal Yield (psi)	2730	5750	11220	12410
Operators Max Anticipated Pressure (psi)	7426			12.0

Calculations	Cond String	13.375	"
Max BHP (psi)	.052*Setting Depth*MW=	366	
			BOPE Adequate For Drilling And Setting Casing at Depth?
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=	270	YES <input type="checkbox"/> rotating head
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=	190	YES <input type="checkbox"/> OK
			*Can Full Expected Pressure Be Held At Previous Shoe?
Pressure At Previous Shoe	Max BHP-.22*(Setting Depth - Previous Shoe Depth)=	190	NO <input type="checkbox"/>
Required Casing/BOPE Test Pressure=		800	psi
*Max Pressure Allowed @ Previous Casing Shoe=		0	psi *Assumes 1psi/ft frac gradient

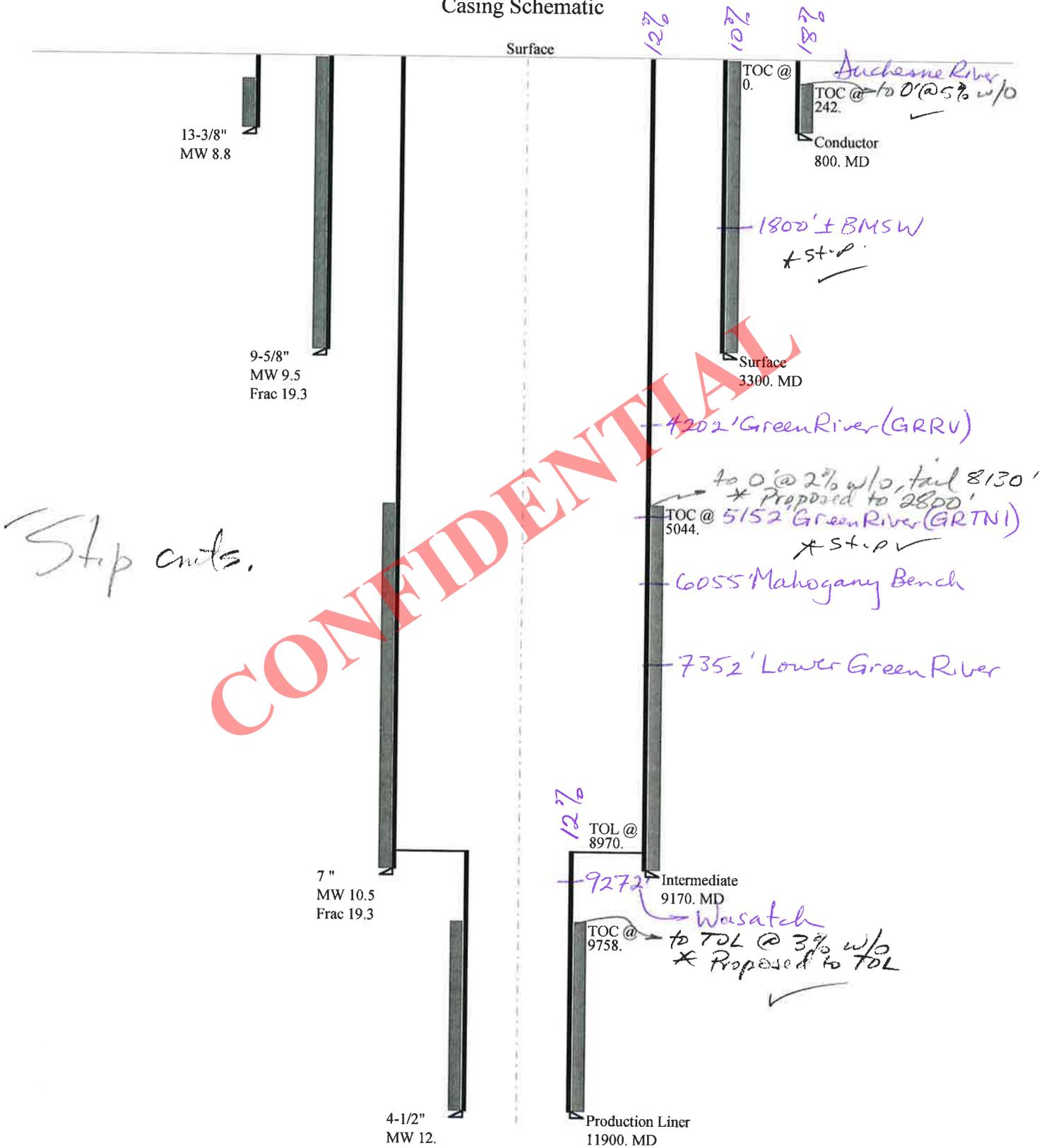
Calculations	Surf String	9.625	"
Max BHP (psi)	.052*Setting Depth*MW=	1680	
			BOPE Adequate For Drilling And Setting Casing at Depth?
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=	1234	NO <input type="checkbox"/> rotating head + 5M annular
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=	904	YES <input type="checkbox"/> OK
			*Can Full Expected Pressure Be Held At Previous Shoe?
Pressure At Previous Shoe	Max BHP-.22*(Setting Depth - Previous Shoe Depth)=	1080	NO <input type="checkbox"/> OK
Required Casing/BOPE Test Pressure=		3300	psi
*Max Pressure Allowed @ Previous Casing Shoe=		800	psi *Assumes 1psi/ft frac gradient

Calculations	I1 String	7.000	"
Max BHP (psi)	.052*Setting Depth*MW=	5007	
			BOPE Adequate For Drilling And Setting Casing at Depth?
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=	3907	YES <input type="checkbox"/>
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=	2990	YES <input type="checkbox"/> OK
			*Can Full Expected Pressure Be Held At Previous Shoe?
Pressure At Previous Shoe	Max BHP-.22*(Setting Depth - Previous Shoe Depth)=	3716	NO <input type="checkbox"/> OK
Required Casing/BOPE Test Pressure=		7854	psi
*Max Pressure Allowed @ Previous Casing Shoe=		3300	psi *Assumes 1psi/ft frac gradient

Calculations	L1 String	4.500	"
Max BHP (psi)	.052*Setting Depth*MW=	7426	
			BOPE Adequate For Drilling And Setting Casing at Depth?
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=	5998	YES <input type="checkbox"/>
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=	4808	YES <input type="checkbox"/> OK
			*Can Full Expected Pressure Be Held At Previous Shoe?
Pressure At Previous Shoe	Max BHP-.22*(Setting Depth - Previous Shoe Depth)=	6825	YES <input type="checkbox"/>
Required Casing/BOPE Test Pressure=		8687	psi
*Max Pressure Allowed @ Previous Casing Shoe=		9170	psi *Assumes 1psi/ft frac gradient

# 43013517250000 Kushmaul 1-16B4

## Casing Schematic



Well name:	<b>43013517250000 Kushmaul 1-16B4</b>		
Operator:	<b>EL PASO E &amp; P COMPANY, LP</b>		
String type:	Conductor	Project ID:	43-013-51725
Location:	DUCHESNE COUNTY		

**Design parameters:**

**Collapse**

Mud weight: 8.800 ppg  
 Internal fluid density: 1.000 ppg

**Burst**

Max anticipated surface pressure: 270 psi  
 Internal gradient: 0.120 psi/ft  
 Calculated BHP: 366 psi

No backup mud specified.

**Minimum design factors:**

**Collapse:**

Design factor: 1.125

**Burst:**

Design factor: 1.00

**Tension:**

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

Tension is based on air weight.  
 Neutral point: 696 ft

**Environment:**

H2S considered? No  
 Surface temperature: 74 °F  
 Bottom hole temperature: 85 °F  
 Temperature gradient: 1.40 °F/100ft  
 Minimum section length: 100 ft

Cement top: 242 ft

**Non-directional string.**

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Est. Cost (\$)
1	800	13.375	54.50	J-55	ST&C	800	800	12.49	9926
Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (kips)	Tension Strength (kips)	Tension Design Factor
1	324	1130	3.486	366	2730	7.46	43.6	514	11.79 J

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

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

Date: November 7, 2012  
 Salt Lake City, Utah

**Remarks:**

Collapse is based on a vertical depth of 800 ft, a mud weight of 8.8 ppg. An internal gradient of .052 psi/ft was used for collapse from TD to TD. Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

Well name:	43013517250000 Kushmaul 1-16B4	
Operator:	EL PASO E & P COMPANY, LP	
String type:	Surface	Project ID: 43-013-51725
Location:	DUCHESNE COUNTY	

**Design parameters:**

**Collapse**

Mud weight: 9.500 ppg  
Internal fluid density: 1.000 ppg

**Burst**

Max anticipated surface pressure: 2,574 psi  
Internal gradient: 0.220 psi/ft  
Calculated BHP: 3,300 psi

No backup mud specified.

**Minimum design factors:**

**Collapse:**

Design factor: 1.125

**Burst:**

Design factor: 1.00

**Tension:**

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

Tension is based on air weight.  
Neutral point: 2,834 ft

**Environment:**

H2S considered? No  
Surface temperature: 74 °F  
Bottom hole temperature: 120 °F  
Temperature gradient: 1.40 °F/100ft  
Minimum section length: 100 ft

Cement top: Surface

**Non-directional string.**

**Re subsequent strings:**

Next setting depth: 9,170 ft  
Next mud weight: 10.500 ppg  
Next setting BHP: 5,002 psi  
Fracture mud wt: 19.250 ppg  
Fracture depth: 3,300 ft  
Injection pressure: 3,300 psi

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Est. Cost (\$)
1	3300	9.625	40.00	N-80	LT&C	3300	3300	8.75	41992
Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (kips)	Tension Strength (kips)	Tension Design Factor
1	1457	3090	2.121	3300	5750	1.74	132	737	5.58 J

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

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

Date: November 7, 2012  
Salt Lake City, Utah

**Remarks:**

Collapse is based on a vertical depth of 3300 ft, a mud weight of 9.5 ppg. An internal gradient of .052 psi/ft was used for collapse from TD to Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

Well name:	<b>43013517250000 Kushmaul 1-16B4</b>	
Operator:	<b>EL PASO E &amp; P COMPANY, LP</b>	
String type:	Intermediate	Project ID: 43-013-51725
Location:	DUCHESNE COUNTY	

**Design parameters:**

**Collapse**

Mud weight: 10.500 ppg  
Design is based on evacuated pipe.

**Burst**

Max anticipated surface pressure: 4,800 psi  
Internal gradient: 0.220 psi/ft  
Calculated BHP: 6,818 psi

No backup mud specified.

**Minimum design factors:**

**Collapse:**

Design factor: 1.125

**Burst:**

Design factor: 1.00

**Tension:**

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

Tension is based on air weight.  
Neutral point: 7,713 ft

**Environment:**

H2S considered? No  
Surface temperature: 74 °F  
Bottom hole temperature: 202 °F  
Temperature gradient: 1.40 °F/100ft  
Minimum section length: 1,000 ft

Cement top: 5,044 ft

**Non-directional string.**

**Re subsequent strings:**

Next setting depth: 11,900 ft  
Next mud weight: 12.000 ppg  
Next setting BHP: 7,418 psi  
Fracture mud wt: 19.250 ppg  
Fracture depth: 9,170 ft  
Injection pressure: 9,170 psi

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Est. Cost (\$)
1	9170	7	29.00	P-110	LT&C	9170	9170	6.059	103553
Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (kips)	Tension Strength (kips)	Tension Design Factor
1	5002	8530	1.705	6818	11220	1.65	265.9	797	3.00 J

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

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

Date: November 7, 2012  
Salt Lake City, Utah

**Remarks:**

Collapse is based on a vertical depth of 9170 ft, a mud weight of 10.5 ppg. The casing is considered to be evacuated for collapse purposes. Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

Well name:	<b>43013517250000 Kushmaul 1-16B4</b>		
Operator:	<b>EL PASO E &amp; P COMPANY, LP</b>		
String type:	Production Liner	Project ID:	43-013-51725
Location:	DUCHESNE COUNTY		

**Design parameters:**

**Collapse**

Mud weight: 12.000 ppg  
 Internal fluid density: 1.500 ppg

**Burst**

Max anticipated surface pressure: 4,800 psi  
 Internal gradient: 0.220 psi/ft  
 Calculated BHP: 7,418 psi

No backup mud specified.

**Minimum design factors:**

**Collapse:**

Design factor: 1.125

**Burst:**

Design factor: 1.00

**Tension:**

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

Tension is based on air weight.  
 Neutral point: 11,386 ft

**Environment:**

H2S considered? No  
 Surface temperature: 74 °F  
 Bottom hole temperature: 241 °F  
 Temperature gradient: 1.40 °F/100ft  
 Minimum section length: 1,000 ft

Cement top: 9,758 ft

Liner top: 8,970 ft

**Non-directional string.**

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Est. Cost (\$)
1	2900	4.5	13.50	P-110	LT&C	11900	11900	3.795	16250
Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (kips)	Tension Strength (kips)	Tension Design Factor
1	6491	10680	1.645	7418	12410	1.67	39.2	338	8.63 J

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

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

Date: November 7, 2012  
 Salt Lake City, Utah

**Remarks:**

For this liner string, the top is rounded to the nearest 100 ft. Collapse is based on a vertical depth of 11900 ft, a mud weight of 12 ppg. An Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.



**Site Stability Issues** N**Drainage Diversion Required?** N**Berm Required?** Y

Location

**Erosion Sedimentation Control Required?** N**Paleo Survey Run?** N **Paleo Potential Observed?** N **Cultural Survey Run?** N **Cultural Resources?** N**Reserve Pit**

Site-Specific Factors		Site Ranking
<b>Distance to Groundwater (feet)</b>	>200	0
<b>Distance to Surface Water (feet)</b>	>1000	0
<b>Dist. Nearest Municipal Well (ft)</b>	>5280	0
<b>Distance to Other Wells (feet)</b>	>1320	0
<b>Native Soil Type</b>	High permeability	20
<b>Fluid Type</b>	Fresh Water	5
<b>Drill Cuttings</b>	Normal Rock	0
<b>Annual Precipitation (inches)</b>		0
<b>Affected Populations</b>		
<b>Presence Nearby Utility Conduits</b>	Not Present	0
<b>Final Score</b>		25
		1 Sensitivity Level

**Characteristics / Requirements**

Reserve pit proposed on north side of location in cut, measuring 110' wide by 150' long by 12' deep and having winds that are parallel to the wellhead.

**Closed Loop Mud Required?** **Liner Required?** Y **Liner Thickness** 20 **Pit Underlayment Required?****Other Observations / Comments**

Landowner was invited but did not attend, requested that the surface vegetation be put back with same species upon reclamation, surface dominated by sagebrush.

Dennis Ingram  
Evaluator

10/2/2012  
Date / Time

**Application for Permit to Drill**  
**Statement of Basis**  
**Utah Division of Oil, Gas and Mining**

APD No	API WellNo	Status	Well Type	Surf Owner	CBM
6866	43013517250000	LOCKED	OW	P	No
<b>Operator</b>	EP ENERGY E&P COMPANY, L.P.		<b>Surface Owner-APD</b>	Ronald J. Kushmaul	
<b>Well Name</b>	Kushmaul 1-16C4		<b>Unit</b>		
<b>Field</b>	ALTAMONT		<b>Type of Work</b>	DRILL	
<b>Location</b>	NENE 16 3S 4W U 915 FNL (UTM) 556626E 4452984N		701 FEL	GPS Coord	

**Geologic Statement of Basis**

El Paso proposes to set 800 feet of conductor and 3,300 feet of surface casing both of which will be cemented to surface. The surface and intermediate holes will be drilled utilizing fresh water mud. The estimated depth to the base of moderately saline ground water is 1,800 feet. A search of Division of Water Rights records indicates that there are 4 water wells within a 10,000 foot radius of the center of Section 16. These wells probably produce water from the Duchesne River Formation. Depths of the wells fall in the range of 285-300 feet. The wells are listed as being used for irrigation, stock watering and domestic. The proposed drilling, casing and cement program should adequately protect the highly used Duchesne River aquifer.

Brad Hill  
**APD Evaluator**

10/22/2012  
**Date / Time**

**Surface Statement of Basis**

A presite visit was scheduled for May 2, 2012 with the operator and landowner to take input and address issues concerning the construction and drilling of this well. Ron Kushmaul was given as the surface owner and was therefore invited to the presite meeting but did not attend.

The surface area is nearly flat and void of tree, and does not have any drainages issues. The reserve pit is in cut, and has reddish blow sand at the surface with potential for underlying sandstone. Therefore, the operator needs to install a 20 mil synthetic liner in the reserve to prevent fluids from subbing away. The reserve pit shall be fenced to keep the public or wildlife from entering same. No other issues were noted during the presite visit.

Dennis Ingram  
**Onsite Evaluator**

10/2/2012  
**Date / Time**

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

Category	Condition
Pits	A synthetic liner with a minimum thickness of 16 mils shall be properly installed and maintained in the reserve pit.
Pits	The reserve pit should be located on the north side of the location.
Surface	The well site shall be bermed to prevent fluids from leaving the pad.

## WORKSHEET APPLICATION FOR PERMIT TO DRILL

APD RECEIVED: 9/18/2012

API NO. ASSIGNED: 43013517250000

WELL NAME: Kushmaul 1-16C4

OPERATOR: EP ENERGY E&amp;P COMPANY, L.P. (N3850)

PHONE NUMBER: 713 997-5038

CONTACT: Maria S. Gomez

PROPOSED LOCATION: NENE 16 030S 040W

Permit Tech Review: 

SURFACE: 0915 FNL 0701 FEL

Engineering Review: 

BOTTOM: 0915 FNL 0701 FEL

Geology Review: 

COUNTY: DUCHESNE

LATITUDE: 40.22537

LONGITUDE: -110.33443

UTM SURF EASTINGS: 556626.00

NORTHINGS: 4452984.00

FIELD NAME: ALTAMONT

LEASE TYPE: 4 - Fee

LEASE NUMBER: Fee

PROPOSED PRODUCING FORMATION(S): GREEN RIVER-WASATCH

SURFACE OWNER: 4 - Fee

COALBED METHANE: NO

## RECEIVED AND/OR REVIEWED:

- PLAT
- Bond: STATE/FEE - 400JU0708
- Potash
- Oil Shale 190-5
- Oil Shale 190-3
- Oil Shale 190-13
- Water Permit: Duchesne City/East Duchesne Water District
- RDCC Review:
- Fee Surface Agreement
- Intent to Commingle

Commingling Approved

## LOCATION AND SITING:

- R649-2-3.
- Unit:
- R649-3-2. General
- R649-3-3. Exception
- Drilling Unit
- Board Cause No: Cause 139-90
- Effective Date: 5/9/2012
- Siting: 4 Producing Grrv-Wstc Wells In Sec Drl Unit
- R649-3-11. Directional Drill

Comments: Presite Completed

Stipulations: 5 - Statement of Basis - bhll  
8 - Cement to Surface -- 2 strings - hmacdonald  
12 - Cement Volume (3) - hmacdonald



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

## Permit To Drill

\*\*\*\*\*

**Well Name:** Kushmaul 1-16C4  
**API Well Number:** 43013517250000  
**Lease Number:** Fee  
**Surface Owner:** FEE (PRIVATE)  
**Approval Date:** 11/8/2012

### Issued to:

EP ENERGY E&P COMPANY, L.P., 1001 Louisiana, Houston, TX 77002

### Authority:

Pursuant to Utah Code Ann. 40-6-1 et seq., and Utah Administrative Code R649-3-1 et seq., the Utah Division of Oil, Gas and Mining issues conditions of approval, and permit to drill the listed well. This permit is issued in accordance with the requirements of Cause 139-90. The expected producing formation or pool is the GREEN RIVER-WASATCH Formation(s), completion into any other zones will require filing a Sundry Notice (Form 9). Completion and commingling of more than one pool will require approval in accordance with R649-3-22.

### Duration:

This approval shall expire one year from the above date unless substantial and continuous operation is underway, or a request for extension is made prior to the expiration date

### General:

Compliance with the requirements of Utah Admin. R. 649-1 et seq., the Oil and Gas Conservation General Rules, and the applicable terms and provisions of the approved Application for permit to drill.

### Conditions of Approval:

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

Cement volumes for the 13 3/8" and 9 5/8" casing strings shall be determined from actual hole diameters in order to place cement from the pipe setting depths back to the surface.

Cement volume for the 7" intermediate string shall be determined from actual hole diameter in order to place cement from the pipe setting depth back to 2800' MD as indicated in the submitted drilling plan.

### Additional Approvals:

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

- Any changes to the approved drilling plan - contact Dustin Doucet
- Significant plug back of the well - contact Dustin Doucet
- Plug and abandonment of the well - contact Dustin Doucet

**Notification Requirements:**

The operator is required to notify the Division of Oil, Gas and Mining of the following actions during drilling of this well:

- Within 24 hours following the spudding of the well - contact Carol Daniels  
OR  
submit an electronic sundry notice (pre-registration required) via the Utah Oil & Gas website  
at <http://oilgas.ogm.utah.gov>
- 24 hours prior to testing blowout prevention equipment - contact Dan Jarvis
- 24 hours prior to cementing or testing casing - contact Dan Jarvis
- Within 24 hours of making any emergency changes to the approved drilling program  
- contact Dustin Doucet
- 24 hours prior to commencing operations to plug and abandon the well - contact Dan Jarvis

**Contact Information:**

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

- Carol Daniels 801-538-5284 - office
- Dustin Doucet 801-538-5281 - office  
801-733-0983 - after office hours
- Dan Jarvis 801-538-5338 - office  
801-231-8956 - after office hours

**Reporting Requirements:**

All reports, forms and submittals as required by the Utah Oil and Gas Conservation General Rules will be promptly filed with the Division of Oil, Gas and Mining, including but not limited to:

- Entity Action Form (Form 6) - due within 5 days of spudding the well
- Monthly Status Report (Form 9) - due by 5th day of the following calendar month
- Requests to Change Plans (Form 9) - due prior to implementation
- Written Notice of Emergency Changes (Form 9) - due within 5 days
- Notice of Operations Suspension or Resumption (Form 9) - due prior to implementation
- Report of Water Encountered (Form 7) - due within 30 days after completion
- Well Completion Report (Form 8) - due within 30 days after completion or plugging

Approved By:

**Approved by:**

A handwritten signature in black ink, appearing to read "J. Rogers", written in a cursive style.

For John Rogers  
Associate Director, Oil & Gas

<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	<b>FORM 9</b>
<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>  Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.	5. LEASE DESIGNATION AND SERIAL NUMBER: Fee
	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
	7. UNIT or CA AGREEMENT NAME:
1. TYPE OF WELL Oil Well	8. WELL NAME and NUMBER: Kushmaul 1-16C4
2. NAME OF OPERATOR: EP ENERGY E&P COMPANY, L.P.	9. API NUMBER: 43013517250000
3. ADDRESS OF OPERATOR: 1001 Louisiana , Houston, TX, 77002	PHONE NUMBER: 713 997-5038 Ext
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0915 FNL 0701 FEL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NENE Section: 16 Township: 03.0S Range: 04.0W Meridian: U	9. FIELD and POOL or WILDCAT: ALTAMONT
	COUNTY: DUCHESNE
	STATE: UTAH

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

TYPE OF SUBMISSION	TYPE OF ACTION		
<input checked="" type="checkbox"/> <b>NOTICE OF INTENT</b> Approximate date work will start: 1/17/2013	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> CASING REPAIR
<input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion:	<input checked="" type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> CHANGE WELL NAME
<input type="checkbox"/> SPUD REPORT Date of Spud:	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> CONVERT WELL TYPE
<input type="checkbox"/> DRILLING REPORT Report Date:	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> NEW CONSTRUCTION
	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> PLUG BACK
	<input type="checkbox"/> PRODUCTION START OR RESUME	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION
	<input type="checkbox"/> REPERFORATE CURRENT FORMATION	<input type="checkbox"/> SIDETRACK TO REPAIR WELL	<input type="checkbox"/> TEMPORARY ABANDON
	<input type="checkbox"/> TUBING REPAIR	<input type="checkbox"/> VENT OR FLARE	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> WATER SHUTOFF	<input type="checkbox"/> SI TA STATUS EXTENSION	<input type="checkbox"/> APD EXTENSION
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> OTHER	OTHER: <input style="width: 100px;" type="text"/>

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

EP eliminated the conductor and is driving structure pipe instead. The casing string is not needed since we will not be penetrating any hydrocarbon bearing zones while drilling our surface hole. Changes are: from conductor @ 800' to structural @ 80', surface from 3300' to 4210', intermediate from 9170' to 9270' with TOC @ 3710' instead of 2800', TOL/TOC from 8970' to 9070', and TD at the same at 11900'.

**REQUEST DENIED**  
Utah Division of Oil, Gas and Mining

Date: December 20, 2012  
By: *Derek Duff*

NAME (PLEASE PRINT) Maria S. Gomez	PHONE NUMBER 713 997-5038	TITLE Principal Regulatory Analyst
SIGNATURE N/A	DATE 12/13/2012	



**The Utah Division of Oil, Gas, and Mining**

- State of Utah
- Department of Natural Resources

**Electronic Permitting System - Sundry Notices**

**Sundry Conditions of Approval Well Number 43013517250000**

**800' conductor casing is necessary to isolate the BMSGW at approximately 1800' (R649-3-8-3), the highly used Duchesne River aquifer and the water wells to depths of 300' in that aquifer in the immediate area.**



**DRILLING PROGRAM**

CASING PROGRAM	SIZE	INTERVAL		WT.	GR.	CPLG.	BURST	COLLAPSE	TENSION
SURFACE	9-5/8"	0	4210	40.00	N-80	LTC	3,090	5,750	820
INTERMEDIATE	7"	0	9270	29.00	P-110	LTC	11,220	8,530	797
PRODUCTION LINER	4 1/2"	9070	11900	13.50	P-110	LTC	12,410	10,680	338

CEMENT PROGRAM		FT. OF FILL	DESCRIPTION	SACKS	EXCESS	WEIGHT	YIELD
SURFACE	Lead	3,710	Boral Craig POZ 35%, Mountain G 65%, Bentonite Wyoming 8%, Silicate 5 lbm/sk, Pol-E Flake 0.125 lbm/sk, Kwik Seal 0.25 lb/sk	640	75%	11.0 ppg	3.16
	Tail	500	Halco-light premium+3 lb/sk Silicate+0.3% Econolite+1% Salt+0.25 lbm/sk Kol-Seal+0.24 lb/sk Kwik Seal+ HR-5	191	50%	14.2 ppg	1.33
INTERMEDIATE	Lead	4,560	Halco-Light-Premium+4% Bentonite+0.4% Econolite+0.2% Halad322+3 lb/sk Silicalite Compacted+0.8% HR-5+ 0.125 lb/sk Poly-E-Flake	325	10%	12.0 ppg	2.31
	Tail	1,000	Halco-Light-Premium+0.2% Econolite+0.3% Versaset+0.2% Halad322+0.8% HR-5+ 0.3% SuperCBL+ 0.125 lb/sk Poly-E-Flake	91	10%	12.5 ppg	1.91
PRODUCTION LINER		2,830	Halco- 50/50 Poz Premium Cement+20% SSA-1+0.3% Super CBL+ 0.3% Halad-344+0.3% Halad-413+ 0.2% SCR-100+ 0.125 lb/sk Poly-E-Flake + 3 lb/sk Silicat	209	25%	12.30	1.61

FLOAT EQUIPMENT & CENTRALIZERS	
SURFACE	PDC drillable guide shoe, 1 joint casing, PDC drillable float collar & Stage collar. Thread lock all float equipment. Install bow spring centralizers on the bottom 3 joints of casing & every 3rd joint thereafter.
INTERMEDIATE	PDC drillable 10M,P-110 float shoe, 1 joint, PDC drillable 10M, P-110 float collar. Thread lock all float equipment. Maker joint at 8,000'.
LINER	Float shoe, 1 joint, float collar. Thread lock all FE. Maker joints every 1000'.

