Form 3160-3
(August 1999)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB No. 1004-0136
Expires November 30, 2000

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No.: UTU-8345
6. If Indian, Allottee or Tribe Name:
7. If Unit or CA Agreement, Name and No.:

1a. Type of Work: [X] DRILL [ ] REENTER

8. Lease Name and Well No.: LOVE 1121-8J

b. Type of Well: [ ] Oil Well [X] Gas Well [ ] Other [ ] Single Zone [X] Multiple Zone

9. API Well No.: 43-047-38749

2. Name of Operator: KERR McGEE OIL & GAS ONSHORE LP

10. Field and Pool, or Exploratory: ~~UNDESIGNATED~~ Love

3A. Address: 1368 SOUTH 1200 EAST VERNAL, UT 84078

3b. Phone No. *(include area code)*: (435) 781-7024

11. Sec., T., R., M., or Blk, and Survey or Area: SEC. 8, T11S, R21E

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*
At surface: NWSE 1816'FSL, 1782'FEL 620797X 39.872751
At proposed prod. Zone: 4414379Y -109.587530

12. County or Parish: UINTAH
13. State: UTAH

14. Distance in miles and direction from nearest town or post office*: 20 MILES SOUTH OF OURAY, UTAH

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any): 1782'

16. No. of Acres in lease: 2486.60

17. Spacing Unit dedicated to this well: 40.00

18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft: REFER TO TOPO C

19. Proposed Depth: 9050'

20. BLM/BIA Bond No. on file: BOND NO: WY-2357

21. Elevations (Show whether DF, KDB, RT, GL, etc.): 5591' UNGRADED GL

22. Approximate date work will start*:

23. Estimated duration:

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, shall be attached to this form:

1. Well plat certified by a registered surveyor.
2. A Drilling Plan.
3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO shall be filed with the appropriate Forest Service Office.
4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
5. Operator certification.
6. Such other site specific information and/or plans as may be required by the authorized office.

25. Signature: [signature] Name *(Printed/Typed)*: SHEILA UPCHEGO Date: 10/11/2006

Title: REGULATORY ANALYST

Approved by *(Signature)*: [signature] Name *(Printed/Typed)*: BRADLEY G. HILL Date: 10-24-06

Title: Office: ENVIRONMENTAL MANAGER

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Conditions of approval, if any, are attached.

Title 18 U.S.C. Section 1001and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

**(Instructions on reverse)*