PROJECT ENGINEER(S): Joe Cawthorn 713-997-5929MANAGER: Tommy Gaydos

<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	<b>FORM 9</b>
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	7. UNIT or CA AGREEMENT NAME:
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2. NAME OF OPERATOR: EP ENERGY E&P COMPANY, L.P.	9. API NUMBER: 43013517250000
3. ADDRESS OF OPERATOR: 1001 Louisiana , Houston, TX, 77002	PHONE NUMBER: 713 997-5038 Ext
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0915 FNL 0701 FEL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NENE Section: 16 Township: 03.0S Range: 04.0W Meridian: U	9. FIELD and POOL or WILDCAT: ALTAMONT
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	STATE: UTAH

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

TYPE OF SUBMISSION	TYPE OF ACTION		
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	<input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> OTHER	OTHER: <input style="width: 100px;" type="text"/>

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

EP will be setting conductor casing at 600' instead of 800' as per our conversation on January 2, 2013.

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

Date: January 08, 2013

By: 

<b>NAME (PLEASE PRINT)</b> Maria S. Gomez	<b>PHONE NUMBER</b> 713 997-5038	<b>TITLE</b> Principal Regulatory Analyst
<b>SIGNATURE</b> N/A	<b>DATE</b> 1/8/2013	

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**DIVISION OF OIL, GAS AND MINING**

**SPUDDING INFORMATION**

Name of Company; EP ENERGY E&P COMPANY, L.P.

Well Name: KUSHMAUL 1-16C4

Api No: 43-013-51725 Lease Type FEE

Section 16 Township 03S Range 04W County UINTAH

Drilling Contractor PETE MARTIN DRLG RIG # BUCKET

**SPUDDED:**

Date 01/02/2013

Time \_\_\_\_\_

How DRY

**Drilling will Commence:** \_\_\_\_\_

Reported by STEVEN MURPHY

Telephone # \_\_\_\_\_

Date 01/02/2013 Signed CHD

CONFIDENTIAL

**DIVISION OF OIL, GAS AND MINING**

***SPUDDING INFORMATION***

Name of Company; EP ENERGY E&P COMPANY, L.P.

Well Name: KUSHMAUL 1-16C-4

Api No: 43-013-51725 Lease Type FEE

Section 16 Township 03S Range 04W County DUCHESNE

Drilling Contractor PROPETRO DRLG RIG # RATHOLE

**SPUDDED:**

Date 01/10/2013

Time \_\_\_\_\_

How ROTARY

***Drilling will Commence: SET & CMT SURF CSG 1/11/2013***

Reported by TONY WILKERSON

Telephone # (435) 823-1725

Date 01/10/2013 Signed CHD

CONFIDENTIAL

T03S R04W S-16 4301351725

24 Hr Notification for Kus x STATE NOTICE.doc x

https://mail.google.com/mail/u/0/?shva=1#inbox/13c590cafd019221

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caroldaniels@utah.gov

Mail 19 of 93

COMPOSE

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Inbox (28)  
Starred  
Important  
Sent Mail  
Drafts  
Cabinet  
Follow up  
Misc  
Notes  
Priority  
More

24 Hr Notification for Kushmaul 1-16C4 Inbox x People (7)

**RLANDRIG008** <RLANDRIG008@epenergy.com> Jan 20 (3 days ago) RLANDRIG008  
 to me, dennisingram, Perry, Chapman, Wayne, Tommy, Joseph rlandrig008@epenergy.com

Jan 20, 2013  
 Ms. Daniels. Show details

We are planning on testing the BOPE and Spudding the 12 1/4" section on the Kushmaul 1-16C4 API# 43013517250000 well. The Drilling Contractor will be Precision Drilling Rig #404. We're scheduled to start on Jan 21, 2013.

Best Regards

Steven Murphy  
 EP Energy  
 Rig Site Supervisor  
 Altamont, Utah  
 C: 435-828-1725

\*\*\*\*\*  
 THIS E-MAIL AND ANY MATERIALS TRANSMITTED WITH IT MAY CONTAIN CONFIDENTIAL OR PROPRIETARY MATERIAL FOR THE SOLE USE OF THE INTENDED RECIPIENT. ANY REVIEW, USE, DISTRIBUTION OR DISCLOSURE BY OTHERS IS STRICTLY PROHIBITED. IF YOU ARE NOT THE INTENDED RECIPIENT, OR AUTHORIZED TO RECEIVE THE INFORMATION FROM THE RECIPIENT, PLEASE NOTIFY THE SENDER BY REPLY E-MAIL AND DELETE ALL COPIES OF THIS MESSAGE.  
 \*\*\*\*\*

RECEIVED

JAN 23 2013

DIV. OF OIL, GAS & MINING

<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	<b>FORM 9</b>
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3. ADDRESS OF OPERATOR: 1001 Louisiana , Houston, TX, 77002	8. WELL NAME and NUMBER: Kushmaul 1-16C4
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0915 FNL 0701 FEL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NENE Section: 16 Township: 03.0S Range: 04.0W Meridian: U	9. API NUMBER: 43013517250000
5. PHONE NUMBER: 713 997-5038 Ext	9. FIELD and POOL or WILDCAT: ALTAMONT
	COUNTY: DUCHESNE
	STATE: UTAH

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

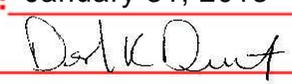
TYPE OF SUBMISSION	TYPE OF ACTION		
<input checked="" type="checkbox"/> NOTICE OF INTENT Approximate date work will start: 1/31/2013	<input type="checkbox"/> ACIDIZE  <input type="checkbox"/> CHANGE TO PREVIOUS PLANS  <input type="checkbox"/> CHANGE WELL STATUS  <input type="checkbox"/> DEEPEN  <input type="checkbox"/> OPERATOR CHANGE  <input type="checkbox"/> PRODUCTION START OR RESUME  <input type="checkbox"/> REPERFORATE CURRENT FORMATION  <input type="checkbox"/> TUBING REPAIR  <input type="checkbox"/> WATER SHUTOFF  <input type="checkbox"/> WILDCAT WELL DETERMINATION	<input checked="" type="checkbox"/> ALTER CASING  <input type="checkbox"/> CHANGE TUBING  <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS  <input type="checkbox"/> FRACTURE TREAT  <input type="checkbox"/> PLUG AND ABANDON  <input type="checkbox"/> RECLAMATION OF WELL SITE  <input type="checkbox"/> SIDETRACK TO REPAIR WELL  <input type="checkbox"/> VENT OR FLARE  <input type="checkbox"/> SI TA STATUS EXTENSION  <input type="checkbox"/> OTHER	<input type="checkbox"/> CASING REPAIR  <input type="checkbox"/> CHANGE WELL NAME  <input type="checkbox"/> CONVERT WELL TYPE  <input type="checkbox"/> NEW CONSTRUCTION  <input type="checkbox"/> PLUG BACK  <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION  <input type="checkbox"/> TEMPORARY ABANDON  <input type="checkbox"/> WATER DISPOSAL  <input type="checkbox"/> APD EXTENSION  OTHER: <input style="width: 100px;" type="text"/>
<input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion:			
<input type="checkbox"/> SPUD REPORT Date of Spud:			
<input type="checkbox"/> DRILLING REPORT Report Date:			

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

EP is currently drilling this well and needs to the setting of 4 1/2" casing to 5" casing. The 9 5/8" was set to 3775' instead of 4200'. Please see attached WBS for details.

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

**Date:** January 31, 2013

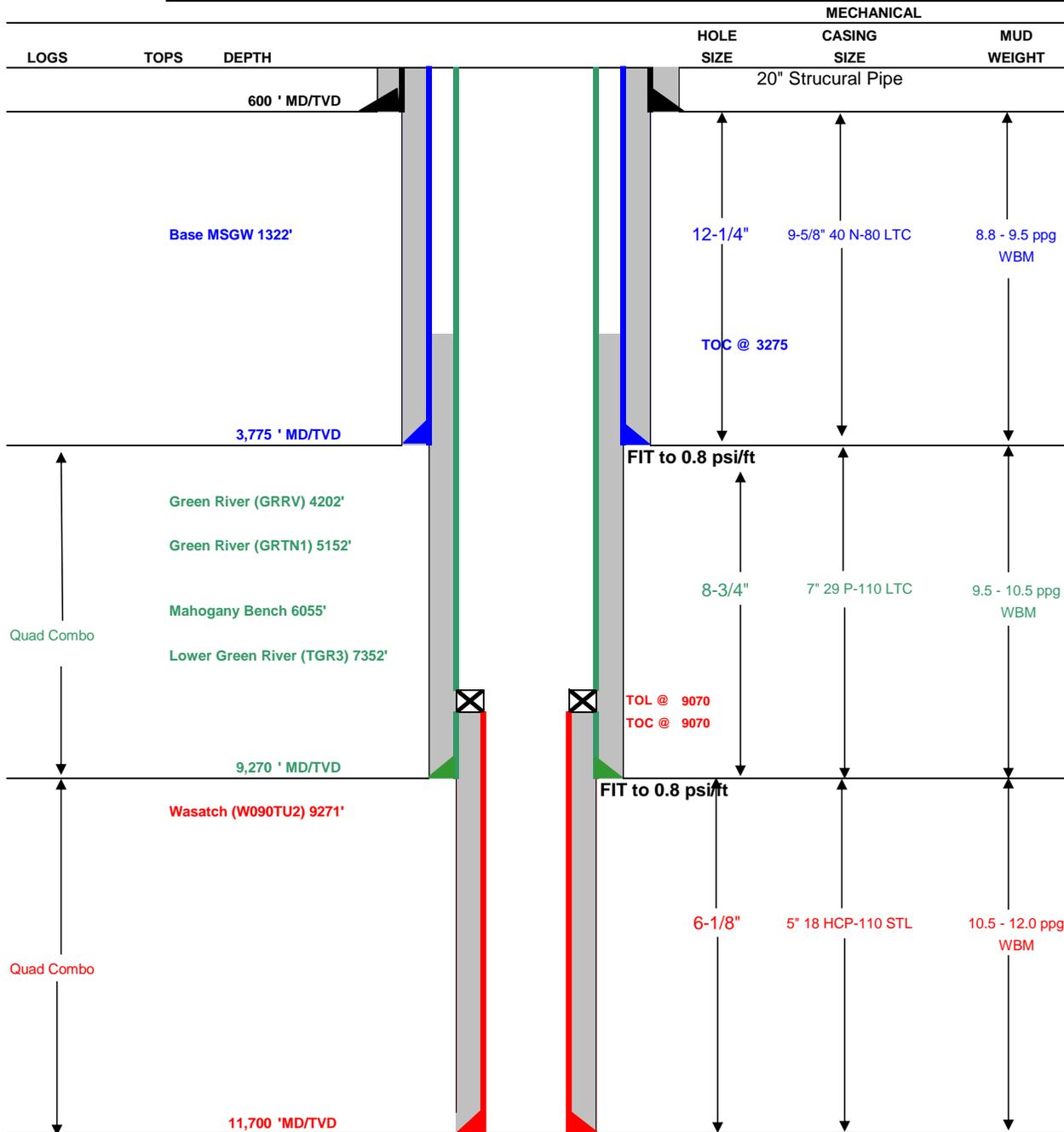
**By:** 

<b>NAME (PLEASE PRINT)</b> Maria S. Gomez	<b>PHONE NUMBER</b> 713 997-5038	<b>TITLE</b> Principal Regulatory Analyst
<b>SIGNATURE</b> N/A	<b>DATE</b> 1/31/2013	



Drilling Schematic

<b>Company Name:</b> EP ENERGY	<b>Date:</b> January 30, 2013
<b>Well Name:</b> Kushmaul 1-16C4	<b>TD:</b> 11,700
<b>Field, County, State:</b> Altamont - Bluebell, Duchesne, Utah	<b>AFE #:</b> 158693
<b>Surface Location:</b> Sec 16 T3S R4W 915' FNL 701' FEL	<b>BHL:</b> Straight Hole
<b>Objective Zone(s):</b> Green River, Wasatch	<b>Elevation:</b> 5983
<b>Rig:</b> Precision 404	<b>Spud (est.):</b>
<b>BOPE Info:</b> rotating head from 600' to 3,775' 11 5M BOP stack and 5M kill lines and choke manifold used from 3,775' to 9,270' 11 10M BOE w/rotating head, 5M annular, 3.5 rams, blind rams & mud cross from 9,270' to TD	



**DRILLING PROGRAM**

CASING PROGRAM	SIZE	INTERVAL		WT.	GR.	CPLG.	BURST	COLLAPSE	TENSION
SURFACE	9-5/8"	0	3775	40.00	N-80	LTC	5,750	3,090	737
INTERMEDIATE	7"	0	9270	29.00	P-110	LTC	11,220	8,510	797
PRODUCTION LINER	5"	9070	11700	18.00	HCP-110	STL	13,940	15,360	341

CEMENT PROGRAM		FT. OF FILL	DESCRIPTION	SACKS	EXCESS	WEIGHT	YIELD
SURFACE	Lead	3,275	Boral Craig POZ 35%, Mountain G 65%, Bentonite Wyoming 8%, Silicate 5 lbm/sk, Pol-E Flake 0.125 lbm/sk, Kwik Seal 0.25 lb/sk	531	75%	11.0 ppg	3.17
	Tail	500	Halco-light premium+3 lb/sk Silicate+0.3% Econolite+1% Salt+0.25 lbm/sk Kol-Seal+0.24 lb/sk Kwik Seal+ HR-5	195	50%	14.3 ppg	1.30
INTERMEDIATE	Lead	4,995	Halco-Light-Premium+4% Bentonite+0.4% Econolite+0.2% Halad322+3 lb/sk Silicalite Compacted+0.8% HR-5+ 0.125 lb/sk Poly-E-Flake	356	10%	12.0 ppg	2.31
	Tail	1,000	Halco-Light-Premium+0.2% Econolite+0.3% Versaset+0.2% Halad322+0.8% HR-5+ 0.3% SuperCBL+ 0.125 lb/sk Poly-E-Flake	91	10%	12.5 ppg	1.91
PRODUCTION LINER		2,630	Halco- 50/50 Poz Premium Cement+20% SSA-1+0.3% Super CBL+ 0.3% Halad-344+0.3% Halad-413+ 0.2% SCR-100+ 0.125 lb/sk Poly-E-Flake + 3 lb/sk Silicat	143	25%	12.30	1.61

FLOAT EQUIPMENT & CENTRALIZERS	
SURFACE	PDC drillable guide shoe, 1 joint casing, PDC drillable float collar & Stage collar. Thread lock all float equipment. Install bow spring centralizers on the bottom 3 joints of casing & every 3rd joint thereafter.
INTERMEDIATE	PDC drillable 10M,P-110 float shoe, 1 joint, PDC drillable 10M, P-110 float collar. Thread lock all float equipment. Maker joint at 8,000'.
LINER	Float shoe, 1 joint, float collar. Thread lock all FE. Maker joints every 1000'.

PROJECT ENGINEER(S): Chapman Amend 713-997-3944MANAGER: Tommy Gaydos

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caroldaniels@utah.gov

Mail

Navigation bar with several empty rectangular boxes and a 'More' button.

22 of 102

COMPOSE

ESPN.com - Player poll: 61 percent disapprove of Goodell - 2 hours ago

Web Clip

Inbox (32)

- Starred
- Important
- Sent Mail
- Drafts (1)
- Cabinet
- Follow up
- Misc
- Notes
- Priority
- More

24 Hr Notification of running and cementing of 9 5/8" Surface Casing on the Kushmaul 1-16C4

Inbox x

People (6)

RLANDRIG008

RLANDRIG008 <RLANDRIG008@epenergy.com>

Jan 25 (3 days ago)

rlandrig008@epenergy.com

Jan. 25<sup>th</sup> 2013

Show details

Ms. Daniels.

We are planning on running and cementing our 9 5/8" 40# N-80 LTC Surface Casing to a depth of 3,775' on the Well: Kushmaul #1-16C4 API # 4301351725000. In Duchesne County, Utah.

Rig is Precision Drilling # 404.

Best Regards

Steven Murphy  
EP Energy  
Rig Site Supervisor  
C: 435-823-1725

APZ # 4301351725  
S-16 T03S R04W

\*\*\*\*\*  
THIS E-MAIL AND ANY MATERIALS TRANSMITTED WITH IT MAY CONTAIN CONFIDENTIAL OR PROPRIETARY MATERIAL FOR THE SOLE USE OF THE INTENDED RECIPIENT. ANY REVIEW, USE, DISTRIBUTION OR DISCLOSURE BY OTHERS IS STRICTLY PROHIBITED. IF YOU ARE NOT THE INTENDED RECIPIENT, OR AUTHORIZED TO RECEIVE THE INFORMATION FROM THE RECIPIENT, PLEASE NOTIFY THE SENDER BY REPLY E-MAIL

RECEIVED

JAN 28 2013

DIV. OF OIL, GAS & MINING

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caroldaniels@utah.gov

Mail

						More	18 of 100		
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COMPOSE

ESPN.com - White completes the SuperPipe six-peat in style - 12 hours ago

Web Clip

Inbox (28)

- Starred
- Important
- Sent Mail
- Drafts (1)
- Cabinet
- Follow up
- Misc
- Notes
- Priority
- More

24 Hrs Notice of testing of 11" 10 K BOPE, 9 5/8" Casing Test.

People (6)

Inbox x

RLANDRIG008 <RLANDRIG008@epenergy.com>

Jan 26 (2 days ago)

RLANDRIG008

rlandrig008@epenergy.com

Jan. 26, 2013

Show details

Ms. Daniels.

Please accept this 24 Hrs notification on testing of our 11" 10 K BOPE and Casing test on our 9 5/8" 40# N-80 LTC set at 3,775' MD on Jan. 27<sup>th</sup> 2013 on the Well: Kushmaul #1-16C4 API # 4300113517250000. In Duchesne County, Utah.

Rig is Precision Drilling # 404.

Best Regards

Steven Murphy  
EP Energy  
Rig Site Supervisor  
C: 435-823-1725

API # 4301351725  
S-16 TO3SR04W

\*\*\*\*\*  
THIS E-MAIL AND ANY MATERIALS TRANSMITTED WITH IT MAY CONTAIN CONFIDENTIAL OR PROPRIETARY MATERIAL FOR THE SOLE USE OF THE INTENDED RECIPIENT. ANY REVIEW, USE, DISTRIBUTION OR DISCLOSURE BY OTHERS IS STRICTLY PROHIBITED. IF

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JAN 28 2013

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S-16 T03S R04W

**24 Hr Notification of running and cementing of 5" Liner on the Kushmaul 1-16C4 API # 4300113517250000**

4301351725

RLANDRIG008 <RLANDRIG008@epenergy.com>

Fri, Feb 8, 2013 at 10:07 AM

To: Alexis Huefner <alexishuefner@utah.gov>, "Amend, Chapman L" <Chapman.Amend@epenergy.com>, Carol Daniels <caroldaniels@utah.gov>, "Cawthorn, Joseph W" <Joseph.Cawthorn@epenergy.com>, Dennis Ingram <dennisingram@utah.gov>, "Evans, Perry (Contractor)" <Perry.Evans@epenergy.com>, "Gaydos, Tommy L" <Tommy.Gaydos@epenergy.com>, "Gomez, Maria S" <Maria.Gomez@epenergy.com>

Feb. 8<sup>th</sup> 2013

We have reached TD of well @ 11,740' and are planning on running and cementing our 5" 18ppf HCP-110 Liner to a depth of 9,068' to 11,740' on the Well: Kushmaul #1-16C4 API # ~~4300113517250000~~ 4301351725. In Duchesne County, Utah within 24hrs.

Rig is Precision Drilling # 404.

Best Regards

RECEIVED

FEB 08 2013

Tony Wilkerson

DIV. OF OIL, GAS & MINING

EP Energy

Rig Site Supervisor

C: 435-823-1725

\*\*\*\*\*

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\*\*\*\*\*

<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	<b>FORM 9</b>
<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>  Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.	5. LEASE DESIGNATION AND SERIAL NUMBER: Fee
	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
	7. UNIT or CA AGREEMENT NAME:
1. TYPE OF WELL Oil Well	8. WELL NAME and NUMBER: Kushmaul 1-16C4
2. NAME OF OPERATOR: EP ENERGY E&P COMPANY, L.P.	9. API NUMBER: 43013517250000
3. ADDRESS OF OPERATOR: 1001 Louisiana , Houston, TX, 77002	PHONE NUMBER: 713 997-5038 Ext
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0915 FNL 0701 FEL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NENE Section: 16 Township: 03.0S Range: 04.0W Meridian: U	9. FIELD and POOL or WILDCAT: ALTAMONT
	COUNTY: DUCHESNE
	STATE: UTAH

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

TYPE OF SUBMISSION	TYPE OF ACTION		
<input checked="" type="checkbox"/> NOTICE OF INTENT Approximate date work will start: <b>2/27/2013</b>	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> CASING REPAIR
<input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion:	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> CHANGE WELL NAME
<input type="checkbox"/> SPUD REPORT Date of Spud:	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> CONVERT WELL TYPE
<input type="checkbox"/> DRILLING REPORT Report Date:	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> NEW CONSTRUCTION
	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> PLUG BACK
	<input type="checkbox"/> PRODUCTION START OR RESUME	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION
	<input type="checkbox"/> REPERFORATE CURRENT FORMATION	<input type="checkbox"/> SIDETRACK TO REPAIR WELL	<input type="checkbox"/> TEMPORARY ABANDON
	<input type="checkbox"/> TUBING REPAIR	<input type="checkbox"/> VENT OR FLARE	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> WATER SHUTOFF	<input type="checkbox"/> SI TA STATUS EXTENSION	<input type="checkbox"/> APD EXTENSION
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	<input checked="" type="checkbox"/> OTHER	OTHER: <input type="text" value="Initial Completion"/>

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.  
 Please see attached for detailed procedure.

**Approved by the Utah Division of Oil, Gas and Mining**  
**Date:** February 26, 2013  
**By:** *Derek Duff*

NAME (PLEASE PRINT) Maria S. Gomez	PHONE NUMBER 713 997-5038	TITLE Principal Regulatory Analyst
SIGNATURE N/A	DATE 2/26/2013	

**Kushmaul 1-16 C4  
Initial Completion  
43013517250000**

**The following precautions will be taken until the RCA for the Conover is completed:**

1. Review torque turning and running of the 7" and 5" liner of anomalies.
2. Test and chart casing for 30 minutes, noting pressure if any on surface casing.
3. Test all lubricators, valves and BOP's to working pressure.
4. Wellhead isolation tools will continue to be used to isolate the wellhead during the frac.
5. Monitor the surface casing during frac:
  - a. Lay a flowline to the flow back tank and keep the valve open.
  - b. This line will remain in place until a wire line set retrievable packer is in place isolating the 5" casing from the 7" after the frac.
6. 2 7/8" tubing will be run to isolate the 7" casing during the flow back of the well.
7. Well pressure and annulus pressure would be monitored during this time until the well is ready for pump.

**Completion Information (Wasatch Formation)**

- Stage 1: RU WL unit with 10K lubricator and test to 10000 psi with water. Perforations from ~11237' - 11670' with ~5000 gallons of 15% HCL acid, ~3000# of 100 mesh sand and ~140000# PowerProp Precured Resin Coated 20/40 Sand.
- Stage 2: RU 10K lubricator and test to 10000 psi with water. Set 10K CBP @ ~11196'. Test CBP and casing to 8500 psi. Perforations from ~10852' - 11186' with ~5000 gallons of 15% HCL acid, ~3000# of 100 mesh sand and ~140000# PowerProp Precured Resin Coated 20/40 Sand.
- Stage 3: RU WL unit with 10K lubricator and test to 10000 psi with water. Set 10K CBP @ ~10840'. Test CBP and casing to 8500 psi. Perforations from ~10555' - 10830' with ~5000 gallons of 15% HCL acid, ~3000# of 100 mesh sand and ~145000# PowerProp Precured Resin Coated 20/40 Sand.
- Stage 4: RU 10K lubricator and test to 10000 psi with water. Set 10K CBP @ ~10525'. Test CBP and casing to 8500 psi. Perforations from ~10260' - 10515' with ~5000 gallons of 15%

HCL acid, ~3000# of 100 mesh sand and ~135000# PowerProp Precured Resin Coated 20/40 Sand.

Stage 5: RU 10K lubricator and test to 10000 psi with water. Set 10K CBP @ ~10232'. Test CBP and casing to 8500 psi. Perforations from ~9922' - 10222' with ~5000 gallons of 15% HCL acid, ~3000# of 100 mesh sand and ~150000# PowerProp Precured Resin Coated 20/40 Sand.

Stage 6: RU 10K lubricator and test to 10000 psi with water. Set 10K CBP @ ~9901'. Test CBP and casing to 8500 psi. Perforations from ~9572' - 9891' with ~5000 gallons of 15% HCL acid, ~4000# of 100 mesh sand and ~145000# TLC Resin Coated 20/40 Sand.

Stage 7: RU 10K lubricator and test to 10000 psi with water. Set 10K CBP @ ~9546'. Test CBP and casing to 8500 psi. Perforations from ~9356' - 9536' with ~5000 gallons of 15% HCL acid, ~4000# of 100 mesh sand and ~120000# TLC Resin Coated 20/40 Sand.

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

FORM 6

**ENTITY ACTION FORM**

Operator: EP Energy E&P Company, L.P. Operator Account Number: N 3850  
 Address: 1001 Louisiana, Room 2730D  
city Houston  
state TX zip 77002 Phone Number: (713) 997-5038

**Well 1**

API Number	Well Name		QQ	Sec	Twp	Rng	County
4301351725	Kushmaul 1-16C4		NENE	16	3S	4W	Duchesne
Action Code	Current Entity Number	New Entity Number	Spud Date			Entity Assignment Effective Date	
A	<i>new</i>	<i>18920</i>	1/2/2013			2/28/2013	
Comments:							

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**Well 2**

API Number	Well Name		QQ	Sec	Twp	Rng	County
Action Code	Current Entity Number	New Entity Number	Spud Date			Entity Assignment Effective Date	
Comments:							

**Well 3**

API Number	Well Name		QQ	Sec	Twp	Rng	County
Action Code	Current Entity Number	New Entity Number	Spud Date			Entity Assignment Effective Date	
Comments:							

**ACTION CODES:**

- A - Establish new entity for new well (single well only)
- B - Add new well to existing entity (group or unit well)
- C - Re-assign well from one existing entity to another existing entity
- D - Re-assign well from one existing entity to a new entity
- E - Other (Explain in 'comments' section)

Maria S. Gomez

Name (Please Print)

*Maria S Gomez*

Signature

Principle Regulatory Analyst

2/27/2013

Title

Date

RECEIVED

FEB 28 2013

Div. of Oil, Gas & Mining

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		FORM 9
<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>		<b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> Fee
Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b>
		<b>7. UNIT or CA AGREEMENT NAME:</b>
<b>1. TYPE OF WELL</b> Oil Well	<b>8. WELL NAME and NUMBER:</b> Kushmaul 1-16C4	
<b>2. NAME OF OPERATOR:</b> EP ENERGY E&P COMPANY, L.P.	<b>9. API NUMBER:</b> 43013517250000	
<b>3. ADDRESS OF OPERATOR:</b> 1001 Louisiana , Houston, TX, 77002	<b>PHONE NUMBER:</b> 713 997-5038 Ext	<b>9. FIELD and POOL or WILDCAT:</b> ALTAMONT
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 0915 FNL 0701 FEL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: NENE Section: 16 Township: 03.0S Range: 04.0W Meridian: U	<b>COUNTY:</b> DUCHESNE	
	<b>STATE:</b> UTAH	
11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA		
<b>TYPE OF SUBMISSION</b>	<b>TYPE OF ACTION</b>	
<input type="checkbox"/> NOTICE OF INTENT Approximate date work will start:  <input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion:  <input type="checkbox"/> SPUD REPORT Date of Spud:  <input checked="" type="checkbox"/> DRILLING REPORT Report Date: 4/5/2013	<input type="checkbox"/> ACIDIZE  <input type="checkbox"/> CHANGE TO PREVIOUS PLANS  <input type="checkbox"/> CHANGE WELL STATUS  <input type="checkbox"/> DEEPEN  <input type="checkbox"/> OPERATOR CHANGE  <input type="checkbox"/> PRODUCTION START OR RESUME  <input type="checkbox"/> REPERFORATE CURRENT FORMATION  <input type="checkbox"/> TUBING REPAIR  <input type="checkbox"/> WATER SHUTOFF  <input type="checkbox"/> WILDCAT WELL DETERMINATION  <input type="checkbox"/> ALTER CASING  <input type="checkbox"/> CHANGE TUBING  <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS  <input type="checkbox"/> FRACTURE TREAT  <input type="checkbox"/> PLUG AND ABANDON  <input type="checkbox"/> RECLAMATION OF WELL SITE  <input type="checkbox"/> SIDETRACK TO REPAIR WELL  <input type="checkbox"/> VENT OR FLARE  <input type="checkbox"/> SI TA STATUS EXTENSION  <input type="checkbox"/> OTHER	
	<input type="checkbox"/> CASING REPAIR  <input type="checkbox"/> CHANGE WELL NAME  <input type="checkbox"/> CONVERT WELL TYPE  <input type="checkbox"/> NEW CONSTRUCTION  <input type="checkbox"/> PLUG BACK  <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION  <input type="checkbox"/> TEMPORARY ABANDON  <input type="checkbox"/> WATER DISPOSAL  <input type="checkbox"/> APD EXTENSION  OTHER: <input style="width: 100px;" type="text"/>	
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.		
Well has been completed and is on production. FINAL REPORT.		
<b>Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY April 05, 2013</b>		
<b>NAME (PLEASE PRINT)</b> Maria S. Gomez	<b>PHONE NUMBER</b> 713 997-5038	<b>TITLE</b> Principal Regulatory Analyst
<b>SIGNATURE</b> N/A	<b>DATE</b> 4/5/2013	

**1 General****1.1 Customer Information**

Company	CENTRAL DIVISION
Representative	
Address	

**1.2 Well Information**

Well	KUSHMAUL 1-16C4		
Project	ALTAMONT FIELD	Site	KUSHMAUL 1-16C4
Rig Name/No.	PRECISION DRILLING/404	Event	DRILLING LAND
Start Date	1/2/2013	End Date	2/12/2013
Spud Date/Time	1/23/2013	UWI	KUSHMAUL 1-16C4
Active Datum	KB @5,983.5ft (above Mean Sea Level)		
Afe No./Description	158693/47758 / KUSHMAUL. 1-16C4		

**2 Summary****2.1 Operation Summary**

Date	Time Start-End	Duration (hr)	Phase	Activity	Sub	OP Code	MD From (ft)	Operation
12/21/2012	6:00 6:00	24.00	BLDLOC	00		P	0.0	BUILD ROAD ENTRY, LOCATION
1/6/2013	6:00 6:00	24.00	DPDCOND	07		P	0.0	MIRU PETE MARTIN - DRILL, SET, CMT 20" COND AT 40' - DRILL SET CMT 14" MOUSE HOLE AT 85' - RDMO
1/11/2013	6:00 6:00	24.00	DRLSURF	07		P	40.0	MIRU PRO-PETRO - DRILLED 17 1/2 " HOLE FROM 40' / 660' - L/D DRILL STRING - RAN 15 JTS 633' OF 13 3/8" 54.5# J-55 STC, SHOE AT 630' - PSI TEST PUMP AND LINES TO 1,000 PSI, OK - PUMPED 60 BBLS OF FW, 40 BBLS OF GEL WATER AHEAD OF 740 SK'S PREMIUM CEMENT AT 15.8 PPG, 1.15 YIELD, 5.0 GALS / SK M/W, 1/4# / SK OF FLOCELE, 2% CC - DISPALSED TOP PLUG WITH 91 BBLS OF FRESH WATER - BUMPED PLUG WITH 500 PSI - CIP AT 10:55 HRS 01/11/13 - HAD 37 BBLS OF GOOD CEMENT BACK TO SURFACE - CHECK FLOAT, FLOATS DIDN'T HOLD - PUMPED BACK FLOW BACK VOLUME, SHUT IN SAME - RD & RELEASED PRO-PETRO.
1/19/2013	6:00 6:00	24.00	MIRU	01		P	660.0	90% MOVED AND 15% RIGGED UP - MOVED 5.0 MILES TO KUSHMAUL 1-16C4.
1/20/2013	6:00 6:00	24.00	MIRU	01		P	660.0	100% MOVED, 60% RIGGED UP.
1/21/2013	6:00 2:00	20.00	MIRU	01		P	660.0	100% RIGGED UP. RIG ON DAY RATE @ 02:00 HRS. 01/21/2013.
	2:00 6:00	4.00	CASSURF	28		P	660.0	NU CHOKE LINE, DIVERTER RISER & ROT HEAD.
1/22/2013	6:00 11:30	5.50	MIRU	01		P	660.0	FINISH N/U DIVERTER RISER, ROTATING HEAD, FLOW LINE
	11:30 20:00	8.50	CASCOND	30		P	660.0	PJSM - R/U B&C QUICK TEST, SET TEST PLUG, TESTED ANNULAR, HCR VALVE / MANUAL VALVE, KILL LINE VALVES, TIW VALVE, MANUAL & HYD TD VALVES, DART VALVE TO 250 PSI / 2,500 PSI W/ 10 MIN PER TEST. TESTED STAND PIPE & PUMP LINES TO 250 PSI / 4M PSI. INSTALL SHAKER SCREENS. DE-ICE RIG. BUILD SPUD MUD.
	20:00 1:00	5.00	CASCOND	14		P	660.0	M/U BIT #1 - TIH P/U BHA - PRESSURE TESTED CHOKE MANIFOLD VALVES TO 250 LOW, 3,000 PSI HIGH, ALL TEST RAN AT 10 MINUTES EACH, FUNCTION TEST ALL CHOKES! FILLED CHOKE MANIFOLD AND CHOKE LINE BACK TO HCR WITH STRAIGHT MENTHANOL.
	1:00 2:30	1.50	CASCOND	17		P	660.0	SLIP & CUT 9 WRAPS OF DRILL LINE.
	2:30 3:00	0.50	CASCOND	12		P	660.0	SERVICE RIG & TDU.

## 2.1 Operation Summary (Continued)

Date	Time Start-End	Duration (hr)	Phase	Activity	Sub	OP Code	MD From (ft)	Operation
	3:00 4:00	1.00	CASCOND	42		P	660.0	M.U. 3 JT'S HEV WATE DP, BIT SUB & 8 3/4" ROCK BIT. DRL OUT CMT IN MOUSE HOLE.
	4:00 5:00	1.00	CASCOND	15		P	660.0	C & C MUD. BLOW DWN TDU & STAND PIPE W/ AIR.
	5:00 6:00	1.00	CASCOND	31		P	660.0	INSTALL TIW VALVE & TEST 13 3/8" CSG TO 1,000 PSI FOR 30 MINS.
1/23/2013	6:00 7:00	1.00	CASCOND	31		P	660.0	PRESSURE TEST 13 3/8" CSG TO 1,000 FOR 30 MINS. OK!
	7:00 7:30	0.50	CASCOND	41		P	660.0	HELD BOPE DRILL.
	7:30 10:00	2.50	CASCOND	32		P	660.0	TAGGED UPON CMT AT 540' - DRILL OUT CMT, SHOE TRACK TO 660'.
	10:00 11:00	1.00	DRLSURF	07		P	660.0	DRILL F. 660' - 796'.
	11:00 11:30	0.50	DRLSURF	12		P	796.0	SERVICE RIG.
	11:30 13:30	2.00	DRLSURF	07		P	796.0	DRILL F. 796' - 982'.
	13:30 14:00	0.50	DRLSURF	11		P	982.0	SURVEY @ 922' 0.55 INC. 240.43 AZM.
	14:00 20:00	6.00	DRLSURF	07		P	982.0	DRILL F. 982 - 1,713'.
	20:00 20:30	0.50	DRLSURF	12		P	1,713.0	SERVICE RIG & TDU.
	20:30 23:00	2.50	DRLSURF	07		P	1,713.0	DRILL 1,713' - 1,988'.
	23:00 23:30	0.50	DRLSURF	42		P	1,988.0	SURVEY @ 1,915' 0.94 INC. 219.3 AZM.
	23:30 6:00	6.50	DRLSURF	07		P	1,988.0	DRILL 1,988' - 2,693'.
1/24/2013	6:00 13:30	7.50	DRLSURF	07		P	2,693.0	DRILL F. 2,693' - 2,941'.
	13:30 14:00	0.50	DRLSURF	11		P	2,941.0	WIRELINE SURVEY AT 2,872' DEG: 1.48, AZM: 188.68.
	14:00 14:30	0.50	DRLSURF	47		N	2,941.0	REPAIRED POWER CORD TO DOG HOUSE.
	14:30 6:00	15.50	DRLSURF	07		P	2,941.0	DRILL F. 2,941' - 3,290'.
1/25/2013	6:00 7:00	1.00	DRLSURF	15		P	3,290.0	C & C MUD & BUILD SLUG
	7:00 11:30	4.50	DRLSURF	13		P	3,290.0	TOH. CHANGE OUT BIT & MUD MOTOR - HAD INTERMITTEN TIGHT HOLE F. 2,120' - 637'.
	11:30 12:00	0.50	DRLSURF	12		P	3,290.0	SERVICE RIG & TDU.
	12:00 17:00	5.00	DRLSURF	13		P	3,290.0	TIH. SPOT REAM F/ 1,430' - 2,662', FREE F. 2,662' / 3,290'.
	17:00 18:00	1.00	DRLSURF	07		P	3,290.0	DRILL 3,290' - 3,329'.
	18:00 19:00	1.00	DRLSURF	45		P	3,329.0	CHANGE OUT SWAP ON #2 PUMP. REPLACE PACKING ON WATER PUMP FOR LINER WASH.
	19:00 6:00	11.00	DRLSURF	07		P	3,329.0	DRILL 3,329' - 3,751'.
1/26/2013	6:00 8:00	2.00	DRLSURF	07		P	3,751.0	DRILL 3,751' - 3,775'. TD FOR 9 5/8" CSG.
	8:00 8:30	0.50	DRLSURF	15		P	3,775.0	BUILD SLUG.
	8:30 13:00	4.50	DRLSURF	13		P	3,775.0	WIPE HOLE F. 3,775 TO 647' - HOLE PULLED SLICK F. 3,775' TO 2,133' - HAD INTERMITTEN HOLE DRAG OF 15 / 20 K 2,133' TO 787', HAD ONE SPOT THAT PULLED 30 K AT 1,574', WORKED THRU SAME ONCE AND NEVER SAW IT AGAIN - FLOW CHECKED WELL AT : 3,316' 2,195' 612', NO FLOW! - TIH SLICK TO TD 3,775'.
	13:00 14:30	1.50	DRLSURF	15		P	3,775.0	PUMPED HIGH VIS SWEEP, HAD GOOD AMOUNT OF FORMATION BACK TO SURAFCE.
	14:30 15:00	0.50	DRLSURF	12		P	3,775.0	SERVICE RIG & TDU.
	15:00 17:00	2.00	DRLSURF	42		P	3,775.0	PJSA. R/U & GYRO WELL W/ VAUGHN ENERGY SERVICES.
	17:00 17:30	0.50	DRLSURF	15		P	3,775.0	C & C MUD. PUMP SLUG.
	17:30 21:00	3.50	CASSURF	13		P	3,775.0	TOH. L/D DRILL COLLARS.
	21:00 22:00	1.00	CASSURF	42		P	3,775.0	CLEAR RIG FLOOR, L/D SHORT BAILS & INSTALL LONG BAILS & TRIP NIPPLE.
	22:00 23:00	1.00	CASSURF	24		P	3,775.0	PJSA. R/U FRANKS WESTATES CSG EQUIP.
	23:00 5:00	6.00	CASSURF	24		P	3,775.0	M/U 9 5/8" SHOE TRACK. PUMP THRU SAME. RAN A TOTAL OF 85 JTS, 1 PUP (3,786') OF 9 5/8" 40# N-80 LT&C CSG. CBU @ 1,342'. BRK CIRC @ 2,730'.
	5:00 6:00	1.00	CASSURF	15		P	3,775.0	CIRC B/U. R/D FRANKS WESTATES TOOLS.

1/27/2013

## 2.1 Operation Summary (Continued)

Date	Time Start-End	Duration (hr)	Phase	Activity	Sub	OP Code	MD From (ft)	Operation
	6:00 8:30	2.50	CASSURF	15		P	3,775.0	FILL CASING, BREAK CIRCULATION SLOWLY, WASHED DOWN F. 3,769' / 3,774' - NOTE: RAN A TOTAL OF 85 JTS, 1 PUP ( 3,786' ) OF 9 5/8" 40# N-80 LT&C CSG, LANDED FC: 3,725' FS: 3,774'.
	8:30 12:30	4.00	CASSURF	25		P	3,775.0	HPJSM. RU HES CMT LINES. - PSI TESTED LINES TO 3,000 PSI. PUMPED 50 BBLS FW, 530 SK'S ( 299 BBLS ) LEAD CMT: 11.0 PPG, Y: 3.17, M/W: 19.55 GALS / SK - TAIL CMT 200 SX'S ( 47 BBLS ) 14.2 PPG, Y: 1.30, M/W: 5.88 GALS / SK - DISPLACED W/ 281BBLS FRESH WATER. BUMP PLUG W/ 1,330 PSI, CHECK FLOATS, OK, HAD 1.5 BBLS ON FLOW BACK - CIP AT 12:00 HRS 01/26/13, HAD 48 BBLS OF GOOD CEMENT BACK TO SURFACE - CEMENT FALLING BACK SLOWLY - R/D HOWCO CEMENTING HEAD AND LINES.
	12:30 14:00	1.50	CASSURF	25		P	3,775.0	R/U AND RAN 200' OF 1" PIPE - PREFORMED TOP OUT CEMENT JOB WITH 100 SK'S (20 BBLS ) OF PREMIUM CEMENT MIXED AT 15.8 PPG, Y: 1.15, M/W: 5.0 GALS / SK - 3% CACL2. NOTE: AFTER PUMPING 3 BBLS, HAD CEMENT BACK TO SURFACE ( EST. CMT DROP BACK 46' ) - HAD 17 BBLS OF GOOD CEMENT BACK TO SURFACE - CIP AT 13:30 HRS 01/26/13 - MONIOTR CEMENT FALL BACK, FELL 3' AND STABILIZED IN 30 MINUTES.
	14:00 16:00	2.00	CASSURF	29		P	3,775.0	4 BOLT BOPE WHILE WAITING ON CEMENT TO SET UP.
	16:00 21:00	5.00	CASSURF	29		P	3,775.0	LIFT DIVERTER STACK, MAKE ROUGH CUT ON 9 5/8" CSG, L/D SAME - N/D 13 5/8" 5 K DIVERTER STACK, CUT OFF AND REMOVE STARTER HEAD.
	21:00 2:00	5.00	CASSURF	28		P	3,775.0	MAKE FINIAL CUT ON 9 5/8" CSG - INSTALLED 9 5/8" / 11" 5 K SOW MULTI BOWL WELL HEAD - TESTED SAME TO 2K PSI FOR 10 MINUTES, OK.
	2:00 6:00	4.00	CASSURF	28		P	3,775.0	INSTALL 11" 10K BOPE. TORQUE UP ALL BOLTS.
1/28/2013	6:00 10:00	4.00	CASSURF	28		P	3,775.0	N/U ROTATING HEAD AND FLOWLINE, FINISH TORQUING UP FLANGES, C/O TO SHORT ELEVATOR BAILS.
	10:00 15:00	5.00	CASSURF	30		P	3,775.0	PJSM WITH B&C QUICK TEST, INSTALLED TEST PLUG, FILL STACK WITH WATER, TEST UPPER & LOWER DP FLEX RAMS, BLINDS, HCR / KILL LINE / MANUAL VALVES 250 PSI LOW / 5M PSI. TESTED ANNULAR 300 PSI / 2,500 PSI. RAN ALL TEST AT 10 MINS. - TEST IBOP, ANNAULAR 250 PSI LOW, 2,500 PSI HIGH, ALL TESTED GOOD.
	15:00 16:00	1.00	CASSURF	31		P	3,775.0	TEST 9 5/8" CASING TO 2,500 PSI FOR 30 MINUTES, OK!.
	16:00 17:00	1.00	CASSURF	42		P	3,775.0	INSTALL WEAR BUSHING, LOCK DOWN SAME.
	17:00 19:30	2.50	CASSURF	14		P	3,775.0	P/U 6 1/2" DC'S - WHILE MEASURING DIRECTIONAL TOOLS. TEST CHOKE MANIFOLD VALVES WITH 250 PSI LOW, 5,000 PSI HIGH, ALL TEST RAN AT 10 MINUTES EACH, OK!. FUNCTION TESTED ALL CHOKES, OK! - FILL CHOKE LINE FROM HCR TO CHOKE MANIFOLD WITH METHANOL.
	19:30 22:00	2.50	CASSURF	14		P	3,775.0	P/U DIRECT TOOLS. M/U BIT #3. TROUBLE SHOOT MWD. TEST SAME.
	22:00 23:30	1.50	CASSURF	13		P	3,775.0	TIH TO 3,569'.
	23:30 1:30	2.00	CASSURF	17		P	3,775.0	SLIP & CUT DRL LINE.
	1:30 2:30	1.00	CASSURF	16		P	3,775.0	TIH & TAGGED CEMENT @ 3,718'. DRILL CEMENT & FLOAT EQUIP.
	2:30 3:00	0.50	DRLINT1	07		P	3,775.0	DRILL 3,775' - 3,785'.
	3:00 3:30	0.50	DRLINT1	15		P	3,785.0	CIRC B/U. PERFORM F.I.T. 12.5 PPG EMW @ 3,785'.
	3:30 6:00	2.50	DRLINT1	07		P	3,785.0	DRILL 3,785' - 3,934'.
1/29/2013	6:00 13:00	7.00	DRLINT1	07		P	3,934.0	DRILL 3,934' - 4,501'.
	13:00 13:30	0.50	DRLINT1	41		P	4,501.0	BOPE DRILL
	13:30 15:30	2.00	DRLINT1	07		P	4,501.0	DRILL 4,501' - 4,594'.
	15:30 16:00	0.50	DRLINT1	51		N	4,594.0	HOLE TRYING TO PACK - OFF, BACK REAM 4,591' - 4,521'.

## 2.1 Operation Summary (Continued)

Date	Time Start-End	Duration (hr)	Phase	Activity	Sub	OP Code	MD From (ft)	Operation
1/30/2013	16:00 16:30	0.50	DRLINT1	12		P	4,594.0	RIG SERVICE.
	16:30 6:00	13.50	DRLINT1	07		P	4,594.0	DRILL 4,594' - 5,619'.
	6:00 12:30	6.50	DRLINT1	07		P	5,619.0	DRILLED 5,619' - 5,806'.
	12:30 13:00	0.50	DRLINT1	12		P	5,806.0	SERVICE RIG & TDU.
	13:00 6:00	17.00	DRLINT1	07		P	5,806.0	DRILLED 5,806' - 6,410' WITH 1 MUD PUMP F/ 12:00 - 24:00HRS
1/31/2013	6:00 14:00	8.00	DRLINT1	07		P	6,410.0	DRILLED 6,410' - 7,108'.
	14:00 14:30	0.50	DRLINT1	12		P	7,108.0	SERVICE RIG & TDU.
	14:30 6:00	15.50	DRLINT1	07		P	7,108.0	DRILLED 7,108' - 8,022'.
2/1/2013	6:00 14:30	8.50	DRLINT1	07		P	8,022.0	DRILLED 8,022' - 8,481'.
	14:30 15:00	0.50	DRLINT1	15		P	8,481.0	CBU. FLOW CHECK, WELL STATIC.
	15:00 21:30	6.50	DRLINT1	57		N	8,481.0	POOH FOR NEW MOTOR.
	21:30 3:00	5.50	DRLINT1	57		N	8,481.0	TIH WITH NEW BIT & MOTOR.
	3:00 6:00	3.00	DRLINT1	07		P	8,481.0	DRILLED 8,481' - 8,610'.
2/2/2013	6:00 16:00	10.00	DRLINT1	07		P	8,610.0	DRILLED 8,610' - 8,879'.
	16:00 16:30	0.50	DRLINT1	12		P	8,879.0	SERVICE RIG & TDU.
	16:30 4:30	12.00	DRLINT1	07		P	8,879.0	DRILLED 8,879' - 9,270'.
	4:30 5:30	1.00	DRLINT1	15		P	9,270.0	CBU.
	5:30 6:00	0.50	DRLINT1	13		P	9,270.0	WIPER TRIP.
2/3/2013	6:00 8:00	2.00	EVLINT1	16		P	9,270.0	PUMP OUT OF HOLE TO 7,961' DUE TO SWABBING. REAM TIGHT HOLE F/ 8,611' T/ 8,560'.
	8:00 11:00	3.00	EVLINT1	13		P	9,270.0	PULL TO SHOE @ 3,775'. PULLED 40 FPM F/ 7,961' T/ 6,045' DUE TO SWABING. FC @ 7,040', WELL STATIC.
	11:00 14:00	3.00	EVLINT1	13		P	9,270.0	TIH. WASH DOWN LAST STD.
	14:00 18:00	4.00	EVLINT1	15		P	9,270.0	C & C MUD FOR LOGS. LOST 232 BBLS.
	18:00 0:00	6.00	EVLINT1	13		P	9,270.0	POOH. PULLED 35 FPM F/ 9,270' T/ 5,899' DUE TO SWABING. FC @ 6,500', 3,775' & BHA. WELL STATIC.
	0:00 1:30	1.50	EVLINT1	14		P	9,270.0	LD DIRECTIONAL BHA.
	1:30 6:00	4.50	EVLINT1	22		P	9,270.0	PJSM. RU HES WL & RUN QUAD COMBO TO 9,270' & LOG UP.
2/4/2013	6:00 7:00	1.00	EVLINT1	22		P	9,270.0	RD HALLIBURTON WIRELINE.
	7:00 13:00	6.00	CASINT1	13		P	9,270.0	TIH. WASH DOWN LAST STD.
	13:00 15:30	2.50	CASINT1	15		P	9,270.0	C & C MUD.
	15:30 0:30	9.00	CASINT1	14		P	9,270.0	LD 4 1/2" DP.
	0:30 2:30	2.00	CASINT1	14		P	9,270.0	LD 4-1/2' HWDP & COLLARS. PULL WEAR BUSHING.
	2:30 6:00	3.50	CASINT1	24		P	9,270.0	PJSM. RU CASING TOOLS. RUNNING 7" CASING.
2/5/2013	6:00 21:00	15.00	CASINT1	24		P	9,270.0	RAN 211 JTS OF 7" 29# HCP-110 LTC CSG TO 9,270'. BREAK CIRC EVERY 1,000'. TOTAL OF 76 BBLS MUD LOST RUNNING CSG. MU LANDING HANGER & RD FRANKS CSG EQUIP. MARKER JT @ 6,996'.
	21:00 22:00	1.00	CASINT1	15		P	9,270.0	C&C MUD. MAX GAS 1,400 UNITS. LOST 82 BBLS MUD.
	22:00 1:30	3.50	CASINT1	25		P	9,270.0	PJSM. RU HES CMT HEAD. TESTED LINES TO 5M PSI. PUMPED 50 BBLS FW, 365 SX (147 BBL) 12 PPG 2.26 YLD PREMIUM CMT & 92 SX (31.3BBL) 12.5 PPG 1.91 YLD PREM CMT. DROPPED SINGLE PLUG. DISPLACED W/ 10 BBL FW, 320 BBL 10.3 PPG MUD & 13 BBL FW @ 4 - 5.4 BPM. DID NOT BUMP PLUG. FINAL PUMP PRESSURE 960 PSI. SHUT DOWN @ 01:18 HRS. BLEED BACK 1 BBL, FLOATS HELD. 33 BBLS LOST DURING CMT OPS. EST TOC 3,984'.
	1:30 2:00	0.50	CASINT1	25		P	9,270.0	FC, WELL STATIC. RIG DOWN HES CEMENTERS.
	2:00 5:00	3.00	CASINT1	27		P	9,270.0	BACK OUT LANDING JOINT. LD CASING BAILS & ELEVATORS. RU 3 1/2" HANDLING TOOLS. INSTALL & TEST 7" PACK OFF TO 5,000 PSI.
	5:00 6:00	1.00	CASINT1	19		P	9,270.0	PJSM. RU & TEST BOPE TO 250 LOW 10,000 HIGH.
	2/6/2013							

## 2.1 Operation Summary (Continued)

Date	Time Start-End	Duration (hr)	Phase	Activity	Sub	OP Code	MD From (ft)	Operation
	6:00 12:00	6.00	CASINT1	19		P	9,270.0	TESTED BOPE TO 250 LOW 10,000 HIGH. TEST ANNULAR TO 250 LOW 4,000 HIGH. ALL TEST 10 MIN EACH. FUNCTION TESTED BOP FROM BOTH STATIONS.
	12:00 12:30	0.50	CASINT1	31		P	9,270.0	TESTED 7" CASING TO 2,500 PSI FOR 30 MIN.
	12:30 16:30	4.00	CASINT1	14		P	9,270.0	PJSM. MU BIT #5 6-1/8" U513M & TIH PU 4 3/4" BHA & 3 1/2" DP.
	16:30 17:30	1.00	CASINT1	17		P	9,270.0	SLIP & CUT DRILL LINE.
	17:30 1:00	7.50	CASINT1	14		P	9,270.0	TIH PU 3 1/2" DP. TAG CMT @ 9,129'.
	1:00 3:00	2.00	CASINT1	32		P	9,270.0	DRILL OUT CMT, FLOAT EQUIP, SHOE TRACK & 10'.
	3:00 4:00	1.00	CASINT1	33		P	9,280.0	CBU. PERFROM FIT TO 15.4 EMW WITH 10.5 PPG MUD @ 2,360 PSI.
	4:00 6:00	2.00	DRLPRD	07		P	9,280.0	DRILLED 9,280' - 9,347'.
2/7/2013	6:00 12:30	6.50	DRLPRD	07		P	9,347.0	DRILLED 9,347' - 9,654'.
	12:30 13:00	0.50	DRLPRD	15		P	9,654.0	SERVICED RIG & TDU.
	13:00 16:00	3.00	DRLPRD	07		P	9,654.0	DRILLED 9,654' - 9,846'.
	16:00 17:00	1.00	DRLPRD	11		P	9,846.0	RAN WIRELINE SURVEY @ 9,763', 2.4° INC 173.08° AZM.
	17:00 6:00	13.00	DRLPRD	07		P	9,846.0	DRILLED 9,846' - 10,572'.
2/8/2013	6:00 10:00	4.00	DRLPRD	07		P	10,572.0	DRILLED 10,572' - 10,799'.
	10:00 11:00	1.00	DRLPRD	11		P	10,799.0	RAN WIRELINE SURVEY @ 10,747', 2.9° INC 179.57° AZM.
	11:00 12:30	1.50	DRLPRD	07		P	10,799.0	DRILLED 10,799' - 10,896'.
	12:30 13:00	0.50	DRLPRD	12		P	10,896.0	SERVICED RIG & TDU.
	13:00 6:00	17.00	DRLPRD	07		P	10,896.0	DRILLED 10,896' - 11,656'.
2/9/2013	6:00 7:30	1.50	DRLPRD	07		P	11,656.0	DRILLED 11,656' - 11,740'.
	7:30 9:00	1.50	EVLPRD	15		P	11,740.0	CBU. MAX GAS 31 UNITS.
	9:00 11:30	2.50	EVLPRD	13		P	11,740.0	WIPER TRIP TO 9,270'. HOLE SLICK.
	11:30 14:00	2.50	EVLPRD	15		P	11,740.0	C&C MUD FOR LOGS.
	14:00 19:00	5.00	EVLPRD	13		P	11,740.0	POOH TO 740'.
	19:00 20:00	1.00	EVLPRD	17		P	11,740.0	SLIP & CUT DRILL LINE.
	20:00 22:00	2.00	EVLPRD	13		P	11,740.0	POOH LD STABILIZERS & BIT.
2/10/2013	22:00 6:00	8.00	EVLPRD	22		P	11,740.0	PJSM. RU HES WL & RUN QUAD COMBO TO 11,740' & LOG UP TO 9,270'. POOH & RD.
	6:00 6:30	0.50	EVLPRD	22		P	11,740.0	RD WIRELINE.
	6:30 14:00	7.50	CASPRD1	24		P	11,740.0	PJSM, RIG UP & RAN 59 JOINTS 5" 18 # HCP-110 ST-L CASING. MAKE UP VERSAFLEX HANGER. RD CSG TOOLS. CIRC LINER VOLUME.
	14:00 23:30	9.50	CASPRD1	13		P	11,740.0	TIH WITH 5" LINER ON 3 1/2" DP TO 11,740'. BREAKING CIRC EVERY 1,000'. NO LOSSES.
	23:30 2:00	2.50	CASPRD1	15		P	11,740.0	CIRC @ 3 BPM. LOSING MUD @ 70 BBLS/HR. SLOW PUMPS TO 2 BPM W/ PARTICAL RETURNS. 72 BBLS MUD LOST. MAX GAS 3,639 UNITS.
	2:00 4:00	2.00	CASPRD1	24		P	11,740.0	RIG UP HALLIBURTON. TESTED LINES TO 9M. PUMPED 10 BBLS FW, 20 BBLS 13 PPG TUNED SPACER & 198 SKS ( 51.8 BBLS) 14.2 PPG 1.47 YIELD HALCEM PREMIUM CEMENT. WASHED LINES. DROPPED WIPER DART. PUMPED 65.3 BBL @ 3 BPM (45 H2O 20.3 MUD) SHEARED WIPER PLUG . DISPLACED CEMENT OUT OF LINER W/ 45.7 BBLS. BUMPED PLUG TO 4,304 PSI @ 04:00 HRS. FLOATS HELD. BLEED BACK 1.75 BBL. FULL RETURNS DURING CMT OPS.
	4:00 4:30	0.50	CASPRD1	24		P	11,740.0	DROPPED BALL. RUPTURED DISC @ 5,100 PSI. PUMPED DN @ 4 BPM/ 1,275 PSI. PRESSURED TO 6,892 PSI. EXPANDED & SET PACKER. PULLED 80K OVER STRING WEIGHT. SET DN 50K. RELEASED SETTING TOOL FROM LINER HANGER. LANDED FS @ 11,735', LC @ 11,637'. LINER TOP @ 9,064'. MARKER JT @ 10,627', 9,606'.
4:30 5:30	1.00	CASPRD1	15		P	11,740.0	PICK UP 10' & CIRC. 1.5 X ANNULAR VOLUME @ 6 BPM. 9BBL CMT RETURNED TO SURFACE.	

## 2.1 Operation Summary (Continued)

Date	Time Start-End	Duration (hr)	Phase	Activity	Sub	OP Code	MD From (ft)	Operation
	5:30 6:00	0.50	CASPRD1	31		P	11,740.0	PERFORM POSITIVE TEST ON LINER TOP TO 1,000 PSI FOR 10MIN.
2/11/2013	6:00 8:00	2.00	CASPRD1	15		P	11,740.0	DISPLACE HOLE WITH 2% KCL.
	8:00 8:30	0.50	CASPRD1	25		P	11,740.0	LD CMT HEAD & RD HES CEMENTERS.
	8:30 15:00	6.50	CASPRD1	14		P	11,740.0	LD 9,054' 3½" DP & LINER SETTING TOOL.
	15:00 16:30	1.50	CASPRD1	13		P	11,740.0	TIH WITH 4¾" DC & 17 STD 3½" DP.
	16:30 21:00	4.50	CASPRD1	14		P	11,740.0	LD 3½" DP & 4¾" DC.
	21:00 2:30	5.50	CASPRD1	29		P	11,740.0	ND BOPE.
	2:30 5:00	2.50	CASPRD1	27		P	11,740.0	INSTALLED 7 1/16" 10M TBG HEAD. TESTED VOID TO 5M PSI. NU FRAC VALVE. RIG RELEASED @ 5:00 AM 2/11/2013.
	5:00 6:00	1.00	RDMO	02		P	11,740.0	RIGGING DOWN.
2/12/2013	6:00 6:00	24.00	RDMO	02		P	11,740.0	RIG DOWN. MOVE CAMPS & TUBULAR'S.

**1 General****1.1 Customer Information**

Company	CENTRAL DIVISION
Representative	
Address	

**1.2 Well Information**

Well	KUSHMAUL 1-16C4		
Project	ALTAMONT FIELD	Site	KUSHMAUL 1-16C4
Rig Name/No.		Event	COMPLETION LAND
Start Date	2/16/2013	End Date	
Spud Date/Time	1/23/2013	UWI	KUSHMAUL 1-16C4
Active Datum	KB @5,983.5ft (above Mean Sea Level)		
Afe No./Description	158693/47758 / KUSHMAUL. 1-16C4		

**2 Summary****2.1 Operation Summary**

Date	Time Start-End	Duration (hr)	Phase	Activity	Sub	OP Code	MD From (ft)	Operation
2/16/2013	6:00 7:30	1.50	CHLOG	28		P		TRAVEL TO LOCATION. HOLD SAFETY MEETING ON WIRELINE SAFETY. FILL OUT & REVIEW JSA
	7:30 10:30	3.00	CHLOG	18		P		WIRELINE TRUCK. RIH W/ 3.5"OD GUAGE RING & TAG @ 11602' POOH RD WIRELINE TRUCK. INSTALL DEAD MEN. SDFN
2/17/2013	6:00 6:00	24.00						DOWN FOR WEEKEND
2/18/2013	6:00 6:00	24.00						DOWN FOR WEEKEND
2/19/2013	6:00 7:30	1.50	WBP	28		P		CREW TRAVEL, SAFETY MEETING. ( RIGGING UP RIG, PICKING UP PIPE WITH CATWALK) FILL OUT AND REVIEW JSA
	7:30 8:00	0.50	MIRU	01		P		MOVE TO LOCATION AND SPOT IN RIG AND ASSOICATED EQUIPMENT. HEAT 500 BBLs 2% KCL TO 120 DEGREES
	8:00 10:30	2.50	MIRU	30		P		REMOVE FRAC VALVE AND INSTALL BOP
	10:30 14:00	3.50	MIRU	01				RIG UP RIG AND SPOT IN CATWALK, COLLARS AND TUBING. PRESSURE TEST BOPS TO 9500 PSI
	14:00 18:00	4.00	WBP	24		P		DRESS AND TALLY TUBING AND BOTTOM HOLE ASSEMBLY. PICK UP 4 1/8" BIT, BIT SUB, 4-2 7/8" COLLARS , CHANGE OVER SUB AND TIH PICKING UP 84 JOINTS 2 3/8" TUBING AND 1 JOINT 2 7/8" TUBING CHANGING OVER TO RUN 2 7/8" TUBING. SECURE WELL
	18:00 18:00	0.00						SHUT DOWN FOR WEEKEND USED 50 GALLONS DIESEL USED 275 GALLONS 25 KCL
2/20/2013	6:00 7:30	1.50	WBP	28		P		CREW TRAVEL, SAFETY MEETING ( PICKING UP TUBING AND RIGGING UP POWER SWIVEL. BODY POSITIONING) FILL OUT AND REVIEW JSA
	7:30 13:30	6.00	WBP	39		P		OPEN WELL AND CONTINUE TO DRESS, TALLY AND PICK UP TUBING. PICKING UP TOTAL OF 203 2 7/8" JOINTS. EOT @ 9064'
	13:30 14:30	1.00	WBP	06		P		RIG UP PUMP AND CIRCULATE TUBING CLEAN WITH 70 BBLs 2% KCL.
	14:30 16:30	2.00	WBP	39		P		CONTINUE TO DRESS, TALLY AND PICK UP TUBING. PICKING UP TOTAL OF 284 2 7/8" JOINTS TUBING. TAG @ 11,610' SPT. LAY DOWN 2 JOINTS 2 7/8" TUBING
	16:30 18:00	1.50	WBP	24		P		PICK UP POWER SWIVEL, INSTALL WASHINGTON HEAD RUBBER. DRAIN UP PUMP EQUIPMENT.
	18:00 18:00	0.00						SECURE WELL. SHUT DOWN FOR DAY

## 2.1 Operation Summary (Continued)

Date	Time Start-End	Duration (hr)	Phase	Activity	Sub	OP Code	MD From (ft)	Operation
2/21/2013	6:00 7:30	1.50	WBP	28		P		CREW TRAVEL, SAFETY MEETING ( PINCH POINTS, BODY POSITIONING, WORKING WITH A NEW EMPLOYEE, RIGGING DOWN POWER SWIVEL) FILL OUT AND REVIEW JSA
	7:30 12:00	4.50	WBP	72		P		RIG UP PUMP AND SWIVEL AND DRILL THROUGH LANDING COLLAR AND CLEAN OUT WELLBORE TO 11,662' CIRCULATE WELLBORE WITH 120 BBLS 2% KCL. HANG BACK POWER SWIVEL
	12:00 18:00	6.00	WBP	24		P		LAY DOWN 287 JOINTS 2 7/8, 84 JOINTS 2 3/8" TUBING, 4 DRILL COLLARS AND A 4 1/8" BIT
	18:00 19:00	1.00	WBP	18		P		RIG DOWN FLOOR AND WASHINGTON HEAD. INSTALL NIGHT CAP SECURE WELL
	19:00 19:00	0.00						SHUT DOWN FOR NIGHT USED 80 GALLONS DIESEL
2/22/2013	6:00 7:30	1.50	WBP	28		P		CREW TRAVEL, SAFETY MEETING ( RIGGING UP WIRLINE AND PRESSURE TESTING CASING. OVERHEAD LOADS, BODY POSITIONING) FILL OUT AND REVIEW JSA
	7:30 7:30	0.00						START TO SET UP POSEIDEN TANK
	7:30 13:00	5.50	WBP	18		P		RIG UP WIRELINE TRUCK AND RUN BOND LOG FROM PBD @ 11,690' TO 3500' WITH LINER TOP @ 9065' AND EST. TOP OF CEMENT @ 3932' UNDER 3000 PSI ON CASING. POOH AND RIG DOWN W/L TRUCK AND EQUIPMENT
	13:00 14:00	1.00	WBP	47		P		REORIENT CASING VALVES TO PROPER POSITION FOR APPLICATION ON THIS WELL
	14:00 17:30	3.50	WBP	18		P		CHART PRESSURE TEST ON CASING TO 9500 PSI AND WATCH FOR 30 MINUTES. TEST GOOD. BLEED OFF AND SECURE WELL
2/23/2013	6:00 6:30	0.50	STG01	28		P		HELD SAFETY MEETING ON FILLING FRAC TANKS FILLED OUT JSA.
	6:30 6:00	23.50	STG01	18		P		FILLED FRAC TANKS
2/24/2013	6:00 6:30	0.50	STG01	28		P		HELD SAFETY MEETING ON HAULING WATER. FILLED OUT JSA
	6:30 20:00	13.50	STG01	18		P		FILLED FRAC WATER.
2/25/2013	6:00 7:30	1.50	WBP	28		P		CREW TRAVEL HELD SAFETY MEETING ON RU STINGER FILLED OUT JSA.
	7:30 10:00	2.50	STG01	42		P		WAIT ON EQUIPMENT
	10:00 12:00	2.00	STG01	16		P		RU STINGERS ISOLATION TOLL PRESS TEST TOOL @ 3500 PSI HELD,
	12:00 15:00	3.00	STG01	21		P		MADE 1 PERFORATING BTM TWO SHOTS DIDN' T FIRE STARTED ON THRID SHOT. PERFORATED FROM 11665.5 TO 11267.5 20 NET FT 60 SHOTS. USING 2 3/4 GUN 3 SPF 120 DEGREE PHASING W/ 15 GM. STARTING PRESSURE 1000 PSI FINAL PRESSURE 2200 PSI. ALL PERFS CORRELATED TO LONE WOLF WIRELINE CEMENT BOND/GR/CCL RUN #1 FEB 21-13.
	15:00 15:30	0.50	STG01	18		P		SECURED WELL SDFN.
2/26/2013	6:00 7:30	1.50	STG01	28		P		CREW TRAVEL. HELD SAFETY MEETING ON HEATING WATER FILLED OUT JSA.
	7:30 11:00	3.50	STG01	18		P		STARTED HEATING FRAC WATER.
	11:00 14:00	3.00	STG01	21		P		MADE 1 PERFORATING RUN. PERFORATED FROM 11256 TO 11236 3 NET FT 9 SHOTS. USING 2 3/4 GUN 3 SPF 120 DEGREE PHASING W/ 15 GM. STARTING PRESSURE 2200 PSI FINAL PRESSURE 3000 PSI. ALL PERFS CORRELATED TO LONE WOLF WIRELINE CEMENT BOND/GR/CCL RUN #1 FEB 21-13. RD WIRELINE.
	14:00 19:00	5.00	STG01	18		P		FINISHED HEATING FRAC WATER.
2/27/2013	6:00 7:30	1.50	STG01	28		P		CREW TRAVEL HED SAFETY MEETING ON RU FRAC EQUIPMENT. FILLED OUT JSA.
	7:30 12:00	4.50	MIRU	01		P		SPOTTED IN PUMP TRUCKS, WAITED ON LINE TRUCK. HAD AIR LINE PROBLEMS.

## 2.1 Operation Summary (Continued)

Date	Time Start-End	Duration (hr)	Phase	Activity	Sub	OP Code	MD From (ft)	Operation
	12:00 16:00	4.00	MIRU	01		P		MIRU PUMP LINES, DIDN'T HAVE ENOUGH SUCTION LINES OR HARD LINE TO MANTAIN RATE , SECURED WELL SDFN.
2/28/2013	6:00 6:30	0.50	MIRU	28		P		HELD SAFETY MEETING ON RU FRAC EQUIPMENT. FILLED OUT JSA
	6:30 9:00	2.50	MIRU	01		P		FINISHED RU PUMP LINES AND SUCTION LINS,
	9:00 10:30	1.50	STG01	35		P		STAGE 1,BREAK DOWN PERFS @ 4600 PSI, @ 2.2 BPM, AND 5 BBLS, PUMPED 24,000 GALS OF 15 % HCL ACID W/ 180 BBLS OF FR BRINE AND 8000 LBS OF ROCCK SALT. AVG PRESS 5489, MAX PRESS 6967, AVG RATE 33 BBL, MAX RATE 50.5. ISIP 4733, F.G. .84. 5-MIN 4656, 10-MIN 4623, 15-MIN 4606. SHUT IN WELL TURNED WELL OVER TO WIRELINE.
	10:30 12:30	2.00	STG02	21		P		STAGE 2. MADE 1 PERFORATING RUN. SET CBP @ 11210 W/ 4400 PSI, PERFORATED FROM 11190 TO 10582 23 NET FT 69 SHOTS. USING 2 3/4 GUN 3 SPF 120 DEGREE PHASING W/ 15 GM. STARTING PRESSURE 4400 PSI FINAL PRESSURE 4400 PSI. ALL PERFS CORRELATED TO LONE WOLF WIRELINE CEMENT BOND/GR/CCL RUN #1 FEB 21-13. RD WIRELINE.TURNED WELL OVER TO FRAC CREW.
	12:30 15:00	2.50	STG02	35				PRESSURE TEST LINES TO 9250 PSI. SICP 4480 PSI. BREAK DOWN STAGE 2 PERFS @ 4751 PSI, 8.6 BPM . TREATED PERFS W/ 5000 GALS 15% HCL ACID.AVG RATE 28 BPM, MAX RATE 72 BPM, AVG PRESS 5322 PSI . MAX PRESS 7673 PSI. I.S.I.P 4909 PSI F.G. 87. 5 MINUTE 4776 PSI, 10 MINUTE 4742 PSI, 15 MINUTE 4721 PSI .PUMPED 3000 LBS 100 MESH SAND IN 1/2 PPG STAGE AND 140180 LBS POWERPROP 20/40 SAND IN 1PPG, 2PPG, 3PPG, 3.5 PPG. AVG RATE 67 BPM, MAX RATE 72 BPM. AVG PRESS 5422 PSI, MAX PRESS 7727 PSI. I.S.I.P. 4964 PSI F.G. .88. 5 MIN 4875 PSI. 10 MIN 4875 PSI, 15 MIN 4789 SHUT WELL IN. 3069 BBLS TO RECOVER TURNED WELL OVER TO WIRELINE.
	15:00 18:00	3.00	STG03	21		P		STAGE 3. MADE 1 PERFORATING RUN. SET CBP 10845 @ W/ 4600 PSI, PERFORATED FROM 10830 TO 10554 23 NET FT 69 SHOTS. USING 2 3/4 GUN 3 SPF 120 DEGREE PHASING W/ 15 GM. STARTING PRESSURE 4600 PSI FINAL PRESSURE 4600 PSI. ALL PERFS CORRELATED TO LONE WOLF WIRELINE CEMENT BOND/GR/CCL RUN #1 FEB 21-13. RD WIRELINE.TURNED WELL OVER TO FRAC CREW.
	18:00 20:00	2.00	STG03	35		P		STAGE 3. PRESSURE TEST LINES TO 9350 PSI. SICP 4750 PSI. BREAK DOWN STAGE 3 PERFS @ 5837 PSI, 10.7 BPM . TREATED PERFS W/ 5000 GALS 15% HCL ACID.AVG RATE 30 BPM, MAX RATE 72 BPM, AVG PRESS 5303 PSI . MAX PRESS 7322 PSI. I.S.I.P 4767 PSI F.G. 87. 5 MINUTE 4627 PSI, 10 MINUTE 4594 PSI, 15 MINUTE 4584 PSI .PUMPED 3000 LBS 100 MESH SAND IN 1/2 PPG STAGE AND 145460 LBS POWERPROP 20/40 SAND IN 1PPG, 2PPG, 3PPG, 3.5 PPG AND 4PPG STAGES. AVG RATE 67 BPM, MAX RATE 78 BPM. AVG PRESS 5628 PSI, MAX PRESS 7321 PSI. I.S.I.P. 4913 PSI F.G. .88. 5 MIN 4757 PSI. 10 MIN 4700 PSI, 15 MIN 4662 SHUT WELL IN. 3079 BBLS TO RECOVER. SECURED WELL SDFN.
3/1/2013	6:00 7:30	1.50	STG04	28		P		CREW TRAVEL HELD SAFETY MEETING ON PERFORATING FILLED OUT JSA.

## 2.1 Operation Summary (Continued)

Date	Time Start-End	Duration (hr)	Phase	Activity	Sub	OP Code	MD From (ft)	Operation
	7:30 9:00	1.50	STG04	21		P		STAGE 4. MADE 1 PERFORATING RUN. SET CBP 10530 @ W/ 4300 PSI, PERFORATED FROM 10514 TO 10260 23 NET FT 69 SHOTS. USING 2 3/4 GUN 3 SPF 120 DEGREE PHASING W/ 15 GM. STARTING PRESSURE 4300 PSI FINAL PRESSURE 4300 PSI. ALL PERFS CORRELATED TO LONE WOLF WIRELINE CEMENT BOND/GR/CCL RUN #1 FEB 21-13. RD WIRELINE. TURNED WELL OVER TO FRAC CREW.
	9:00 10:30	1.50	STG04	35		P		PRESSURE TEST LINES TO 9300 PSI. SICP 4256 PSI. BREAK DOWN STAGE 4 PERFS @ 6456 PSI, 10.5 BPM . TREATED PERFS W/ 5000 GALS 15% HCL ACID. AVG RATE 30 BPM, MAX RATE 69.4 BPM, AVG PRESS 5336 PSI . MAX PRESS 6733 PSI. I.S.I.P. 4545 PSI F.G. 87. 5 MINUTE 4410 PSI, 10 MINUTE 4315 PSI, 15 MINUTE 4251 PSI . PUMPED 3000 LBS 100 MESH SAND IN 1/2 PPG STAGE AND 137780 LBS POWERPROP 20/40 SAND IN 1PPG, 2PPG, 3PPG, 3.5 PPG AND 4 PPG STAGES. AVG RATE 69 BPM, MAX RATE 70 BPM. AVG PRESS 5403 PSI, MAX PRESS 6862 PSI. I.S.I.P. 4741 PSI F.G. .88. 5 MIN 4626 PSI. 10 MIN 4542 PSI, 15 MIN 4492 SHUT WELL IN. 3069 BBLs TO RECOVER TURNED WELL OVER TO WIRELINE.
	10:30 13:00	2.50	STG05	21		P		STAGE 5. MADE 1 PERFORATING RUN. SET CBP 10235 @ W/ 4000 PSI, PERFORATED FROM 10219 TO 9918 23 NET FT 69 SHOTS. USING 2 3/4 GUN 3 SPF 120 DEGREE PHASING W/ 15 GM. STARTING PRESSURE 4000 PSI FINAL PRESSURE 3900 PSI. ALL PERFS CORRELATED TO LONE WOLF WIRELINE CEMENT BOND/GR/CCL RUN #1 FEB 21-13. RD WIRELINE. TURNED WELL OVER TO FRAC CREW.
	13:00 17:30	4.50	STG05	35		P		PRESSURE TEST LINES TO 9450 PSI. SICP 3440 PSI. BREAK DOWN STAGE 5 PERFS @ 6429 PSI, 9.8 BPM . TREATED PERFS W/ 5000 GALS 15% HCL ACID. AVG RATE 32 BPM, MAX RATE 63 BPM, AVG PRESS 5917 PSI . MAX PRESS 7052 PSI. I.S.I.P. 4265 PSI F.G. 85. 5 MINUTE 4102 PSI, 10 MINUTE 4007 PSI, 15 MINUTE 3950 PSI. SHUT DOWN FOR 2 HRS FIXING HOSE ON SAND MASTER. PUMPED 3000 LBS 100 MESH SAND IN 1/2 PPG STAGE AND 138020 LBS POWERPROP 20/40 SAND IN 1PPG, 2PPG, 3PPG, 3.5 PPG AND 4 PPG STAGES. AVG RATE 69 BPM, MAX RATE 70 BPM. AVG PRESS 5631 PSI, MAX PRESS 7052 PSI. I.S.I.P. 4444 PSI F.G. .87. 5 MIN 4223 PSI. 10 MIN 4108 PSI, 15 MIN 4035 SHUT WELL IN. 2731 BBLs TO RECOVER TURNED WELL OVER TO WIRELINE.
	17:30 17:00		STG06	21		P		STAGE 6. MADE 1 PERFORATING RUN. SET CBP 9404 @ W/ 3500 PSI, PERFORATED FROM 9888 TO 9568 23 NET FT 69 SHOTS. USING 2 3/4 GUN 3 SPF 120 DEGREE PHASING W/ 15 GM. STARTING PRESSURE 3500 PSI FINAL PRESSURE 3400 PSI. ALL PERFS CORRELATED TO LONE WOLF WIRELINE CEMENT BOND/GR/CCL RUN #1 FEB 21-13. RD WIRELINE. SECURED WELL SDFN.
3/2/2013	6:00 7:30	1.50	STG06	28		P		CREW TRAVE HELD SAFETY MEETING ON PRESSURE TESTING LINES FILLED OUT JSA,

## 2.1 Operation Summary (Continued)

Date	Time Start-End	Duration (hr)	Phase	Activity	Sub	OP Code	MD From (ft)	Operation
	7:30 10:30	3.00	STG06	35		P		PRESSURE TEST LINES TO 9199 PSI. SICP 3000 PSI. BREAK DOWN STAGE 6 PERFS @ 4738 PSI, 12.1 BPM . TREATED PERFS W/ 5000 GALS 15% HCL ACID.AVG RATE 28 BPM, MAX RATE 69 BPM, AVG PRESS 4952 PSI . MAX PRESS 7145 PSI. I.S.I.P 3940 PSI F.G. 83. 5 MINUTE 3827 PSI, 10 MINUTE 3740 PSI, 15 MINUTE 3662 PSI .PUMPED 400 LBS 100 MESH SAND IN 1/2 PPG STAGE AND 137580 LBS POWERPROP AND TLC 20/40 SAND IN 1PPG, 2PPG, 3PPG, 3.5 PPG AND 4 PPG STAGES. AVG RATE 69 BPM, MAX RATE 70 BPM. AVG PRESS 4882 PSI, MAX PRESS 7146 PSI. I.S.I.P. 4496 PSI F.G. .89. 5 MIN 4386 PSI. 10 MIN 4306 PSI, 15 MIN 4199 SHUT WELL IN. 3284 BBLs TO RECOVER TURNED WELL OVER TO WIRELINE.
	10:30 13:00	2.50	STG07	21		P		STAGE 7. MADE 1 PERFORATING RUN.SET CBP 9550 @ W/ 3600 PSI, PERFORATED FROM 9532 TO 9351 23 NET FT 69 SHOTS. USING 2 3/4 GUN 3 SPF 120 DEGREE PHASING W/ 15 GM. STARTING PRESSURE 4000 PSI FINAL PRESSURE 3900 PSI. ALL PERFS CORRELATED TO LONE WOLF WIRELINE CEMENT BOND/GR/CCL RUN #1 FEB 21-13. RD WIRELINE.TURNED WELL OVER TO FRAC CREW.
	13:00 16:00	3.00	STG07	35		P		PRESSURE TEST LINES TO 9450 PSI. SICP 3000 PSI." SLICK WATER FRAC" BREAK DOWN STAGE 7 PERFS . TREATED PERFS W/ 5000 GALS 15% HCL ACID.PUMPED 8000 LBS 100 MESH SAND IN 1/2 PPG AND 1 PPG STAGES AND 66040 LBS TLC 20/40 SAND IN .5 PPG, 1PPG, 1.5 PPG AND 2# PPG STAGES. AVG RATE 62 BPM, MAX RATE 69 BPM. AVG PRESS 4334 PSI, MAX PRESS 7274 PSI. I.S.I.P. 3747 PSI F.G. .83. 5 MIN 3646 PSI. 10 MIN 3563 PSI, 15 MIN 3486 SHUT WELL IN. 2496 BBLs TO RECOVER.
	16:00 21:00	5.00	RDMO	02		P		RD WIRELINE, RD FRAC CREW, RD STINGER SECURED WELL SDFN.
3/3/2013	6:00 6:30	0.50	MIRU	28		P		HELD SAFETY MEETING ON RIGGING UP COIL TUBING. FILLED OUT JSA.
	6:30 10:30	4.00	MIRU	01		P		MIRU COIL TUBING EQUIPMENT.
	10:30 22:00	11.50	WBP	10		P		RIH W/ 4" MILL AND MOTOR ASSEMBLY. PUMPING 1 BPM RETURNING 1 BPM. INCREASED RATE @ LT TOO 2 3/4 BPM. RETURNING 3 3/4 BPM. DRILLED UP CBP @ 9550, 9904, 10235, 10530, 10854 AND 11210. CLEANED OUT TO PBD @ 11695'. CIRCULATE ON BTM FOR 1 HR, TOOH W/ COIL TBG, BUMPED UP.
	22:00 23:00	1.00	RDMO	02				LD MOTOR ASSEMBLY, BLEW COIL DRY, RD COIL TUBING TURNED WELL OVER TO FLOW BACK.
	23:00 6:00	7.00	FB	19		P		OPENED WELL ON 12/64 CHOKE W/ 2700 PSI. @ 11:45. MADE 0 OIL, 186 WATER 0 MCFD,
3/4/2013	6:00 6:30	0.50	FB	28		P		HELD SAFETY MEETING ON CHECKING FOR LEAKS ON LINE
	6:30 6:00	23.50	FB	19		P		2700 PSI, 12/64 CHOKE, TRACE OF OIL, 923 BBLs WATER . 0 MCFD.
3/5/2013	6:00 7:30	1.50	WLWORK	28		P		CREW TRAVEL HELD SAFETY MEETING ON WIRELINE SAFETY. FILLED OUT JSA.
	7:30 11:00	3.50	WLWORK	20		P		MIRU WIRELINE. RIH SET PKR @ 9200' W/ 2700 PSI. POOH RD WIRELINE.
	11:00 13:00	2.00	FB	19		P		bled down well, FLOWED BACK 50 BBLs OIL AND WATER.
	13:00 16:30	3.50	INSTUB	24		P		TALLIED AND PU ON OFF TOOL, 6-JTS 2 3/8 N-80 EUE TBG, X-OVER AND 200-JTS 2 7/8 L-80 EUE TBG, SECURED WELL SDFN.
3/6/2013	6:00 7:30	1.50	INSTUB	28		P		CREW TRAVEL HELD SAFETY MEETING. ON PICKING UP TUBING. FILLED OUT JSA

## 2.1 Operation Summary (Continued)

Date	Time Start-End	Duration (hr)	Phase	Activity	Sub	OP Code	MD From (ft)	Operation
	7:30 10:30	3.00	INSTUB	24		P		CONTINUED PU TBG LATCHED ONTO PKR @ 9212. SPACED OUT TBG.
	10:30 13:00	2.50	INSTUB	06		P		CIRCULATE WELL W/ 395 BBLS PKR FLUID.
	13:00 15:00	2.00	INSTUB	16		P		ND BOP NU WELLHEAD, PRESSURE TEST WELLHEAD HEAD @ 4500 PSI. HELD. PUMPED OUT PLUG @ 4200.
3/7/2013	6:00 6:30	0.50	FB	28		P		HELD SAFETY MEETING ON FLOW TESTING AND LIGHTING BURNERS.
	6:30 6:00	23.50	FB	19		P		2700 PSI. 14/64 CHOKE, 491 BBLS OIL, 548 BBLS H2O, 424 MCFD
3/8/2013	6:00 6:30	0.50	FB	28		P		HELD SAFETY MEETING ON CHECKING GAUGES ARE READING CORRECT
	6:30 6:00	23.50	FB	19		P		2550 PSI. 14/64 CHOKE, 490 BBLS OIL, 478 BBLS H2O, 485 MCFD
3/9/2013	6:00 6:30	0.50	FB	28		P		HELD SAFETY MEETING ON FLOW TESTING AND CHECKING FACILITIES FOR LEAKS. FILLED OUT JSA.
	6:30 6:30	0.00						2400 PSI. 14/64 CHOKE, 471 BBLS OIL, 407 BBLS H2O, 477 MCFD
3/10/2013	6:00 6:30	0.50	FB	28		P		HELD SAFETY MEETING ON FLOW TESTING WELL AND CHECKING CHOKES FOR WASHOUT
	6:30 6:00	22.50						2375 PSI. 14/64 CHOKE, 480 BBLS OIL, 390 BBLS H2O, 455 MCFD
3/11/2013								2000 PSI. 16/64 CHOKE, 551 BBLS OIL, 472 BBLS H2O, 511 MCFD
	6:00 6:30	0.50	FB	28		P		HELD SAFETY MEETING ON MEET AND GREET. FILLED OUT JSA.

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

AMENDED REPORT  FORM 8  
(highlight changes)

**WELL COMPLETION OR RECOMPLETION REPORT AND LOG**

5. LEASE DESIGNATION AND SERIAL NUMBER:

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7. UNIT or CA AGREEMENT NAME:

8. WELL NAME and NUMBER:  
Kushmaul 1-16C4

9. API NUMBER:  
4301351725

10. FIELD AND POOL, OR WILDCAT  
Altamont

11. QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:  
NENE 16 3S 4W U

12. COUNTY  
Duchesne

13. STATE  
UTAH

1a. TYPE OF WELL: OIL WELL  GAS WELL  DRY  OTHER \_\_\_\_\_

b. TYPE OF WORK: NEW WELL  HORIZ. LATS.  DEEP-EN  RE-ENTRY  DIFF. RESVR.  OTHER \_\_\_\_\_

2. NAME OF OPERATOR:  
EP Energy E&P Company, L.P.

3. ADDRESS OF OPERATOR:  
1001 Louisiana CITY Houston STATE TX ZIP 77002

PHONE NUMBER:  
(713) 997-5038

4. LOCATION OF WELL (FOOTAGES)  
AT SURFACE: 915 FNL & 701 FEL  
AT TOP PRODUCING INTERVAL REPORTED BELOW: 915 FNL & 701 FEL  
AT TOTAL DEPTH: 915 FNL & 701 FEL

14. DATE SPUNNED: 1/5/2013

15. DATE T.D. REACHED: 2/7/2013

16. DATE COMPLETED: 3/2/2013

ABANDONED  READY TO PRODUCE

17. ELEVATIONS (DF, RKB, RT, GL):

18. TOTAL DEPTH: MD 11,740 TVD 11733

19. PLUG BACK T.D.: MD TVD

20. IF MULTIPLE COMPLETIONS, HOW MANY? \*

21. DEPTH BRIDGE PLUG SET: MD TVD

22. TYPE ELECTRIC AND OTHER MECHANICAL LOGS RUN (Submit copy of each)  
Sonic, Gamma Ray, Resistivity & Neutron Density

23. WAS WELL CORED? NO  YES  (Submit analysis)  
WAS DST RUN? NO  YES  (Submit report)  
DIRECTIONAL SURVEY? NO  YES  (Submit copy)

24. CASING AND LINER RECORD (Report all strings set in well)

HOLE SIZE	SIZE/GRADE	WEIGHT (#/ft.)	TOP (MD)	BOTTOM (MD)	STAGE CEMENTER DEPTH	CEMENT TYPE & NO. OF SACKS	SLURRY VOLUME (BBL)	CEMENT TOP **	AMOUNT PULLED
17.5	13.375 J55	54.5	0	630		Prem 740	851	0	
12.25	9.625 N80	40	0	3,774		Prem 830	2,055	0	
8.75	7" HCP110	29	0	9,270		Prem 457	1,001	4100 *	
6.125	5 HCP110	18	9,069	11,740		Prem 198	291	9570 **	

25. TUBING RECORD

SIZE	DEPTH SET (MD)	PACKER SET (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)
2.875	8832	8737						

26. PRODUCING INTERVALS

FORMATION NAME	TOP (MD)	BOTTOM (MD)	TOP (TVD)	BOTTOM (TVD)	INTERVAL (Top/Bot - MD)	SIZE	NO. HOLES	PERFORATION STATUS
(A) Wasatch	9,156	11,671	9,152	11,564	11,236 11,671	.38	69	Open <input checked="" type="checkbox"/> Squeezed <input type="checkbox"/>
(B)					10,852 11,190	.38	69	Open <input checked="" type="checkbox"/> Squeezed <input type="checkbox"/>
(C)					10,554 10,830	.38	69	Open <input checked="" type="checkbox"/> Squeezed <input type="checkbox"/>
(D)					10,260 10,514	.38	69	Open <input checked="" type="checkbox"/> Squeezed <input type="checkbox"/>

27. PERFORATION RECORD

28. ACID, FRACTURE, TREATMENT, CEMENT SQUEEZE, ETC. See attached for further information on #27 & #28.

DEPTH INTERVAL	AMOUNT AND TYPE OF MATERIAL
11236-11671	24000 gals, 15% HCL, 8000# Rock Salt
10852-11190	5000 gals, 15% HCL, 3000# 100 Mesh, 140180# 20/40 Power Prop
10554-10830	5000 gals, 15% HCL, 3000# 100 Mesh, 145460# 20/40 Power Prop

29. ENCLOSED ATTACHMENTS: All logs are submitted to UDOGM by vendor.

30. WELL STATUS:  
Producing

ELECTRICAL/MECHANICAL LOGS  GEOLOGIC REPORT  DST REPORT  DIRECTIONAL SURVEY  
 SUNDRY NOTICE FOR PLUGGING AND CEMENT VERIFICATION  CORE ANALYSIS  OTHER: \_\_\_\_\_

31. INITIAL PRODUCTION

INTERVAL A (As shown in item #26)

DATE FIRST PRODUCED: 3/6/2013	TEST DATE: 3/12/2013	HOURS TESTED: 24	TEST PRODUCTION RATES: →	OIL - BBL: 599	GAS - MCF: 722	WATER - BBL: 494	PROD. METHOD: Rod Pump
CHOKE SIZE: 16	TBG. PRESS. 1,850	CSG. PRESS.	API GRAVITY 43.20	BTU - GAS 1	GAS/OIL RATIO 1	24 HR PRODUCTION RATES: →	INTERVAL STATUS: Producing

INTERVAL B (As shown in item #26)

DATE FIRST PRODUCED:	TEST DATE:	HOURS TESTED:	TEST PRODUCTION RATES: →	OIL - BBL:	GAS - MCF:	WATER - BBL:	PROD. METHOD:
CHOKE SIZE:	TBG. PRESS.	CSG. PRESS.	API GRAVITY	BTU - GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	INTERVAL STATUS:

INTERVAL C (As shown in item #26)

DATE FIRST PRODUCED:	TEST DATE:	HOURS TESTED:	TEST PRODUCTION RATES: →	OIL - BBL:	GAS - MCF:	WATER - BBL:	PROD. METHOD:
CHOKE SIZE:	TBG. PRESS.	CSG. PRESS.	API GRAVITY	BTU - GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	INTERVAL STATUS:

INTERVAL D (As shown in item #26)

DATE FIRST PRODUCED:	TEST DATE:	HOURS TESTED:	TEST PRODUCTION RATES: →	OIL - BBL:	GAS - MCF:	WATER - BBL:	PROD. METHOD:
CHOKE SIZE:	TBG. PRESS.	CSG. PRESS.	API GRAVITY	BTU - GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	INTERVAL STATUS:

32. DISPOSITION OF GAS (Sold, Used for Fuel, Vented, Etc.)

Sold

33. SUMMARY OF POROUS ZONES (Include Aquifers):

Show all important zones of porosity and contents thereof. Cored intervals and all drill-stem tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures and recoveries.

34. FORMATION (Log) MARKERS:

Formation	Top (MD)	Bottom (MD)	Descriptions, Contents, etc.	Name	Top (Measured Depth)
				Upper Green River	4,360
				Middle Green River	5,977
				Lower Green River	7,334
				Wasatch	9,156

35. ADDITIONAL REMARKS (include plugging procedure)

36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records.

NAME (PLEASE PRINT) Maria S. Gomez TITLE Principal Regulatory Analyst  
 SIGNATURE *Maria S. Gomez* DATE 12/19/13

This report must be submitted within 30 days of

- completing or plugging a new well
- drilling horizontal laterals from an existing well bore
- recompleting to a different producing formation
- reentering a previously plugged and abandoned well
- significantly deepening an existing well bore below the previous bottom-hole depth
- drilling hydrocarbon exploratory holes, such as core samples and stratigraphic tests

\* ITEM 20: Show the number of completions if production is measured separately from two or more formations.

\*\* ITEM 24: Cement Top - Show how reported top(s) of cement were determined (circulated (CIR), calculated (CAL), cement bond log (CBL), temperature survey (TS)).

Send to: Utah Division of Oil, Gas and Mining  
 1594 West North Temple, Suite 1210  
 Box 145801  
 Salt Lake City, Utah 84114-5801  
 Phone: 801-538-5340  
 Fax: 801-359-3940

**Attachment to Well Completion Report****Form 8 Dated December 17, 2013****Well Name: Kushmaul 1-16C4****Items #27 and #28 Continued****27. Perforation Record**

<b>Interval (Top/Bottom – MD)</b>	<b>Size</b>	<b>No. of Holes</b>	<b>Perf. Status</b>
<b>9918'-10219'</b>	<b>.38</b>	<b>69</b>	<b>Open</b>
<b>9568'-9888'</b>	<b>.38</b>	<b>69</b>	<b>Open</b>
<b>9351'-9532'</b>	<b>.38</b>	<b>69</b>	<b>Open</b>

**28. Acid, Fracture, Treatment, Cement Squeeze, Etc.**

<b>Depth Interval</b>	<b>Amount and Type of Material</b>
<b>10260'-10514'</b>	<b>5000 gals, 15% HCL, 3000# 100 Mesh, 137780# 20/40 Power Prop</b>
<b>9918'-10219'</b>	<b>5000 gals, 15% HCL, 3000# 100 Mesh, 138020# 20/40 Power Prop</b>
<b>9568'-9888'</b>	<b>5000 gals, 15% HCL, 4000# 100 Mesh, 20000 20140 Power Prop, 133580# 20/40 Tempered LC</b>
<b>9351'-9532'</b>	<b>5000 gals, 15% HCL, 8020# 100 Mesh, 66040# 20/40 Tempered LC</b>

**\*5851'-7480' no bond****\*\*9070'-9570' no bond & 11050'-11740' no bond**

## CENTRAL DIVISION

ALTAMONT FIELD  
KUSHMAUL 1-16C4  
KUSHMAUL 1-16C4  
KUSHMAUL 1-16C4

### **Deviation Summary Report**

Disclaimer: Although the information contained in this report is based on sound engineering practices, the copyright owner(s) does (do) not accept any responsibility whatsoever, in negligence or otherwise, for any loss or damage arising from the possession or use of the report whether in terms of correctness or otherwise. The application, therefore, by the user of this report or any part thereof, is solely at the user's own risk.

**1 General****1.1 Customer Information**

Company	CENTRAL DIVISION
Representative	
Address	

**1.2 Well Information**

Well	KUSHMAUL 1-16C4	Wellbore No.	OH
Wellbore Legal Name	KUSHMAUL 1-16C4	Common Wellbore Name	KUSHMAUL 1-16C4
Project	ALTAMONT FIELD	Site	KUSHMAUL 1-16C4
Vertical Section Azimuth	359.25 (°)	North Reference	Grid
Origin N/S		Origin E/W	
Spud Date/Time	1/22/2013	UWI	KUSHMAUL 1-16C4
Active Datum	KB @5,983.5ft (above Mean Sea Level)		

**2 Survey Name****2.1 Survey Name: Survey #1**

Survey Name	Survey #1	Company	VAUGHN ENERGY SERVICES LLC (GYRO TECHNOLOGIES INC)
Started	1/25/2013	Ended	1/26/2013
Tool Name	GMS	Engineer	Jay Hinnman

**2.1.1 Tie On Point**

MD (ft)	Inc (°)	Azi (°)	TVD (ft)	N/S (ft)	E/W (ft)
0.0	0.00	0.00	0.0	0.00	0.00

**2.1.2 Survey Stations**

Date	Type	MD (ft)	Inc (°)	Azi (°)	TVD (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLeg (°/100ft)	Build (°/100ft)	Turn (°/100ft)	TFace (°)
1/25/2013	Tie On	0.0	0.00	0.00	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1/25/2013	NORMAL	100.0	0.12	86.30	100.0	0.01	0.10	0.01	0.12	0.12	0.00	87.05
	NORMAL	200.0	0.28	123.12	200.0	-0.12	0.41	-0.12	0.20	0.16	36.82	57.89
	NORMAL	300.0	0.22	150.23	300.0	-0.42	0.71	-0.43	0.13	-0.05	27.11	127.60
	NORMAL	400.0	0.06	79.75	400.0	-0.58	0.86	-0.59	0.21	-0.16	-70.48	-163.69
	NORMAL	500.0	0.10	217.47	500.0	-0.64	0.86	-0.65	0.15	0.03	137.72	154.06
	NORMAL	600.0	0.16	147.77	600.0	-0.82	0.88	-0.83	0.15	0.06	-69.70	-106.47
	NORMAL	700.0	0.08	118.48	700.0	-0.97	1.02	-0.99	0.09	-0.07	-29.29	-154.86
	NORMAL	800.0	0.04	188.49	800.0	-1.04	1.08	-1.06	0.08	-0.04	70.01	149.74
	NORMAL	900.0	0.17	158.28	900.0	-1.22	1.13	-1.23	0.14	0.13	-30.21	-39.19
	NORMAL	1,000.0	0.34	181.09	1,000.0	-1.65	1.18	-1.67	0.19	0.17	22.81	42.59
	NORMAL	1,100.0	0.50	197.34	1,100.0	-2.37	1.04	-2.38	0.20	0.16	16.25	44.70
	NORMAL	1,200.0	0.39	187.21	1,200.0	-3.12	0.87	-3.13	0.14	-0.11	-10.13	-149.57
	NORMAL	1,300.0	0.66	203.39	1,300.0	-3.99	0.59	-4.00	0.30	0.27	16.18	37.14
	NORMAL	1,400.0	0.81	208.71	1,400.0	-5.14	0.03	-5.14	0.16	0.15	5.32	27.14
	NORMAL	1,500.0	1.09	215.55	1,500.0	-6.53	-0.87	-6.52	0.30	0.28	6.84	25.49
	NORMAL	1,600.0	1.08	237.41	1,600.0	-7.81	-2.21	-7.79	0.41	-0.01	21.86	102.30
	NORMAL	1,700.0	0.87	216.59	1,699.9	-8.93	-3.46	-8.89	0.41	-0.21	-20.82	-130.79
	NORMAL	1,800.0	1.16	222.20	1,799.9	-10.29	-4.59	-10.23	0.31	0.29	5.61	21.73
	NORMAL	1,900.0	1.34	220.69	1,899.9	-11.93	-6.04	-11.85	0.18	0.18	-1.51	-11.13

2.1.2 Survey Stations (Continued)

Date	Type	MD (ft)	Inc (°)	Azi (°)	TVD (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLeg (°/100ft)	Build (°/100ft)	Turn (°/100ft)	TFace (°)
1/25/2013	NORMAL	2,000.0	1.26	226.11	1,999.9	-13.58	-7.59	-13.48	0.15	-0.08	5.42	125.74
	NORMAL	2,100.0	1.38	223.82	2,099.8	-15.21	-9.22	-15.09	0.13	0.12	-2.29	-24.88
	NORMAL	2,200.0	1.33	222.85	2,199.8	-16.93	-10.84	-16.78	0.06	-0.05	-0.97	-155.84
	NORMAL	2,300.0	1.38	212.36	2,299.8	-18.79	-12.27	-18.63	0.25	0.05	-10.49	-83.88
	NORMAL	2,400.0	1.34	212.05	2,399.8	-20.80	-13.54	-20.62	0.04	-0.04	-0.31	-169.73
	NORMAL	2,500.0	1.43	205.10	2,499.7	-22.92	-14.69	-22.73	0.19	0.09	-6.95	-65.32
	NORMAL	2,600.0	1.41	209.17	2,599.7	-25.13	-15.82	-24.92	0.10	-0.02	4.07	103.25
	NORMAL	2,700.0	1.42	205.31	2,699.7	-27.32	-16.95	-27.10	0.10	0.01	-3.86	-85.94
	NORMAL	2,800.0	1.55	199.43	2,799.6	-29.72	-17.93	-29.48	0.20	0.13	-5.88	-52.50
	NORMAL	2,900.0	1.70	197.11	2,899.6	-32.41	-18.81	-32.16	0.16	0.15	-2.32	-24.84
	NORMAL	3,000.0	1.54	191.59	2,999.6	-35.14	-19.52	-34.89	0.22	-0.16	-5.52	-138.45
	NORMAL	3,100.0	1.61	184.54	3,099.5	-37.86	-19.90	-37.60	0.21	0.07	-7.05	-73.68
	NORMAL	3,200.0	1.76	190.39	3,199.5	-40.77	-20.29	-40.50	0.23	0.15	5.85	51.86
	NORMAL	3,300.0	1.82	193.86	3,299.4	-43.82	-20.95	-43.55	0.12	0.06	3.47	62.77
	NORMAL	3,400.0	1.99	174.24	3,399.4	-47.09	-21.15	-46.81	0.67	0.17	-19.62	-85.33
	NORMAL	3,500.0	1.61	197.01	3,499.3	-50.16	-21.39	-49.88	0.80	-0.38	22.77	129.05
	NORMAL	3,600.0	1.57	195.70	3,599.3	-52.83	-22.17	-52.53	0.05	-0.04	-1.31	-138.39
	NORMAL	3,700.0	1.36	177.53	3,699.3	-55.33	-22.49	-55.03	0.51	-0.21	-18.17	-123.23

2.2 Survey Name: Survey #2

Survey Name	Survey #2	Company	RYAN ENERGY TECHNOLOGIES
Started	1/28/2013	Ended	
Tool Name	EM	Engineer	MARCUS WILSON

2.2.1 Tie On Point

MD (ft)	Inc (°)	Azi (°)	TVD (ft)	N/S (ft)	E/W (ft)
3,700.0	1.36	177.53	3,699.3	-55.33	-22.49

2.2.2 Survey Stations

Date	Type	MD (ft)	Inc (°)	Azi (°)	TVD (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLeg (°/100ft)	Build (°/100ft)	Turn (°/100ft)	TFace (°)
1/28/2013	Tie On	3,700.0	1.36	177.53	3,699.3	-55.33	-22.49	-55.03	0.00	0.00	0.00	0.00
1/28/2013	NORMAL	3,802.0	1.80	166.42	3,801.2	-58.10	-22.06	-57.81	0.52	0.43	-10.89	-40.48
	NORMAL	3,895.0	1.58	174.42	3,894.2	-60.79	-21.60	-60.51	0.35	-0.24	8.60	136.95
	NORMAL	3,988.0	1.58	177.49	3,987.1	-63.35	-21.42	-63.07	0.09	0.00	3.30	91.53
	NORMAL	4,081.0	2.20	174.90	4,080.1	-66.41	-21.20	-66.13	0.67	0.67	-2.78	-9.14
	NORMAL	4,175.0	0.88	141.81	4,174.1	-68.77	-20.59	-68.50	1.64	-1.40	-35.20	-161.81
	NORMAL	4,268.0	0.79	163.91	4,267.0	-69.95	-19.98	-69.69	0.36	-0.10	23.76	116.48
	NORMAL	4,361.0	1.41	173.32	4,360.0	-71.70	-19.66	-71.44	0.69	0.67	10.12	20.98
	NORMAL	4,454.0	1.41	176.92	4,453.0	-73.98	-19.47	-73.72	0.10	0.00	3.87	91.80
	NORMAL	4,547.0	1.58	194.10	4,546.0	-76.37	-19.72	-76.11	0.51	0.18	18.47	77.96
	NORMAL	4,641.0	2.02	201.71	4,639.9	-79.17	-20.65	-78.89	0.53	0.47	8.10	32.35
	NORMAL	4,734.0	2.42	192.92	4,732.9	-82.60	-21.70	-82.31	0.56	0.43	-9.45	-44.85
	NORMAL	4,828.0	1.32	196.52	4,826.8	-85.57	-22.45	-85.27	1.18	-1.17	3.83	175.70
	NORMAL	4,921.0	1.80	188.39	4,919.8	-88.05	-22.96	-87.74	0.57	0.52	-8.74	-28.85
	NORMAL	5,013.0	2.02	177.49	5,011.7	-91.10	-23.10	-90.79	0.46	0.24	-11.85	-64.33
	NORMAL	5,107.0	1.19	171.60	5,105.7	-93.72	-22.89	-93.41	0.90	-0.88	-6.27	-171.69
	NORMAL	5,200.0	1.10	182.99	5,198.7	-95.56	-22.80	-95.26	0.26	-0.10	12.25	117.20
	NORMAL	5,293.0	1.19	178.02	5,291.6	-97.42	-22.81	-97.11	0.14	0.10	-5.34	-50.32
	NORMAL	5,386.0	1.32	180.22	5,384.6	-99.46	-22.78	-99.15	0.15	0.14	2.37	21.44
	NORMAL	5,479.0	1.49	164.09	5,477.6	-101.69	-22.45	-101.39	0.46	0.18	-17.34	-74.94
1/29/2013	NORMAL	5,572.0	2.02	174.20	5,570.6	-104.48	-21.96	-104.19	0.66	0.57	10.87	35.41

## 2.2.2 Survey Stations (Continued)

Date	Type	MD (ft)	Inc (°)	Azi (°)	TVD (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLeg (°/100ft)	Build (°/100ft)	Turn (°/100ft)	TFace (°)
1/29/2013	NORMAL	5,665.0	2.11	162.81	5,663.5	-107.75	-21.28	-107.46	0.45	0.10	-12.25	-83.36
	NORMAL	5,759.0	2.42	153.59	5,757.4	-111.18	-19.89	-110.91	0.51	0.33	-9.81	-54.28
	NORMAL	5,852.0	2.68	148.80	5,850.3	-114.80	-17.89	-114.56	0.36	0.28	-5.15	-41.75
	NORMAL	5,945.0	1.71	150.60	5,943.3	-117.87	-16.08	-117.65	1.05	-1.04	1.94	176.83
	NORMAL	6,038.0	1.58	142.69	6,036.2	-120.10	-14.63	-119.90	0.28	-0.14	-8.51	-123.71
	NORMAL	6,131.0	1.41	151.78	6,129.2	-122.12	-13.31	-121.94	0.31	-0.18	9.77	130.12
	NORMAL	6,225.0	1.49	162.20	6,223.2	-124.31	-12.39	-124.13	0.29	0.09	11.09	78.37
1/30/2013	NORMAL	6,318.0	2.02	164.79	6,316.1	-127.04	-11.59	-126.88	0.58	0.57	2.78	9.81
	NORMAL	6,411.0	1.10	202.50	6,409.1	-129.45	-11.50	-129.29	1.43	-0.99	40.55	149.66
	NORMAL	6,504.0	1.19	221.70	6,502.1	-130.99	-12.48	-130.82	0.42	0.10	20.65	86.52
	NORMAL	6,598.0	1.41	210.10	6,596.0	-132.72	-13.71	-132.53	0.36	0.23	-12.34	-56.00
	NORMAL	6,691.0	1.10	243.72	6,689.0	-134.11	-15.09	-133.90	0.84	-0.33	36.15	129.04
	NORMAL	6,784.0	1.49	229.30	6,782.0	-135.29	-16.80	-135.06	0.54	0.42	-15.51	-47.24
	NORMAL	6,877.0	2.11	210.80	6,875.0	-137.55	-18.60	-137.30	0.91	0.67	-19.89	-52.64
	NORMAL	6,970.0	2.20	205.09	6,967.9	-140.64	-20.23	-140.36	0.25	0.10	-6.14	-70.13
	NORMAL	7,063.0	2.50	200.75	7,060.8	-144.15	-21.71	-143.85	0.37	0.32	-4.67	-32.86
	NORMAL	7,157.0	2.20	213.00	7,154.7	-147.58	-23.42	-147.26	0.62	-0.32	13.03	126.87
	NORMAL	7,250.0	2.29	212.91	7,247.7	-150.64	-25.40	-150.29	0.10	0.10	-0.10	-2.29
	NORMAL	7,343.0	1.89	222.01	7,340.6	-153.34	-27.43	-152.97	0.56	-0.43	9.78	144.81
	NORMAL	7,437.0	2.50	210.80	7,434.5	-156.25	-29.52	-155.85	0.79	0.65	-11.93	-40.83
	NORMAL	7,530.0	1.32	232.42	7,527.5	-158.64	-31.41	-158.22	1.47	-1.27	23.25	159.09
	NORMAL	7,623.0	1.80	199.68	7,620.4	-160.67	-32.75	-160.23	1.07	0.52	-35.20	-78.72
	NORMAL	7,716.0	1.89	197.40	7,713.4	-163.51	-33.70	-163.06	0.12	0.10	-2.45	-40.34
	NORMAL	7,809.0	2.42	194.41	7,806.3	-166.88	-34.65	-166.41	0.58	0.57	-3.22	-13.47
1/31/2013	NORMAL	7,902.0	1.89	193.40	7,899.3	-170.27	-35.49	-169.79	0.57	-0.57	-1.09	-176.41
	NORMAL	7,995.0	2.29	199.20	7,992.2	-173.52	-36.46	-173.03	0.49	0.43	6.24	30.79
	NORMAL	8,089.0	2.20	200.92	8,086.1	-176.97	-37.72	-176.47	0.12	-0.10	1.83	144.04
	NORMAL	8,182.0	2.42	210.32	8,179.1	-180.34	-39.35	-179.81	0.47	0.24	10.11	64.61
	NORMAL	8,275.0	2.50	202.41	8,272.0	-183.91	-41.11	-183.36	0.37	0.09	-8.51	-80.71
	NORMAL	8,368.0	2.20	217.92	8,364.9	-187.19	-42.99	-186.61	0.75	-0.32	16.68	122.87
	NORMAL	8,461.0	2.02	224.38	8,457.8	-189.77	-45.23	-189.16	0.32	-0.19	6.95	130.32
2/1/2013	NORMAL	8,554.0	2.42	222.49	8,550.8	-192.39	-47.70	-191.75	0.44	0.43	-2.03	-11.32
	NORMAL	8,648.0	3.69	198.50	8,644.6	-196.72	-50.00	-196.05	1.89	1.35	-25.52	-57.59
	NORMAL	8,741.0	4.48	192.79	8,737.4	-203.10	-51.76	-202.41	0.95	0.85	-6.14	-30.11
	NORMAL	8,834.0	4.09	197.62	8,830.1	-209.80	-53.56	-209.09	0.57	-0.42	5.19	139.61
	NORMAL	8,927.0	2.59	193.00	8,923.0	-215.01	-55.04	-214.28	1.64	-1.61	-4.97	-172.13
	NORMAL	9,020.0	1.71	189.88	9,015.9	-218.43	-55.75	-217.68	0.95	-0.95	-3.35	-173.98
	NORMAL	9,113.0	1.32	207.90	9,108.9	-220.74	-56.49	-219.99	0.66	-0.42	19.38	138.08
	NORMAL	9,206.0	1.49	212.52	9,201.8	-222.71	-57.64	-221.94	0.22	0.18	4.97	36.00
	NORMAL	9,223.0	1.41	196.78	9,218.8	-223.09	-57.82	-222.32	2.38	-0.47	-92.59	-109.15

## 2.3 Survey Name: Survey #3

Survey Name	Survey #3	Company	HALLIBURTON ENERGY SERVICES INC
Started	2/6/2013	Ended	
Tool Name	ETOOL	Engineer	El Paso

## 2.3.1 Tie On Point

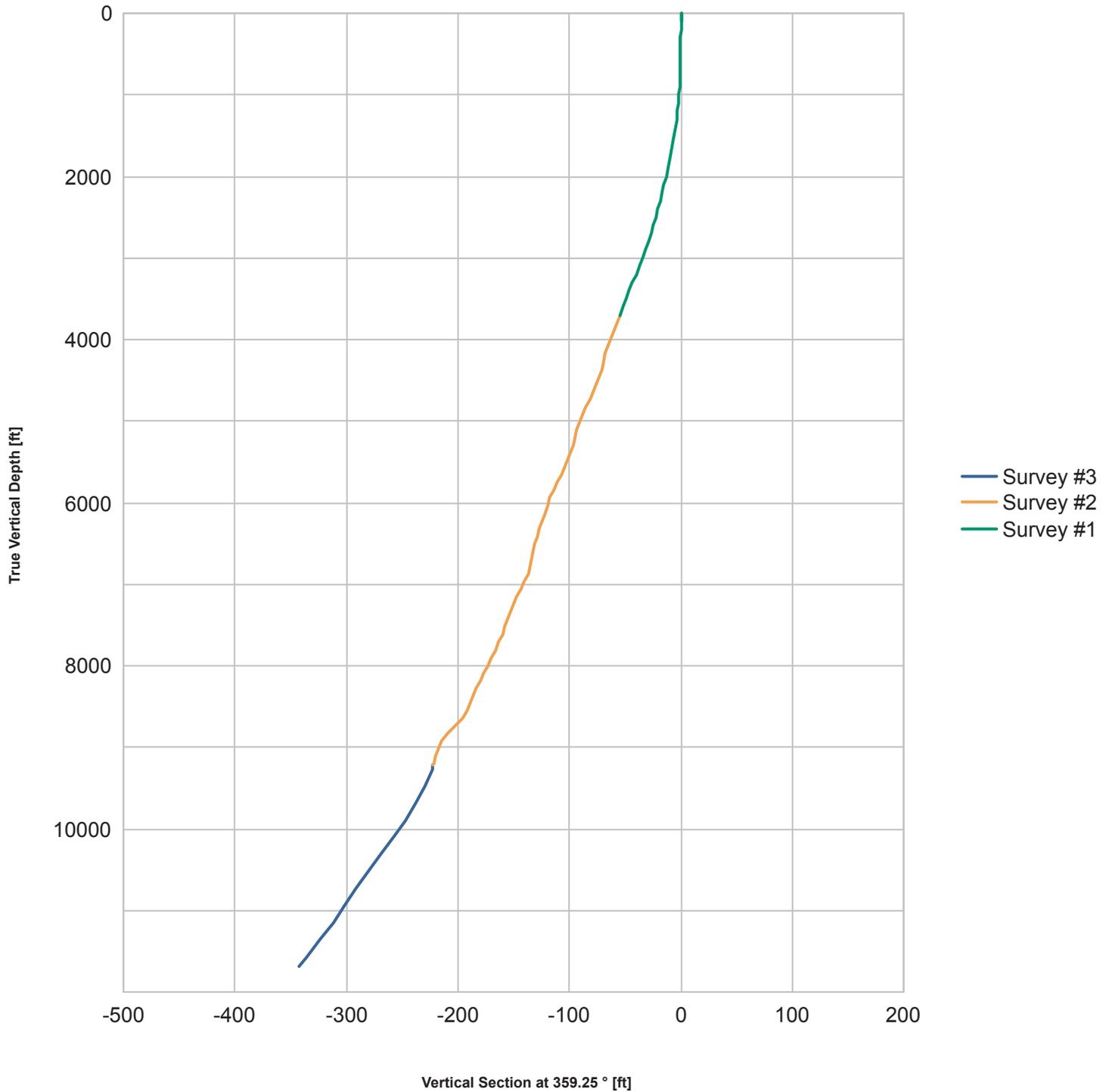
MD (ft)	Inc (°)	Azi (°)	TVD (ft)	N/S (ft)	E/W (ft)
9,223.0	1.41	196.78	9,218.8	-223.09	-57.82

## 2.3.2 Survey Stations

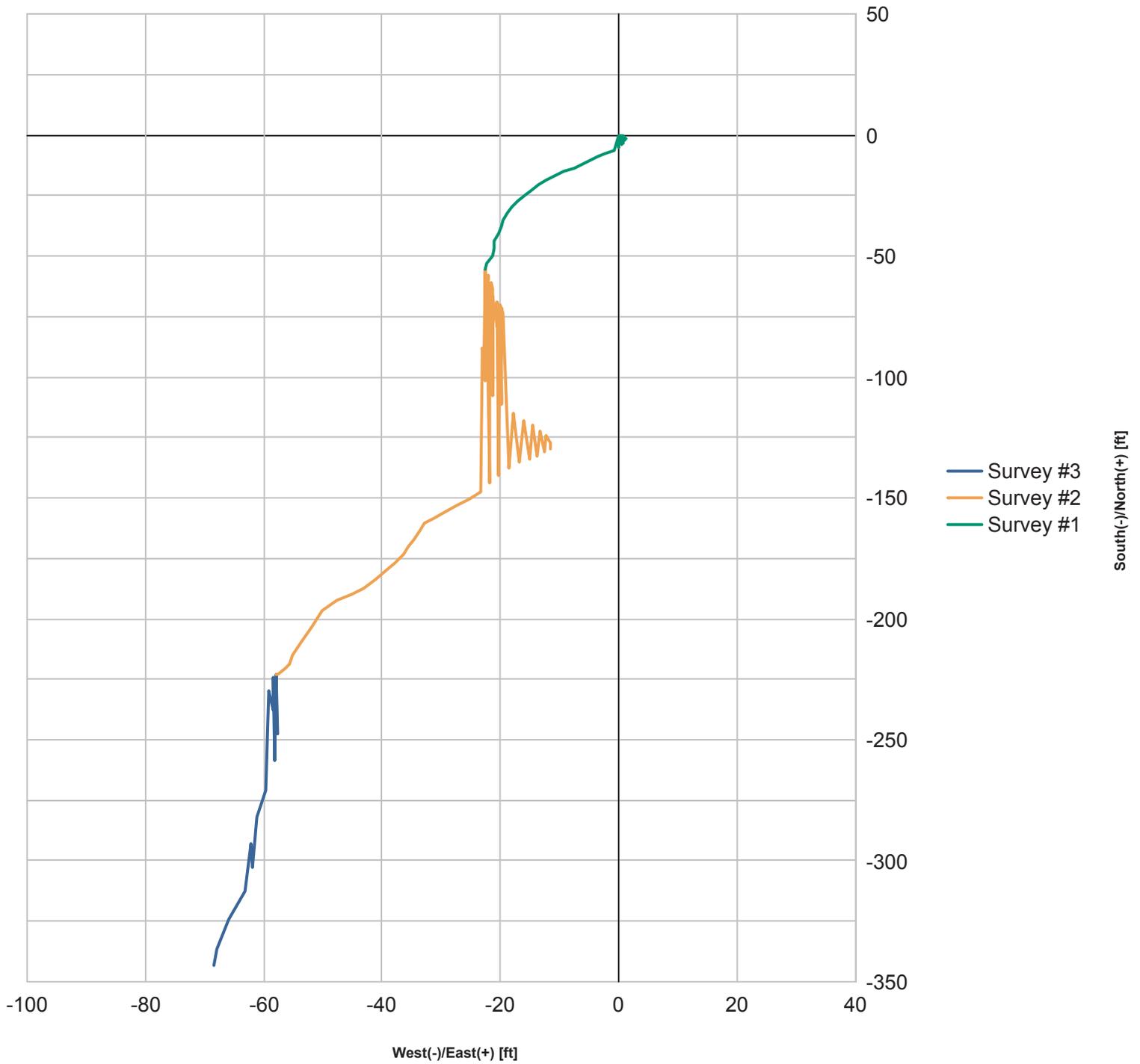
Date	Type	MD (ft)	Inc (°)	Azi (°)	TVD (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLeg (°/100ft)	Build (°/100ft)	Turn (°/100ft)	TFace (°)
2/6/2013	Tie On	9,223.0	1.41	196.78	9,218.8	-223.09	-57.82	-222.32	0.00	0.00	0.00	0.00
2/6/2013	NORMAL	9,270.0	1.50	211.05	9,265.8	-224.17	-58.31	-223.40	0.79	0.19	30.36	83.25
	NORMAL	9,480.0	1.80	171.31	9,475.7	-229.79	-59.23	-229.00	0.55	0.14	-18.92	-95.74
	NORMAL	9,690.0	2.60	174.96	9,685.6	-237.79	-58.31	-237.01	0.39	0.38	1.74	11.76
	NORMAL	9,900.0	2.90	176.96	9,895.3	-247.84	-57.61	-247.07	0.15	0.14	0.95	18.74
	NORMAL	10,110.0	3.10	188.86	10,105.1	-258.76	-58.20	-257.98	0.31	0.10	5.67	78.20
	NORMAL	10,320.0	3.40	186.29	10,314.7	-270.56	-59.76	-269.76	0.16	0.14	-1.22	-27.19
	NORMAL	10,530.0	3.00	187.74	10,524.4	-282.19	-61.19	-281.37	0.19	-0.19	0.69	169.28
	NORMAL	10,740.0	2.80	181.15	10,734.1	-292.77	-62.03	-291.93	0.18	-0.10	-3.14	-124.22
	NORMAL	10,950.0	2.50	177.66	10,943.9	-302.47	-61.95	-301.64	0.16	-0.14	-1.66	-153.46
	NORMAL	11,160.0	3.10	193.62	11,153.7	-312.57	-63.10	-311.72	0.47	0.29	7.60	60.57
	NORMAL	11,370.0	3.60	192.67	11,363.3	-324.52	-65.88	-323.63	0.24	0.24	-0.45	-6.81
	NORMAL	11,580.0	3.10	184.91	11,572.9	-336.61	-67.81	-335.70	0.32	-0.24	-3.70	-141.62
	NORMAL	11,700.0	3.20	185.29	11,692.8	-343.18	-68.40	-342.26	0.09	0.08	0.32	11.98

### 3 Charts

#### 3.1 Vertical Section View



3.2 Plan View



**Table of Contents**

1	General.....	1
1.1	Customer Information.....	1
1.2	Well Information.....	1
2	Survey Name.....	1
2.1	Survey Name: Survey #1.....	1
2.1.1	Tie On Point.....	1
2.1.2	Survey Stations.....	1
2.2	Survey Name: Survey #2.....	2
2.2.1	Tie On Point.....	2
2.2.2	Survey Stations.....	2
2.3	Survey Name: Survey #3.....	3
2.3.1	Tie On Point.....	3
2.3.2	Survey Stations.....	4
3	Charts.....	5
3.1	Vertical Section View.....	5
3.2	Plan View.....	6

<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		<b>FORM 9</b>
<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>  Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		<b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> Fee
		<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b>
<b>1. TYPE OF WELL</b> Oil Well		<b>7. UNIT or CA AGREEMENT NAME:</b>
<b>2. NAME OF OPERATOR:</b> EP ENERGY E&P COMPANY, L.P.		<b>8. WELL NAME and NUMBER:</b> Kushmaul 1-16C4
<b>3. ADDRESS OF OPERATOR:</b> 1001 Louisiana , Houston, TX, 77002		<b>9. API NUMBER:</b> 43013517250000
<b>PHONE NUMBER:</b> 713 997-5038 Ext		<b>9. FIELD and POOL or WILDCAT:</b> ALTAMONT
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 0915 FNL 0701 FEL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: NENE Section: 16 Township: 03.0S Range: 04.0W Meridian: U		<b>COUNTY:</b> DUCHESNE
		<b>STATE:</b> UTAH

11.

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

TYPE OF SUBMISSION	TYPE OF ACTION		
<input type="checkbox"/> NOTICE OF INTENT Approximate date work will start:	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> CASING REPAIR
<input checked="" type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion: 4/1/2014	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> CHANGE WELL NAME
<input type="checkbox"/> SPUD REPORT Date of Spud:	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> CONVERT WELL TYPE
<input type="checkbox"/> DRILLING REPORT Report Date:	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> NEW CONSTRUCTION
	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> PLUG BACK
	<input type="checkbox"/> PRODUCTION START OR RESUME	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION
	<input type="checkbox"/> REPERFORATE CURRENT FORMATION	<input type="checkbox"/> SIDETRACK TO REPAIR WELL	<input type="checkbox"/> TEMPORARY ABANDON
	<input type="checkbox"/> TUBING REPAIR	<input type="checkbox"/> VENT OR FLARE	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> WATER SHUTOFF	<input type="checkbox"/> SI TA STATUS EXTENSION	<input type="checkbox"/> APD EXTENSION
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	<input checked="" type="checkbox"/> OTHER	OTHER: <input type="text" value="See Below"/>

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

EP downsized pump and deepend. Please see attached for details.

**Accepted by the  
Utah Division of  
Oil, Gas and Mining  
FOR RECORD ONLY**  
July 02, 2014

<b>NAME (PLEASE PRINT)</b> Maria S. Gomez	<b>PHONE NUMBER</b> 713 997-5038	<b>TITLE</b> Principal Regulatory Analyst
<b>SIGNATURE</b> N/A	<b>DATE</b> 6/26/2014	

## CENTRAL DIVISION

ALTAMONT FIELD  
KUSHMAUL 1-16C4  
KUSHMAUL 1-16C4  
WORKOVER LAND

### **Operation Summary Report**

Disclaimer: Although the information contained in this report is based on sound engineering practices, the copyright owner (s) does (do) not accept any responsibility whatsoever, in negligence or otherwise, for any loss or damage arising from the possession or use of the report whether in terms of correctness or otherwise. The application, therefore, by the user of this report or any part thereof, is solely at the user's own risk.

**1 General****1.1 Customer Information**

Company	CENTRAL DIVISION
Representative	
Address	

**1.2 Well Information**

Well	KUSHMAUL 1-16C4		
Project	ALTAMONT FIELD	Site	KUSHMAUL 1-16C4
Rig Name/No.	NABORS DRILLING/0561	Event	WORKOVER LAND
Start date	3/26/2014	End date	4/2/2014
Spud Date/Time	1/22/2013	UWI	KUSHMAUL 1-16C4
Active datum	KB @5,983.5usft (above Mean Sea Level)		
Afe No./Description	162791/51223 / KUSHMAUL. 1-16C4		

**2 Summary****2.1 Operation Summary**

Date	Time Start-End	Duration (hr)	Phase	Activity Code	Sub	OP Code	MD from (usft)	Operation
3/27/2014	6:00 7:00	1.00	PRDHEQ	28		P		CREW TRAVEL TO LOCATION HSM WRITE AND REVIEW JSA TOPIC; ROADING RIG
	7:00 9:00	2.00	POST	18		P		ROAD RIG FROM MERKLEY 1-32C4 TO LOCATION
	9:00 10:30	1.50	MIRU	01		P		MIRU PUMP 60 BBLS OF HOT 2% KCL WATER DOWN ANNULUS
	10:30 13:00	2.50	PRDHEQ	39		P		L/D POLISH ROD ATTEMPT TO UNSEAT PUMP WHILE PUMPING DOWN ANNULUS FAILED
	13:00 15:30	2.50	PRDHEQ	39		P		R/U BACK OFF TOOL BACK OFF RODS TOH w 118-1 RODS 39-7/8" RODS
	15:30 16:30	1.00	WOR	16		P		N/D WELL HEAD N/U BOPE
	16:30 17:30	1.00	WLWORK	21		P		MIRU WIRELINE TIH PERFORATE TBG AT 3950' TOH R/D WIRELINE
	17:30 18:30	1.00	PRDHEQ	39		P		RELEASE TAC SOH w 4 JTS SECURE WELL SDFN
3/28/2014	6:00 7:00	1.00	PRDHEQ	28		P		CREW TRAVEL TO LOCATION HSM WRITE AND REVIEW JSA TOPIC; STRIPPING WELL
	7:00 19:00	12.00	PRDHEQ	39		P		CONTINUE STRIPPING OUT OF HOLE w RODS AND TBG L/D BHA SECURE WELL CLEAN WORK AREA SDFN
3/29/2014	6:00 7:00	1.00	PRDHEQ	28		P		CREW TRAVEL TO LOCATION HSM WRITE AND REVIEW JSA TOPIC; TRIPPING TUBING
	7:00 12:30	5.50	PRDHEQ	39		P		CSIP 0 PSI TALLY AND P/U BULL PLUG 2 JTS OF 2 3/8" TBG w 3 1/2" PBGA w DIP TUBE 2' X 2 3/8" TBG SUB 2 3/8" PSN 4' X 2 3/8" TBG SUB 4 JTS OF 2 3/8" TBG 5" TAC 39 JTS OF 2 3/8" TBG 2 3/8" X 2 7/8" XO 278 JTS OF 2 7/8" TBG SET 5" TAC AT 10167' w 20K TENTION
	12:30 15:00	2.50	PRDHEQ	16		P		N/D BOPE N/U WELL HEAD RE-PLUM TO FACILITIES
	15:00 18:00	3.00	PRDHEQ	39		P		PREP RODS P/U AND PRIME 2" 2 STAGE X 40' INSERT PUMP P/U 17-1 1/2" K BARS 65-3/4" SHG P/U POLISH ROD SECURE WELL SDFN
3/30/2014	6:00 7:00	1.00	PRDHEQ	28		P		CREW TRAVEL TO LOCATION HSM WRITE AND REVIEW JSA TOPIC; TRIPPING RODS
	7:00 12:30	5.50	PRDHEQ	39		P		CONTINUE TIH CHECKING EVERY BRAKE w 113-3/4" w/g 121-7/8" w/g 92-1" SPACE OUT PUMP w 8, 8, 4, 2, X 1" PONY RODS FILL TBG w 24 BBLS OF HOT 2% KCL WATER TEST AND STROKE TEST TO 1000 PSI GOOD
	12:30 14:00	1.50	RDMO	02		P		RDMO SLIDE ROTO FLEX TURN WELL OVER TO PRODUCTION
4/1/2014	6:00 7:00	1.00	PRDHEQ	28		P		CREW TRAVEL TO LOCATION HSM WRITE AND REVIEW JSA TOPIC; RIGGING UP

## 2.1 Operation Summary (Continued)

Date	Time Start-End	Duration (hr)	Phase	Activity Code	Sub	OP Code	MD from (usft)	Operation
	7:00 11:00	4.00	MIRU	01		P		SLIDE ROTO FLEX MIRU FILL TBG TEST AND STROKE TEST GOOD LONG STROKE PUMP WHILE PUMP HOT 2% KCL DOWN ANNULUS FAILED UNABLE TO GET PUMP TO WORK
	11:00 13:00	2.00	PRDHEQ	39		P		L/D POLISH ROD PONY RODS TOH w 92-1" 121-7/8" 178-3/4" 17-1-1/2" RODS L/D PUMP SECURE WELL SDFN
4/2/2014	6:00 7:00	1.00	PRDHEQ	28		P		CREW TRAVEL TO LOCATION HSM WRITE AND REVIEW JSA TOPIC; TRIPPING TUBING
	7:00 12:30	5.50	PRDHEQ	39		P		P/U AND PRIME 2" X 1-1/2" X 38' PA PUMP 17-1-1/2" KBARS 178-3/4" 121-7/8" 92-1" SPACE OUT PUMP w 2', 2', 4', 8', X 1" PONY RODS FILL TBG w 23 BBLS OF 2% KCL TEST AND STROKE TEST TO 1000 PSI GOOD
	12:30 14:00	1.50	RDMO	02		P		RDMO SLIDE ROTO FLEX TURN WELL OVER TO PRODUCTION

**Table of Contents**

1	General.....	1
1.1	Customer Information.....	1
1.2	Well Information.....	1
2	Summary.....	1
2.1	Operation Summary.....	1

<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		<b>FORM 9</b>
<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>  Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		<b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> Fee
		<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b>
<b>1. TYPE OF WELL</b> Oil Well		<b>7. UNIT or CA AGREEMENT NAME:</b>
<b>2. NAME OF OPERATOR:</b> EP ENERGY E&P COMPANY, L.P.		<b>8. WELL NAME and NUMBER:</b> Kushmaul 1-16C4
<b>3. ADDRESS OF OPERATOR:</b> 1001 Louisiana , Houston, TX, 77002		<b>9. API NUMBER:</b> 43013517250000
<b>PHONE NUMBER:</b> 713 997-5038 Ext		<b>9. FIELD and POOL or WILDCAT:</b> ALTAMONT
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 0915 FNL 0701 FEL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: NENE Section: 16 Township: 03.0S Range: 04.0W Meridian: U		<b>COUNTY:</b> DUCHESNE
		<b>STATE:</b> UTAH

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

TYPE OF SUBMISSION	TYPE OF ACTION		
<input checked="" type="checkbox"/> <b>NOTICE OF INTENT</b> Approximate date work will start: 11/12/2014	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> CASING REPAIR
<input type="checkbox"/> <b>SUBSEQUENT REPORT</b> Date of Work Completion:	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> CHANGE WELL NAME
<input type="checkbox"/> <b>SPUD REPORT</b> Date of Spud:	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> CONVERT WELL TYPE
<input type="checkbox"/> <b>DRILLING REPORT</b> Report Date:	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> NEW CONSTRUCTION
	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> PLUG BACK
	<input type="checkbox"/> PRODUCTION START OR RESUME	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION
	<input type="checkbox"/> REPERFORATE CURRENT FORMATION	<input type="checkbox"/> SIDETRACK TO REPAIR WELL	<input type="checkbox"/> TEMPORARY ABANDON
	<input type="checkbox"/> TUBING REPAIR	<input type="checkbox"/> VENT OR FLARE	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> WATER SHUTOFF	<input type="checkbox"/> SI TA STATUS EXTENSION	<input type="checkbox"/> APD EXTENSION
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	<input checked="" type="checkbox"/> OTHER	OTHER: <input type="text" value="See Below"/>

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

Downsize and deepen pump to 1.25 in.

**Accepted by the  
Utah Division of  
Oil, Gas and Mining  
FOR RECORD ONLY  
November 18, 2014**

<b>NAME (PLEASE PRINT)</b> Maria S. Gomez	<b>PHONE NUMBER</b> 713 997-5038	<b>TITLE</b> Principal Regulatory Analyst
<b>SIGNATURE</b> N/A	<b>DATE</b> 11/12/2014	

<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	<b>FORM 9</b>
<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>  Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.	5. LEASE DESIGNATION AND SERIAL NUMBER: Fee
1. TYPE OF WELL Oil Well	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
2. NAME OF OPERATOR: EP ENERGY E&P COMPANY, L.P.	7. UNIT or CA AGREEMENT NAME:
3. ADDRESS OF OPERATOR: 1001 Louisiana , Houston, TX, 77002	8. WELL NAME and NUMBER: Kushmaul 1-16C4
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0915 FNL 0701 FEL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NENE Section: 16 Township: 03.0S Range: 04.0W Meridian: U	9. API NUMBER: 43013517250000
3. ADDRESS OF OPERATOR: 1001 Louisiana , Houston, TX, 77002	PHONE NUMBER: 713 997-5038 Ext
9. FIELD and POOL or WILDCAT: ALTAMONT	COUNTY: DUCHESNE
STATE: UTAH	STATE: UTAH

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

TYPE OF SUBMISSION	TYPE OF ACTION		
<input checked="" type="checkbox"/> NOTICE OF INTENT Approximate date work will start: <b>8/18/2015</b>	<input checked="" type="checkbox"/> ACIDIZE	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> CASING REPAIR
<input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion:	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> CHANGE WELL NAME
<input type="checkbox"/> SPUD REPORT Date of Spud:	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> CONVERT WELL TYPE
<input type="checkbox"/> DRILLING REPORT Report Date:	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> NEW CONSTRUCTION
	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> PLUG BACK
	<input type="checkbox"/> PRODUCTION START OR RESUME	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION
	<input checked="" type="checkbox"/> REPERFORATE CURRENT FORMATION	<input type="checkbox"/> SIDETRACK TO REPAIR WELL	<input type="checkbox"/> TEMPORARY ABANDON
	<input type="checkbox"/> TUBING REPAIR	<input type="checkbox"/> VENT OR FLARE	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> WATER SHUTOFF	<input type="checkbox"/> SI TA STATUS EXTENSION	<input type="checkbox"/> APD EXTENSION
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> OTHER	OTHER: <input style="width: 100px;" type="text"/>

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

Infill perforations and acidize. See attached for details.

**Approved by the**  
**August 17, 2015**  
**Oil, Gas and Mining**

Date: \_\_\_\_\_

By:

<b>NAME (PLEASE PRINT)</b> Maria S. Gomez	<b>PHONE NUMBER</b> 713 997-5038	<b>TITLE</b> Principal Regulatory Analyst
<b>SIGNATURE</b> N/A	<b>DATE</b> 8/12/2015	

## **Kushmaul 1-16C4 Summary Procedure**

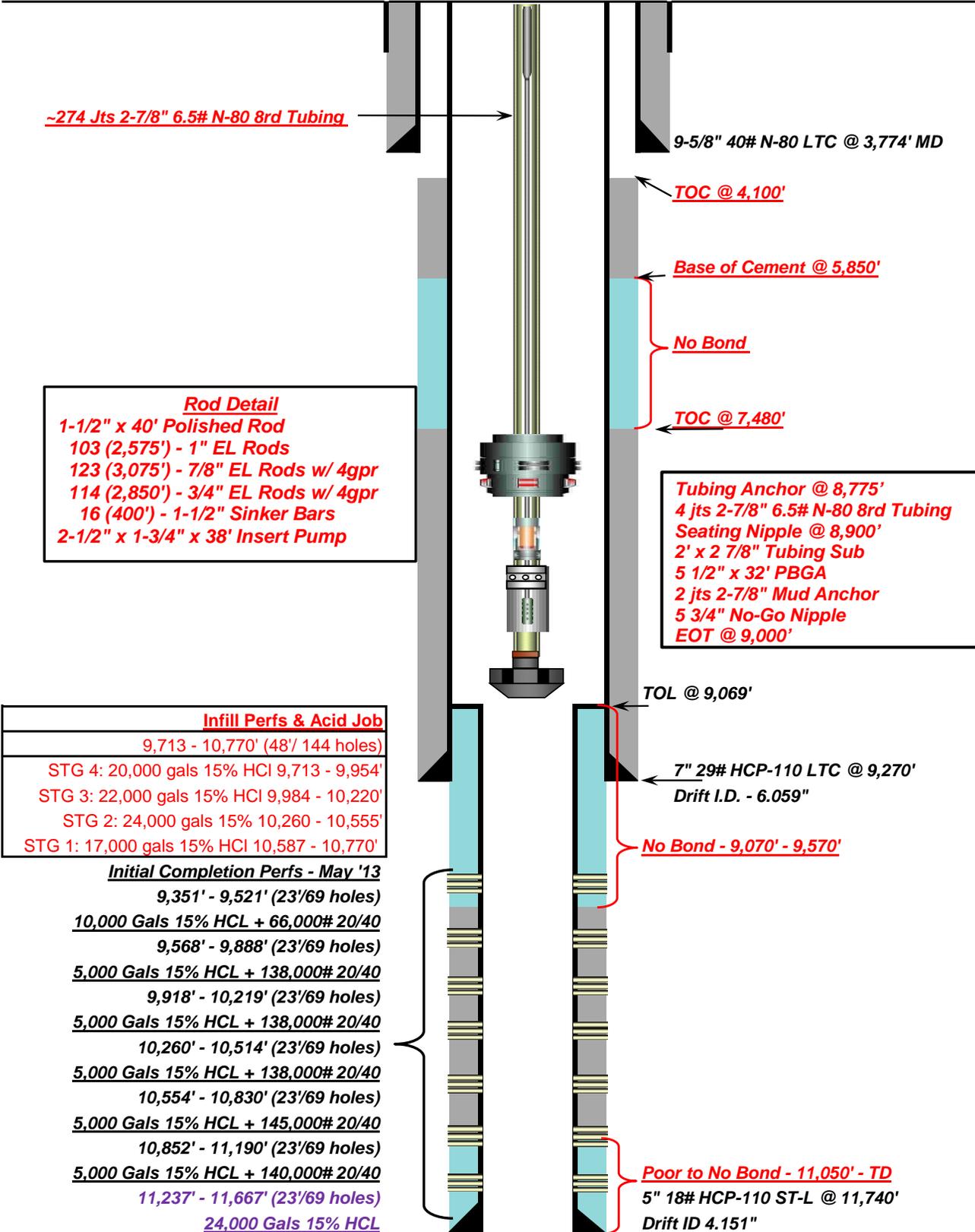
- POOH with rod pump and equipment, inspect/Repair/Re-furbish as needed. Replace any bad tubing and joints of rods.
- Perforate 36 infill perf shots (48' net) ranging **9,713' – 10,770'**.
- RIH with 5" 18# RBP and Packer and acidize the following stages. The depths noted are settings depths of the packer and plug (not perforations):
  - Stage 1:
    - 10,587' – 10,770'
    - **17,000 gals 15% HCl Acid**, 1,000 lbs diverter
  - Stage 2:
    - 10,260' – 10,555'
    - **24,000 gals 15% HCl Acid**, 1,200 lbs diverter
  - Stage 3:
    - 9,984' – 10,220'
    - **22,000 gals 15% HCl Acid**, 1,000 lbs diverter
  - Stage 4:
    - 9,713' – 9,954'(top may increase up to 9,650')
    - **20,000 gals 15% HCl Acid**, 1,000 lbs diverter
- RIH w/ AL equipment.
- Clean location and resume production.



**Proposed Pumping Schematic**

Company Name: EP Energy  
 Well Name: Kushmaul 1-16C4  
 Field, County, State: Altamont - Bluebell, Duchesne, Utah  
 Surface Location: Lat: 40°13'31.059N Long: 110°20'03.991W  
 Producing Zone(s): Wasatch

Last Updated: August 4, 2015  
 By: Krug  
 TD: 11,740'  
 NHOW: 19,000#  
 Pick Up: 33"



**Rod Detail**  
 1-1/2" x 40' Polished Rod  
 103 (2,575') - 1" EL Rods  
 123 (3,075') - 7/8" EL Rods w/ 4gpr  
 114 (2,850') - 3/4" EL Rods w/ 4gpr  
 16 (400') - 1-1/2" Sinker Bars  
 2-1/2" x 1-3/4" x 38' Insert Pump

**Tubing Anchor @ 8,775'**  
 4 jts 2-7/8" 6.5# N-80 8rd Tubing  
 Seating Nipple @ 8,900'  
 2' x 2 7/8" Tubing Sub  
 5 1/2" x 32' PBGA  
 2 jts 2-7/8" Mud Anchor  
 5 3/4" No-Go Nipple  
 EOT @ 9,000'

**Infill Perfs & Acid Job**

9,713 - 10,770' (48' / 144 holes)
STG 4: 20,000 gals 15% HCl 9,713 - 9,954'
STG 3: 22,000 gals 15% HCl 9,984 - 10,220'
STG 2: 24,000 gals 15% 10,260 - 10,555'
STG 1: 17,000 gals 15% HCl 10,587 - 10,770'

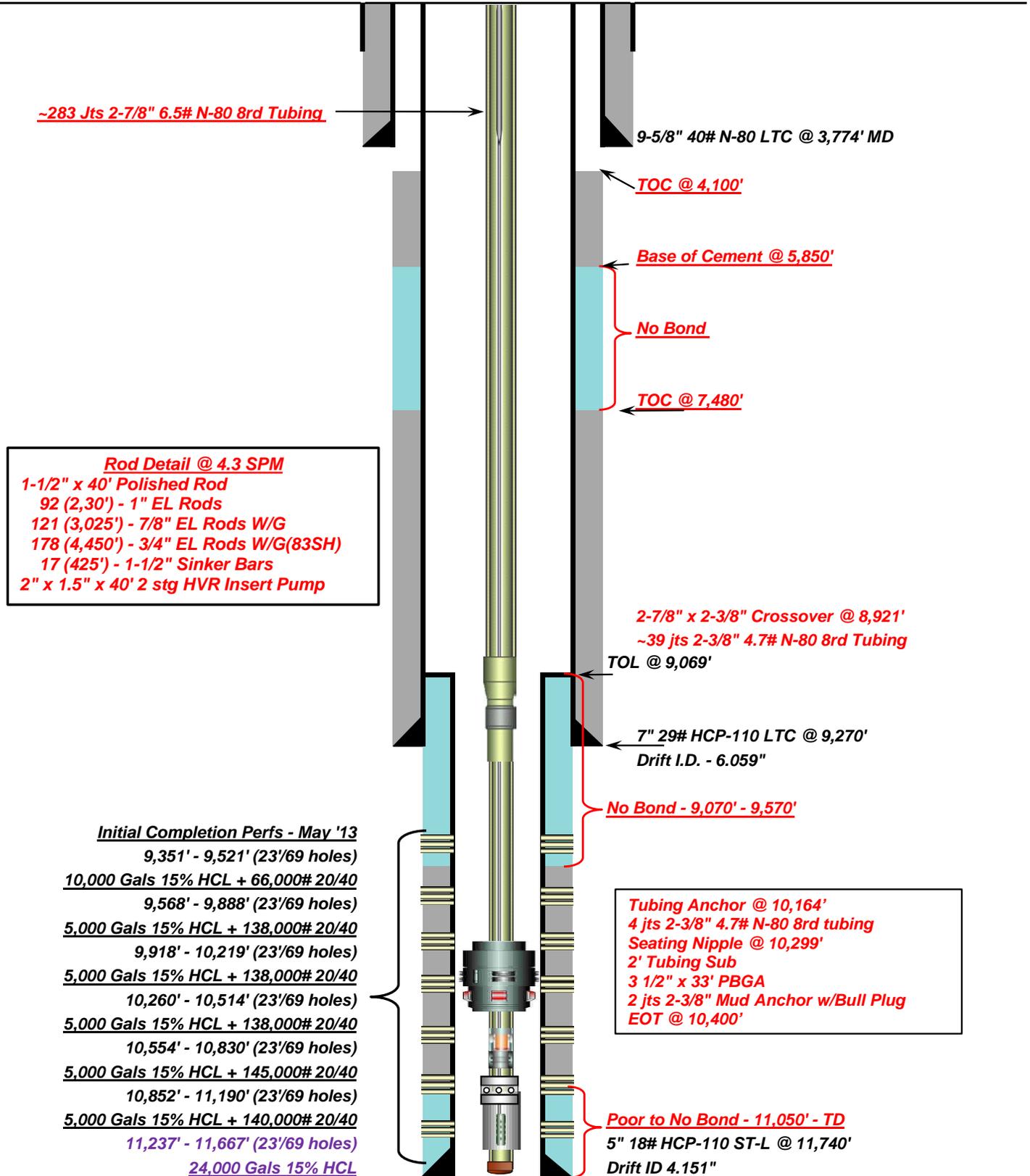
- Initial Completion Perfs - May '13**
- 9,351' - 9,521' (23'/69 holes)  
10,000 Gals 15% HCL + 66,000# 20/40
  - 9,568' - 9,888' (23'/69 holes)  
5,000 Gals 15% HCL + 138,000# 20/40
  - 9,918' - 10,219' (23'/69 holes)  
5,000 Gals 15% HCL + 138,000# 20/40
  - 10,260' - 10,514' (23'/69 holes)  
5,000 Gals 15% HCL + 138,000# 20/40
  - 10,554' - 10,830' (23'/69 holes)  
5,000 Gals 15% HCL + 145,000# 20/40
  - 10,852' - 11,190' (23'/69 holes)  
5,000 Gals 15% HCL + 140,000# 20/40
  - 11,237' - 11,667' (23'/69 holes)  
24,000 Gals 15% HCL



**Current Pumping Schedule**

Company Name: EP Energy  
 Well Name: Kushmaul 1-16C4  
 Field, County, State: Altamont - Bluebell, Duchesne, Utah  
 Surface Location: Lat: 40°13'31.059N Long: 110°20'03.991W  
 Producing Zone(s): Wasatch

Last Updated: July 23, 2015  
 By: Krug  
 TD: 11,740'  
 NHOW: 19,000#  
 Pick Up: 33"



<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		FORM 9  5. LEASE DESIGNATION AND SERIAL NUMBER: Fee
<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>  Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
1. TYPE OF WELL Oil Well		7. UNIT or CA AGREEMENT NAME:
2. NAME OF OPERATOR: EP ENERGY E&P COMPANY, L.P.		8. WELL NAME and NUMBER: Kushmaul 1-16C4
3. ADDRESS OF OPERATOR: 1001 Louisiana , Houston, TX, 77002		9. API NUMBER: 43013517250000
4. LOCATION OF WELL FOOTAGES AT SURFACE: 0915 FNL 0701 FEL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NENE Section: 16 Township: 03.0S Range: 04.0W Meridian: U		9. FIELD and POOL or WILDCAT: ALTAMONT
		COUNTY: DUCHESNE
		STATE: UTAH

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

TYPE OF SUBMISSION	TYPE OF ACTION		
<input checked="" type="checkbox"/> NOTICE OF INTENT Approximate date work will start: 3/8/2016	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> CASING REPAIR
<input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion:	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> CHANGE WELL NAME
<input type="checkbox"/> SPUD REPORT Date of Spud:	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> CONVERT WELL TYPE
<input type="checkbox"/> DRILLING REPORT Report Date:	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> NEW CONSTRUCTION
	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> PLUG BACK
	<input type="checkbox"/> PRODUCTION START OR RESUME	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input checked="" type="checkbox"/> RECOMPLETE DIFFERENT FORMATION
	<input type="checkbox"/> REPERFORATE CURRENT FORMATION	<input type="checkbox"/> SIDETRACK TO REPAIR WELL	<input type="checkbox"/> TEMPORARY ABANDON
	<input type="checkbox"/> TUBING REPAIR	<input type="checkbox"/> VENT OR FLARE	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> WATER SHUTOFF	<input type="checkbox"/> SI TA STATUS EXTENSION	<input type="checkbox"/> APD EXTENSION
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> OTHER	OTHER: <input style="width: 100px;" type="text"/>

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

Recomplete well to LGR. Please see attached for details.

**Approved by the**  
**March 07, 2016**  
**Oil, Gas and Mining**

Date: \_\_\_\_\_

By: DeKQ Duff

NAME (PLEASE PRINT) Maria S. Gomez	PHONE NUMBER 713 997-5038	TITLE Principal Regulatory Analyst
SIGNATURE N/A	DATE 2/26/2016	

## *Kushmal 1-16C4 Recom Summary Procedure*

- POOH with rods, pump & tubing. Inspect/Repair/Re-furbish as needed. Replace any bad tubing and joints of rods.
- Set 15k CBP for 5" 18# casing w/ 15' cmt @ 9,200'.
- Stage 1:
  - Perforate new CP70 interval from **9,010' – 9,055'**.
  - Prop Frac Perforations with **30,000** lbs 30/50 prop (w/ **3,000** lbs 100 mesh & **8,000** gals 15% HCl acid (Stage 1 Recom).
- Stage 2:
  - RIH with 7" CBP & set @ 8,795'.
  - Perforate new LGR 70 interval from **8,722' – 8,782'**.
  - Prop Frac Perforations with **40,000** lbs 30/50 prop (w/ **3,000** lbs 100 mesh & **8,000** gals 15% HCl acid (Stage 2 Recom).
- Stage 3:
  - RIH w/ 7" CBP & set @ 8,370'.
  - Perforate new LGR interval from **8,179' – 8,355'**.
  - Acid Frac perforations with **22,000** gals 15% HCl acid (Stage 3 Recom).
- Stage 4:
  - RIH w/ 7" CBP & set @ 8,135'.
  - Perforate new LGR interval from **7,874' – 8,095'**.
  - Acid Frac perforations with **24,000** gals 15% HCl acid) (Stage 4 Recom).
- Clean out well drilling up (3) 7" CBPs leaving 5" 15k CBP w/15' cmt @ 9,200'. (PBD @ 9,200')  
Top perf BELOW plugs @ 9,356'.
- RIH w/ production tubing and rods.
- Clean location and resume production.

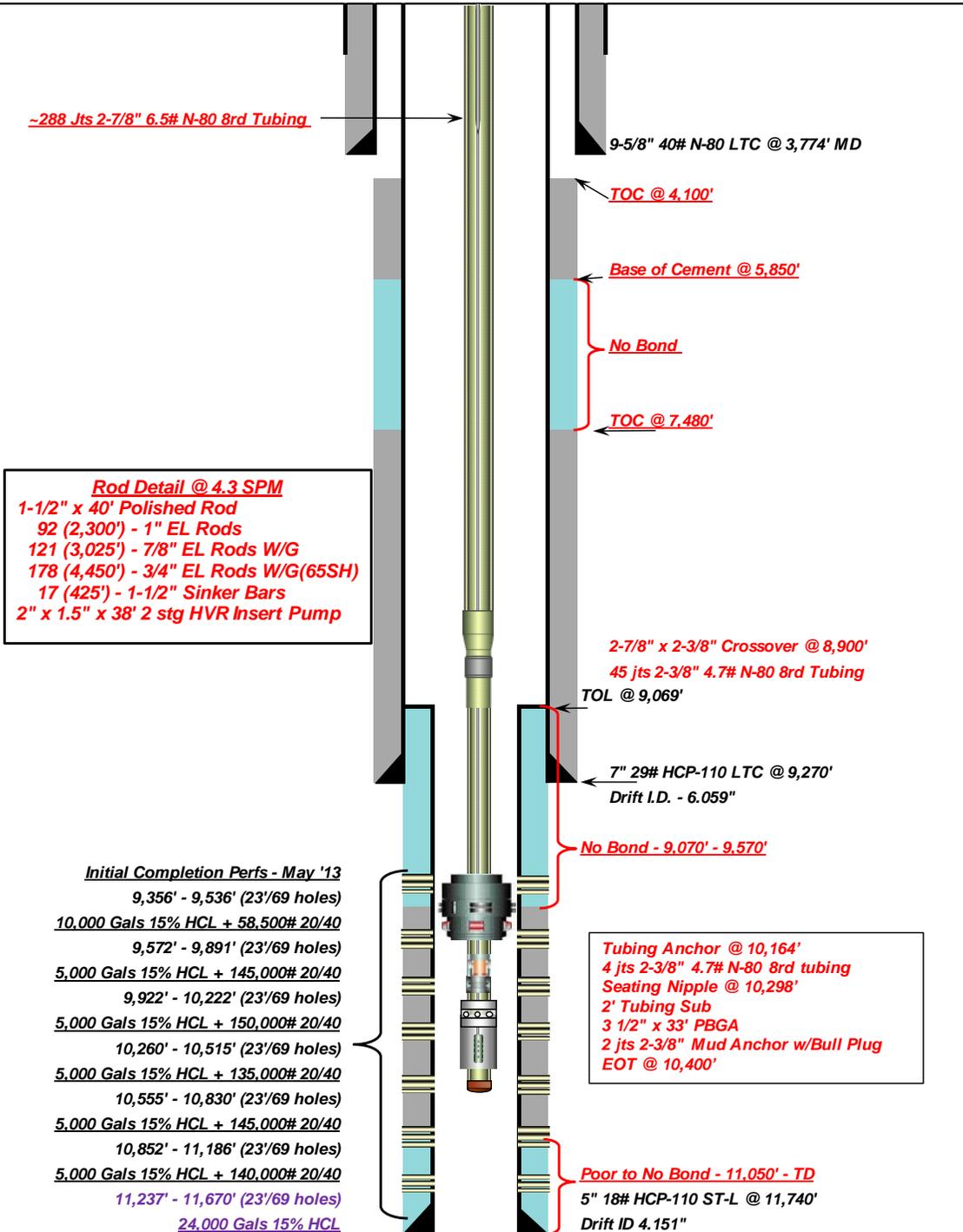
**Current WBD:**



**Pumping Schematic**

Company Name: EP Energy  
 Well Name: Kushmaul 1-16C4  
 Field, County, State: Altamont - Bluebell, Duchesne, Utah  
 Surface Location: Lat: 40°13'31.059N Long: 110°20'03.991W  
 Producing Zone(s): Wasatch

Last Updated: October 30, 2014  
 By: Tomova  
 TD: 11,740'  
 NHOW: 19,000#  
 Pick Up: 33"



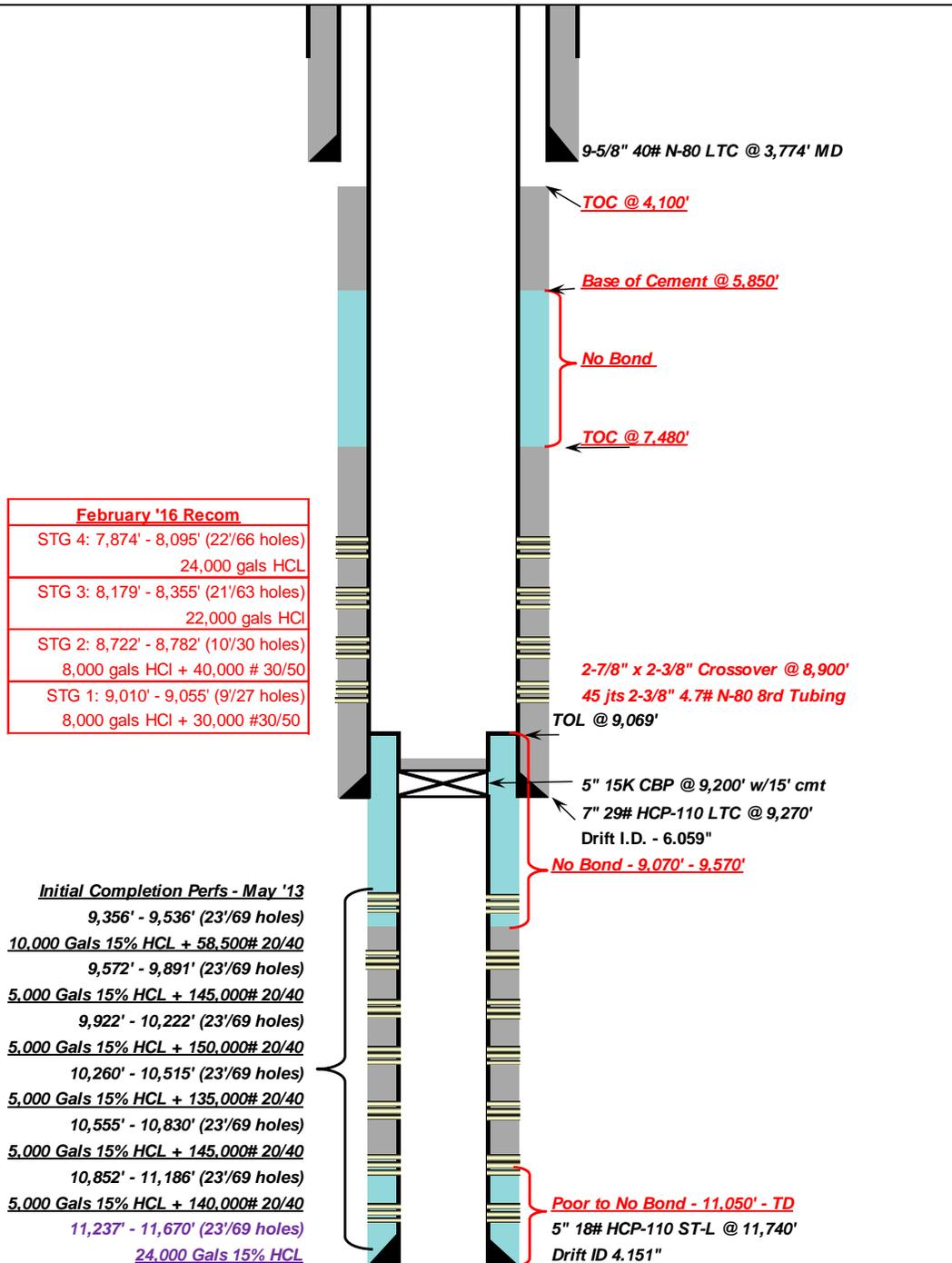
**Proposed WBD:**



**Pumping Schematic**

Company Name: EP Energy  
 Well Name: Kushmaul 1-16C4  
 Field, County, State: Altamont - Bluebell, Duchesne, Utah  
 Surface Location: Lat: 40°13'31.059N Long: 110°20'03.991W  
 Producing Zone(s): Wasatch

Last Updated: February 25, 2016  
 By: Fondren  
 TD: 11,740'  
 NHOW: 19,000#  
 Pick Up: 33"



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

**RECOMPLETION**

AMENDED REPORT  FORM 8  
(highlight changes)

<b>WELL COMPLETION OR RECOMPLETION REPORT AND LOG</b>		5. LEASE DESIGNATION AND SERIAL NUMBER:
1a. TYPE OF WELL: OIL WELL <input type="checkbox"/> GAS WELL <input type="checkbox"/> DRY <input type="checkbox"/> OTHER _____		6. IF INDIAN, ALLOTTEE OR TRIBE NAME
b. TYPE OF WORK: NEW WELL <input type="checkbox"/> HORIZ. LATS. <input type="checkbox"/> DEEP-EN <input type="checkbox"/> RE-ENTRY <input type="checkbox"/> DIFF. RESVR. <input type="checkbox"/> OTHER _____		7. UNIT or CA AGREEMENT NAME
2. NAME OF OPERATOR:		8. WELL NAME and NUMBER:
3. ADDRESS OF OPERATOR: CITY _____ STATE _____ ZIP _____		9. API NUMBER:
PHONE NUMBER: _____		10 FIELD AND POOL, OR WILDCAT
4. LOCATION OF WELL (FOOTAGES) AT SURFACE:  AT TOP PRODUCING INTERVAL REPORTED BELOW:  AT TOTAL DEPTH:		11. QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:  U. S. B. & M.
12. COUNTY		13. STATE <b>UTAH</b>

14. DATE SPUDDED:	15. DATE T.D. REACHED:	16. DATE COMPLETED:	ABANDONED <input type="checkbox"/> READY TO PRODUCE <input type="checkbox"/>	17. ELEVATIONS (DF, RKB, RT, GL):
18. TOTAL DEPTH: MD _____ TVD _____	19. PLUG BACK T.D.: MD _____ TVD _____	20. IF MULTIPLE COMPLETIONS, HOW MANY? *	21. DEPTH BRIDGE MD _____ PLUG SET: TVD _____	
22. TYPE ELECTRIC AND OTHER MECHANICAL LOGS RUN (Submit copy of each)			23. WAS WELL CORED? NO <input type="checkbox"/> YES <input type="checkbox"/> (Submit analysis) WAS DST RUN? NO <input type="checkbox"/> YES <input type="checkbox"/> (Submit report) DIRECTIONAL SURVEY? NO <input type="checkbox"/> YES <input type="checkbox"/> (Submit copy)	

**24. CASING AND LINER RECORD (Report all strings set in well)**

HOLE SIZE	SIZE/GRADE	WEIGHT (#/ft.)	TOP (MD)	BOTTOM (MD)	STAGE CEMENTER DEPTH	CEMENT TYPE & NO. OF SACKS	SLURRY VOLUME (BBL)	CEMENT TOP **	AMOUNT PULLED

**25. TUBING RECORD**

SIZE	DEPTH SET (MD)	PACKER SET (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)

26. PRODUCING INTERVALS					27. PERFORATION RECORD				
FORMATION NAME	TOP (MD)	BOTTOM (MD)	TOP (TVD)	BOTTOM (TVD)	INTERVAL (Top/Bot - MD)	SIZE	NO. HOLES	PERFORATION STATUS	
(A)								Open <input type="checkbox"/>	Squeezed <input type="checkbox"/>
(B)								Open <input type="checkbox"/>	Squeezed <input type="checkbox"/>
(C)								Open <input type="checkbox"/>	Squeezed <input type="checkbox"/>
(D)								Open <input type="checkbox"/>	Squeezed <input type="checkbox"/>

**28. ACID, FRACTURE, TREATMENT, CEMENT SQUEEZE, ETC.**

DEPTH INTERVAL	AMOUNT AND TYPE OF MATERIAL

29. ENCLOSED ATTACHMENTS:  <input type="checkbox"/> ELECTRICAL/MECHANICAL LOGS <input type="checkbox"/> SUNDRY NOTICE FOR PLUGGING AND CEMENT VERIFICATION	<input type="checkbox"/> GEOLOGIC REPORT <input type="checkbox"/> CORE ANALYSIS	<input type="checkbox"/> DST REPORT <input type="checkbox"/> OTHER: _____	<input type="checkbox"/> DIRECTIONAL SURVEY	30. WELL STATUS:
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**31. INITIAL PRODUCTION**

**INTERVAL A (As shown in item #26)**

DATE FIRST PRODUCED:		TEST DATE:		HOURS TESTED:		TEST PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	PROD. METHOD:
CHOKE SIZE:	TBG. PRESS.	CSG. PRESS.	API GRAVITY	BTU – GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	INTERVAL STATUS:

**INTERVAL B (As shown in item #26)**

DATE FIRST PRODUCED:		TEST DATE:		HOURS TESTED:		TEST PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	PROD. METHOD:
CHOKE SIZE:	TBG. PRESS.	CSG. PRESS.	API GRAVITY	BTU – GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	INTERVAL STATUS:

**INTERVAL C (As shown in item #26)**

DATE FIRST PRODUCED:		TEST DATE:		HOURS TESTED:		TEST PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	PROD. METHOD:
CHOKE SIZE:	TBG. PRESS.	CSG. PRESS.	API GRAVITY	BTU – GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	INTERVAL STATUS:

**INTERVAL D (As shown in item #26)**

DATE FIRST PRODUCED:		TEST DATE:		HOURS TESTED:		TEST PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	PROD. METHOD:
CHOKE SIZE:	TBG. PRESS.	CSG. PRESS.	API GRAVITY	BTU – GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	INTERVAL STATUS:

**32. DISPOSITION OF GAS (Sold, Used for Fuel, Vented, Etc.)**

**33. SUMMARY OF POROUS ZONES (Include Aquifers):**

Show all important zones of porosity and contents thereof: Cored intervals and all drill-stem tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures and recoveries.

**34. FORMATION (Log) MARKERS:**

Formation	Top (MD)	Bottom (MD)	Descriptions, Contents, etc.	Name	Top (Measured Depth)

**35. ADDITIONAL REMARKS (Include plugging procedure)**

**36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records.**

NAME (PLEASE PRINT) \_\_\_\_\_ TITLE \_\_\_\_\_  
 SIGNATURE \_\_\_\_\_ DATE \_\_\_\_\_

This report must be submitted within 30 days of

- completing or plugging a new well
- drilling horizontal laterals from an existing well bore
- recompleting to a different producing formation
- reentering a previously plugged and abandoned well
- significantly deepening an existing well bore below the previous bottom-hole depth
- drilling hydrocarbon exploratory holes, such as core samples and stratigraphic tests

\* ITEM 20: Show the number of completions if production is measured separately from two or more formations.

\*\* ITEM 24: Cement Top – Show how reported top(s) of cement were determined (circulated (CIR), calculated (CAL), cement bond log (CBL), temperature survey (TS)).

Send to: Utah Division of Oil, Gas and Mining Phone: 801-538-5340  
 1594 West North Temple, Suite 1210  
 Box 145801 Fax: 801-359-3940  
 Salt Lake City, Utah 84114-5801



## CENTRAL DIVISION

ALTAMONT FIELD  
KUSHMAUL 1-16C4  
KUSHMAUL 1-16C4  
RECOMPLETE LAND

### **Operation Summary Report**

Disclaimer: Although the information contained in this report is based on sound engineering practices, the copyright owner(s) does (do) not accept any responsibility whatsoever, in negligence or otherwise, for any loss or damage arising from the possession or use of the report whether in terms of correctness or otherwise. The application, therefore, by the user of this report or any part thereof, is solely at the user's own risk.

**1 General****1.1 Customer Information**

Company	CENTRAL DIVISION
Representative	
Address	

**1.2 Well Information**

Well	KUSHMAUL 1-16C4		
Project	ALTAMONT FIELD	Site	KUSHMAUL 1-16C4
Rig Name/No.		Event	RECOMPLETE LAND
Start date	3/15/2016	End date	
Spud Date/Time	1/22/2013	UWI	KUSHMAUL 1-16C4
Active datum	KB @5,983.5usft (above Mean Sea Level)		
Afe No./Description	166434/56406 / KUSHMAUL 1-16C4		

**2 Summary****2.1 Operation Summary**

Date	Time Start-End	Duration (hr)	Phase	Activity Code	Sub	OP Code	MD from (usft)	Operation
3/17/2016	6:00 7:30	1.50	WOR	28		P		CREW TRAVEL HELD SAFETY MEETING ON MOVING RIG. FILLED OUT AND REVIEWED JSA.
	7:30 9:30	2.00	MIRU	01		P		MOVED RIG FROM THE 1-30Z1 TO THE 1-16C4 MIRU WHILE PUMPING 60 BBLS DOWN CSG.
	9:30 10:30	1.00	WOR	18		P		WHILE TRYING TO UNSEAT PUMP PARTED PULL ROD.
	10:30 13:00	2.50	WOR	39		P		TOOH W/ 92-1", 121-7/8", 178-3/4",17-1 1/2" C BARS AND PULL ROD.
	13:00 14:30	1.50	WLWORK	21		P		RU WIRELINE RIH PERFORATE TUBING @ 10245'. RD WIRELINE
	14:30 16:30	2.00	WOR	39		P		RIH W/ 97-3/4" RODS. FLUSHED TBG W/ 30 BBLS. LD 97-3/4" RODS AS PER NEW ROD DESIGN.
	16:30 18:00	1.50	WOR	16		P		ND WELLHEAD. NU AND TESTED BOP @ 5000 PSI. HELD. RU RIG FLOOR RELEASE TAC CLOSED IN WELL. CLOSED AND LOCKED PIPE RAMS, CLOSED CSG VALVES AND INSTALLED NIGHT CAPS. CLOSED TIW VALVE AND INSTALLED NIGHT CAP. SDFN.
3/18/2016	6:00 7:30	1.50	WOR	28		P		CREW TRAVEL HELD SAFETY MEETING ON SCANNING TBG. FILLED OUT AND REVIEWED JSA.
	7:30 12:30	5.00	WOR	39		P		RU SCANNERS. TOOH SCANNING 288-JTS 2 7/8 L-80 EUE TBG,217-JTS YELLOW, 30-JTS BLUE AND 41-JTS RED. RD SCANNERS. LD 39-JTS 2 3/8 L-80 EUE TBG, 5" TAC,4-JTS 2 3/8 L-80 EUE TBG AND BHA. FLUSHING TUBING AS NEEDED W/ 60 BBLS.
	12:30		WLWORK	26		P		RU WIRELINE RIH W/ 6" GR/JB TO LINER TOP @ 9064', RIH W/ 4" GR/JB TO 9260'. SET 5" 15K CBP @ 9200' DUMPED BAILED 20' CEM. RD WIRELINE. CLOSED IN WELL. CLOSED AND LOCKED BLIND RAMS, CLOSED CSG VALVES AND INSTALLED NIGHT CAPS. SDFN
3/19/2016	6:00 7:30	1.50	WOR	28		P		CREW TRAVEL HELD SAFETY MEETING ON NIPPLING DOWN BOP. FILLED OUT AND REVIEWED JSA.
	7:30 8:30	1.00	WOR	16		P		ND 5 K BOP. NU 7" 10K MANUAL FRAC VALVE. FILLED CSG W/ 80 BBLS. PRESSURE TEST @ 8000 PSI HELD.
	8:30 9:30	1.00	WOR	06		P		FILLED CSG W/ 80 BBLS FLUID LEVEL ~2150'. PRESSURE TEST CSG @ 8000 PSI HELD.
	9:30 13:00	3.50	WOR	16		P		RAN FLOWBACK LINES, NU FRAC STACK. PRESSURE TEST FRAC STACK @ 9500 PSI HELD, PRESSURE TEST FLOWBACK LINES @ 8000 PSI HELD.,

## 2.1 Operation Summary (Continued)

Date	Time Start-End	Duration (hr)	Phase	Activity Code	Sub	OP Code	MD from (usft)	Operation
	13:00 15:00	2.00	WLWORK	21		P		RU WIRELINE. PERFORATED STAGE # 1 FROM 9055' TO 9010'. ALL PERFS CORRELATED TO LONE WOLF RADIAL CBL, GAMMA RAY, CCL LOG RUN #1 DATED 2/21/2013. 9 NET FT. 27 SHOTS. USING 3 1/8" GUNS, 22.7 GM CHARGES, 3 SPF, 120 PHASING. STARTING PRESSURE 1000 PSI. FINAL PRESSURE 900 PSI. RD WIRELINE SHUT IN WELL, CLOSED AND LOCKED FRAC VALVES. CLOSED CSG VALVES AND INSTALLED NIGHT CAPS. SDFN.
3/20/2016	6:00 8:30	2.50	SITEPRE	28		P		CREW TRAVEL HELD SAFETY MEETING ON HEATING FRAC WATER. FILLED OUT AND REVIEWED JSA.
	8:30 8:30	0.00	SITEPRE	18		P		HEATED 10,500 BBLS FRESH WATER TO 120 DEGREES.
3/21/2016	6:00 8:00	2.00	MIRU	42		P		CREW TRAVEL HELD SAFETY MEETING ON RU FRAC EQUIPMENT. FILLED OUT AND REVIEWED JSA.
	8:00 14:00	6.00	MIRU	01		P		MIRU FRAC EQUIPMENT.
3/22/2016	6:00 6:30	0.50	STG01	28		P		HELD SAFETY MEETING ON PUMPING HIGH PRESSURE. FILLED OUT AND REVIEWED JSA.
	6:30 7:30	1.00	STG01	18		P		STARTED EQUIPMENT. PRESSURE TEST LINES @ 9600 PSI.
	7:30 9:00	1.50	STG01	35		P		OPENED UP WELL W/ 920 PSI. BREAK DOWN STAGE # 1 PERFS @ 4152 PSI, 6 BPM. TREATED PERFS W/ 7000 GALS 15% HCL ACID. FLUSHED TO BTM PERF 345 BBLS. ISIP 2961. F.G. .76. 5 MIN 2770 PSI, 10 MIN 2689 PSI 15 MIN 2637 PSI. PUMPED 5058 LBS 100 MESH IN 1/2 PPG STAGE AND 32467 LBS WHITE 30/50. IN .5#, 1#, 1.75# AND 2.5# STAGES. AVG RATE 72.4 BPM, MAX RATE 76.2 BPM. AVG PRESS 5621 PSI, MAX PRESS 6417 PSI. I.S.I.P. 3068 PSI. F.G. .773. 5 MIN 2886 PSI, 10 MIN 2832 PSI. SHUT WELL IN. 2321 BBLS TO RECOVER TURN WELL OVER TO WIRELINE
	9:00 11:30	2.50	STG02	21		P		RU WIRELINE. SET CBP @ 8797' W/ 2500 PSI. PERFORATED STAGE # 2 FROM 8782' TO 8722'. ALL PERFS CORRELATED TO LONE WOLF RADIAL CBL, GAMMA RAY, CCL LOG RUN #1 DATED 2/21/2013. 10 NET FT. 30 SHOTS. USING 3 1/8" GUNS, 22.7 GM CHARGES, 3 SPF, 120 PHASING. STARTING PRESSURE 2500 PSI. FINAL PRESSURE 2300 PSI. TURN WELL OVER TO FRAC CREW.
	11:30 13:00	1.50	STG02	35		P		PRESSURE TEST LINES @ 9590 PSI. OPENED UP WELL W/ 1039 PSI. BREAK DOWN STAGE # 2 PERFS @ 3994 PSI, 5.9 BPM. TREATED PERFS W/ 9000 GALS 15% HCL ACID. FLUSHED TO BTM PERF 334 BBLS. ISIP 1817. F.G. .64. 5 MIN 1370 PSI, 10 MIN 1138 PSI 15 MIN 1013 PSI. PUMPED 5402 LBS 100 MESH IN 1/2 PPG STAGE AND 34193 LBS WHITE 30/50. IN .5#, 1#, 1.75# AND 2.5# STAGES. AVG RATE 75.5 BPM, MAX RATE 76.1 BPM. AVG PRESS 4349 PSI, MAX PRESS 4801 PSI. I.S.I.P. 2475 PSI. F.G. .716. 5 MIN 2102 PSI, 10 MIN 2044 PSI. SHUT WELL IN. 2370 BBLS TO RECOVER TURN WELL OVER TO WIRELINE
	13:00 15:00	2.00	STG03	21		P		RU WIRELINE. SET CBP @ 8370' W/ 1400 PSI. PERFORATED STAGE # 3 FROM 8355' TO 8179'. ALL PERFS CORRELATED TO LONE WOLF RADIAL CBL, GAMMA RAY, CCL LOG RUN #1 DATED 2/21/2013. 21 NET FT. 63 SHOTS. USING 3 1/8" GUNS, 22.7 GM CHARGES, 3 SPF, 120 PHASING. STARTING PRESSURE 1400 PSI. FINAL PRESSURE 1100 PSI. TURN WELL OVER TO FRAC CREW.
	15:00 16:00	1.00	STG03	35		P		PRESSURE TEST @ 9550 PSI. OPENED WELL W/ 550 PSI. BREAK DOWN STAGE # 3 PERFS @ 3409 PSI 6.1 BPM. TREATED PERFS W/ 6000 GALS 15% HCL ACID. DROPPED 63 BIO BALLS IN 70 BBL SPACER. THEN PUMPED 6000 GAL 15% HCL. AVG RATE 32.1 BPM, MAX RATE 50.4 BPM. AVG PRESS 2265 PSI, MAX PRESS 3409 PSI. I.S.I.P. 1713 PSI, F.G. .640. 5 MIN 1434 PSI. 10 MIN 1190 PSI. SHUT IN WELL. 650 BBLS TO RECOVER. TURNED WELL OVER TO WIRELINE

## 2.1 Operation Summary (Continued)

Date	Time Start-End	Duration (hr)	Phase	Activity Code	Sub	OP Code	MD from (usft)	Operation
	16:00 18:00	2.00	STG04	21		P		RU WIRELINE. SET CBP @ 8110' W/ 750 PSI. PERFORATED STAGE # 4 FROM 8095' TO 7874'. ALL PERFS CORRELATED TO LONE WOLF RADIAL CBL, GAMMA RAY, CCL LOG RUN #1 DATED 2/21/2013. 21 NET FT. 63 SHOTS. USING 3 1/8" GUNS, 22.7 GM CHARGES, 3 SPF, 120 PHASING. STARTING PRESSURE 750 PSI. FINAL PRESSURE 200 PSI. CLOSED IN WELL. CLOSED AND LOCKED FRAC VALVES. CLOSED CSG VALVES AND INSTALLED NIGHT CAPS. SDFN.
3/23/2016	6:00 6:30	0.50	STG04	28		P		HELD SAFETY MEETING ON PROPER PPE. FILLED OUT AND REVIEWED JSA.
	6:30 8:00	1.50	STG04	35		P		PRESSURE TEST LINES @ 9500. OPENED WELL W/ 240 PSI. BREAK DOWN STAGE # 4 PERFS @ 1791 PSI 10.2 BPM. EST INJECTION RATE 47.4 BPM 2307 PSI. I.S.I.P. 1410 PSI F.G. .61. 5 MIN 1096 PSI, 10 MIN 947 PSI, 15 MIN 854 PSI. TREATED PERFS W/ 18918 GALS 15% HCL ACID. DROPPED 66 BIO BALLS EVERY 4000 GALS. AVG RATE 33.3 BPM, MAX RATE 50.4 BPM. AVG PRESS 2039 PSI, MAX PRESS 4454 PSI. I.S.I.P. 1510 PSI, F.G. .622. 5 MIN 1395 PSI. 10 MIN 1357 PSI. SHUT IN WELL. 840 BBLS TO RECOVER
	8:00 11:00	3.00	RDMO	02		P		RD AND MOVE FRAC EQUIPMENT..
	11:00 6:00	19.00	FB	19		P		OPENED WELL 950 PSI ON 12/64 CHOKE.  64/64 CHOKE, 0 PSI, RECOVERED OMC, 0 BBLS OIL, 162 BBLS H2O
3/24/2016	6:00 7:30	1.50	WOR	28		P		CREW TRAVEL HELD SAFETY MEETING ON NIPPLING DOWN FRAC VALVES. FILLED OUT AND REVIEWED JSA.
	7:30 10:00	2.50	WOR	16		P		WELL DEAD, NIPPLED DOWN FRAC STACK TO 7" MASTER VALVE. NIPPLE UP AND PRESSURE TESTED 5K BOPE.
	10:00 11:30	1.50	WOR	06		P		WELL STARTED TO FLOW A LITTLE BIT OF WATER PUMPED 100 BBLS BRINE DOWN CTG @ 1200 PSI 5 BPM. ISIP 700 PSI. BLEED DOWN WELL.
	11:30 15:00	3.50	WOR	39		P		TALLIED AND RIH W/ 6" BIT. BIT SUB AND 259- JTS 2 7/8 L-80 EUE TBG. TAGGED CBP SET @ 8110'. RU POWER SWIVEL.
	15:00 15:00	0.00	WOR	10		P		PUMPED 10 BBLS BREAK REVERSE CIRCULATION PUMPING 3 BPM AND RETURNING 3 BPM. DRILLED OUT CBP SET @ 8110' (8113' TBG TALLY). CIRCULATE TBG CLEAN. RD POWER SWIVEL, TOOH W/ 12-JTS EOT @ 9704'. CLOSED IN WELL. CLOSED AND LOCKED PIPE RAMS, CLOSED CSG VALVES AND INSTALLED NIGHT CAPS. CLOSED TIW VALVE AND INSTALLED NIGHT CAP. SDFN.
3/25/2016	6:00 7:30	1.50	WOR	28		P		CREW TRAVEL HELD SAFETY MEETING. ON TRIPPING TUBING. FILLED OUT AND REVIEWED JSA.
	7:30 16:00	8.50	WOR	10		P		150 TSIP. 200 CSIP. BLEED DOWN WELL, RIH W/ 20-JTS 2 7/8 L-80 EUE TBG TAGGED CBP @ 8370' RU POWER SWIVEL. PUMPED 5 BBLS BREAK REVERSE CIRCULATION. PUMPING 3 BPM AND RETURNING 3 BPM. DRILLED OUT CBP SET @ 8370'. CIRCULATE TBG CLEAN. PUMPED 15 BBLS 10# BRINE DOWN TBG RD POWER SWIVEL.. RIH TAGGED @ 8767' RU POWER SWIVEL WASHED DOWN TO CBP 8797' DRILLED OUT CBP. CIRCULATE TBG CLEAN. PUMPED 15 BBLS 10# BRINE DOWN TBG. SWIVELED DOWN TO LINER TOP @ 9054' TTL 289-JTS 2 7/8 L-80 EUE TBG IN WELL. CIRCULATE TBG CLEAN. PUMPED 25 BBLS 10# BRINE DOWN TBG. RD POWER SWIVEL
	16:00 17:30	1.50	WOR	39		P		LD 41-JTS 2 7/8 L-80. RACKED OUT POWER SWIVEL. CLOSED TIW VALVE AND INSTALLED NIGHT CAP. LEFT CSG OPEN TO FLOWBACK TANK, TURNED WELL OVER TO FLOWBACK CREW.
	17:30 6:00	12.50	FB	19		P		500 PSI, 18/64 CHOKE. RECOVERED 0 MCF, 0 BBLS OIL, 450 BBLS H2O

## 2.1 Operation Summary (Continued)

Date	Time Start-End	Duration (hr)	Phase	Activity Code	Sub	OP Code	MD from (usft)	Operation
3/26/2016	6:00 7:00	1.00	WOR	28		P		CREW TRAVEL HELD SAFETY MEETING ON H.E.L.P. FILLED OUT AND REVIEWED JSA.
	7:00 10:00	3.00	WHDTR	18		P		CLOSED IN CSG OPENED TBG TO FLOWBACK TANK. FLOWED BACK 25 BBLS WATER. CLOSED IN TBG. PLUMBED TBG INTO FLOW LINE. OPENED TBG TO TREATER. 325 PSI. ON 18/64 CHOKE.
	10:00 6:00	20.00	FB	19		P		275 PSI, 28/64 CHOKE. RECOVERED: 202 BBLS OIL, 425 BBLS H2O. FLARING GAS.
3/27/2016	6:00 6:30	0.50	FB	28		P		HELD SAFETY MEETING ON FLOWBACK PROCEDURES. FILLED OUT AND REVIEWED JSA.
	6:30 6:00	23.50	FB	19		P		225 PSI. 28/64 CHOKE. RECOVERED 159 MCF, 433 BBLS OIL, 522 BBLS H2O.
3/28/2016	6:00 6:30	0.50	FB	28		P		HELD SAFETY MEETING ON FLOWBACK PROCEDURES. FILLED OUT AND REVIEWED JSA.
	6:30 14:00	7.50	FB	19		P		WELL DIED @ 13:00.
	14:00 16:30	2.50	WLWORK	32		P		RU SLICKLINE RIH W/ WAX KNIFE TO 6000'. NO WAX PLUG. RD SLICKLINE. OPENED TBG TO FLOWBACK TANK.
	16:30 6:00	13.50	FB	19		P		WELL STARTED FLOWING @ 1:00 AM.  0 PSI. 64/64 CHOKE WELL DIED @ 13:00. RECOVERED 6 BBLS OIL, 235 BBLS H2O, 60 MCF
3/29/2016	6:00 7:30	1.50	WOR	28		P		CREW TRAVEL. HELD SAFETY MEETING ON WELL CONTROL. FILLED OUT AND REVIEWED JSA.
	7:30 11:00	3.50	WOR	06		P		WELL FLOWING TO FLOWBACK TANK 100 PSI, 64/64 CHOKE FLOWING ~40 BBLS PER HOUR. CIRCULATE WELL W/ 300 BBLS 2% KCL. WELL DIED.
	11:00 13:00	2.00	WOR	39		P		TOOH W/ 228-JTS 2 7/8 L-80 EUE TBG, BIT SUB AND 6" BIT.
	13:00 15:00	2.00	WOR	39		P		RIH W/ 5 3/4 NO-GO, 2-JTS 2 7/8 L-80 EUE TBG, 5 1/2" PBGA, 2-2' X 2 7/8 N-80 EUE TBG SUB, 2 1/4" X 2 7/8" X 40' TBG PYUM[P BARREL, 4' 2 7/8 N-80 EUE TBG SUB, 4-JTS 2 7/8 L-80 EUE TBG, 7" KLX TAC, 241-JTS 2 7/8 L-80 EUE TBG, SET TAC @ 7536, SN @ 7709 AND EOT 7812'. LANDED TBG W/ 6' 2 7/8 TBG SUB AND TBG HANGER. IN TUBING HEAD.
	15:00 17:00	2.00	WOR	16		P		ND BOP, ND FRAC VALVE, REMOVE HANGER AND 6' 2 7/8 TBG SUB LANDED TBG ON TAPPED B-FLANGE. NU WELLHEAD. CLOSED IN TBG, LEFT CASING OPEN TO TREATER ON 24/64 CHOKE.
3/30/2016	6:00 7:30	1.50	WOR	28		P		CREW TRAVEL HELD SAFETY MEETING ON TRIPPING RODS. FILLED OUT AND REVIEWED JSA.
	7:30 8:30	1.00	WOR	06		P		FLUSHED TBG W/ 50 BBLS 2% KCL. DROPPED STANDING VALVE. PUMPED 30 BBLS 10# BRINE. PUMPED 10 GALS CORROSION INHIBITOR. PUMPED 20 BBLS BRINE.
	8:30 10:30	2.00	WOR	39		P		RIH W/ 2 1/4" PLUNGER, 1 1/2" X 40' POLISH ROD, 3' STABILIZER SUB, 14-1 1/2" C BARS, 81-3/4", 121-7/8" AND 92-1". SPACED OUT RODS W/ 11-8', 1-4', 1-2' X 1" EL SUBS
	10:30 12:00	1.50	WOR	42		P		WAIT ON RATIGAN FROM NATIONAL SUPPLY COMPANY
	12:00 14:00	2.00	RDMO	02		P		FILLED TBG W/ 0 BBLS, PRESSURE AND STROKE TEST @ 1000 PSI. HELD. RD RIG SLIDE ROTA-FLEX. PUT WELL ON PRODUCTION.

<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		<b>FORM 9</b>
<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>  Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		<b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> Fee
		<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b>
<b>1. TYPE OF WELL</b> Oil Well		<b>7. UNIT or CA AGREEMENT NAME:</b>
<b>2. NAME OF OPERATOR:</b> EP ENERGY E&P COMPANY, L.P.		<b>8. WELL NAME and NUMBER:</b> Kushmaul 1-16C4
<b>3. ADDRESS OF OPERATOR:</b> 1001 Louisiana , Houston, TX, 77002		<b>9. API NUMBER:</b> 43013517250000
<b>PHONE NUMBER:</b> 713 997-5138 Ext		<b>9. FIELD and POOL or WILDCAT:</b> ALTAMONT
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 0915 FNL 0701 FEL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: NENE Section: 16 Township: 03.0S Range: 04.0W Meridian: U		<b>COUNTY:</b> DUCHESNE
		<b>STATE:</b> UTAH

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

TYPE OF SUBMISSION	TYPE OF ACTION		
<input checked="" type="checkbox"/> <b>NOTICE OF INTENT</b> Approximate date work will start: <b>10/10/2016</b>	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> CASING REPAIR
<input type="checkbox"/> <b>SUBSEQUENT REPORT</b> Date of Work Completion:	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> CHANGE WELL NAME
<input type="checkbox"/> <b>SPUD REPORT</b> Date of Spud:	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> CONVERT WELL TYPE
<input type="checkbox"/> <b>DRILLING REPORT</b> Report Date:	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> NEW CONSTRUCTION
	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> PLUG BACK
	<input type="checkbox"/> PRODUCTION START OR RESUME	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION
	<input type="checkbox"/> REPERFORATE CURRENT FORMATION	<input type="checkbox"/> SIDETRACK TO REPAIR WELL	<input type="checkbox"/> TEMPORARY ABANDON
	<input type="checkbox"/> TUBING REPAIR	<input type="checkbox"/> VENT OR FLARE	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> WATER SHUTOFF	<input type="checkbox"/> SI TA STATUS EXTENSION	<input type="checkbox"/> APD EXTENSION
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	<input checked="" type="checkbox"/> OTHER	OTHER: <input type="text" value="Cancel Sundry 65412"/>

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

Please cancel Sundry 65412 that was approved 08/17/2015 as the work was never done.

**Accepted by the  
Utah Division of  
Oil, Gas and Mining  
FOR RECORD ONLY  
October 21, 2016**

<b>NAME (PLEASE PRINT)</b> Linda Renken	<b>PHONE NUMBER</b> 713 997-5138	<b>TITLE</b> Sr. Regulatory Analyst
<b>SIGNATURE</b> N/A	<b>DATE</b> 10/10/2016	

<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		<b>FORM 9</b>
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<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 0915 FNL 0701 FEL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: NENE Section: 16 Township: 03.0S Range: 04.0W Meridian: U		<b>COUNTY:</b> DUCHESNE
		<b>STATE:</b> UTAH

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

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<input checked="" type="checkbox"/> <b>NOTICE OF INTENT</b> Approximate date work will start: <b>10/10/2016</b>	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> CASING REPAIR
<input type="checkbox"/> <b>SUBSEQUENT REPORT</b> Date of Work Completion:	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> CHANGE WELL NAME
<input type="checkbox"/> <b>SPUD REPORT</b> Date of Spud:	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> CONVERT WELL TYPE
<input type="checkbox"/> <b>DRILLING REPORT</b> Report Date:	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> NEW CONSTRUCTION
	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> PLUG BACK
	<input type="checkbox"/> PRODUCTION START OR RESUME	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION
	<input type="checkbox"/> REPERFORATE CURRENT FORMATION	<input type="checkbox"/> SIDETRACK TO REPAIR WELL	<input type="checkbox"/> TEMPORARY ABANDON
	<input type="checkbox"/> TUBING REPAIR	<input type="checkbox"/> VENT OR FLARE	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> WATER SHUTOFF	<input type="checkbox"/> SI TA STATUS EXTENSION	<input type="checkbox"/> APD EXTENSION
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	<input checked="" type="checkbox"/> OTHER	OTHER: <input type="text" value="Cancel Sundry 49389"/>

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

Please cancel Sundry 49389 approved on 04/01/2014 as this work was never done.

**Accepted by the  
Utah Division of  
Oil, Gas and Mining  
FOR RECORD ONLY  
October 21, 2016**

<b>NAME (PLEASE PRINT)</b> Linda Renken	<b>PHONE NUMBER</b> 713 997-5138	<b>TITLE</b> Sr. Regulatory Analyst
<b>SIGNATURE</b> N/A	<b>DATE</b> 10/10/2016	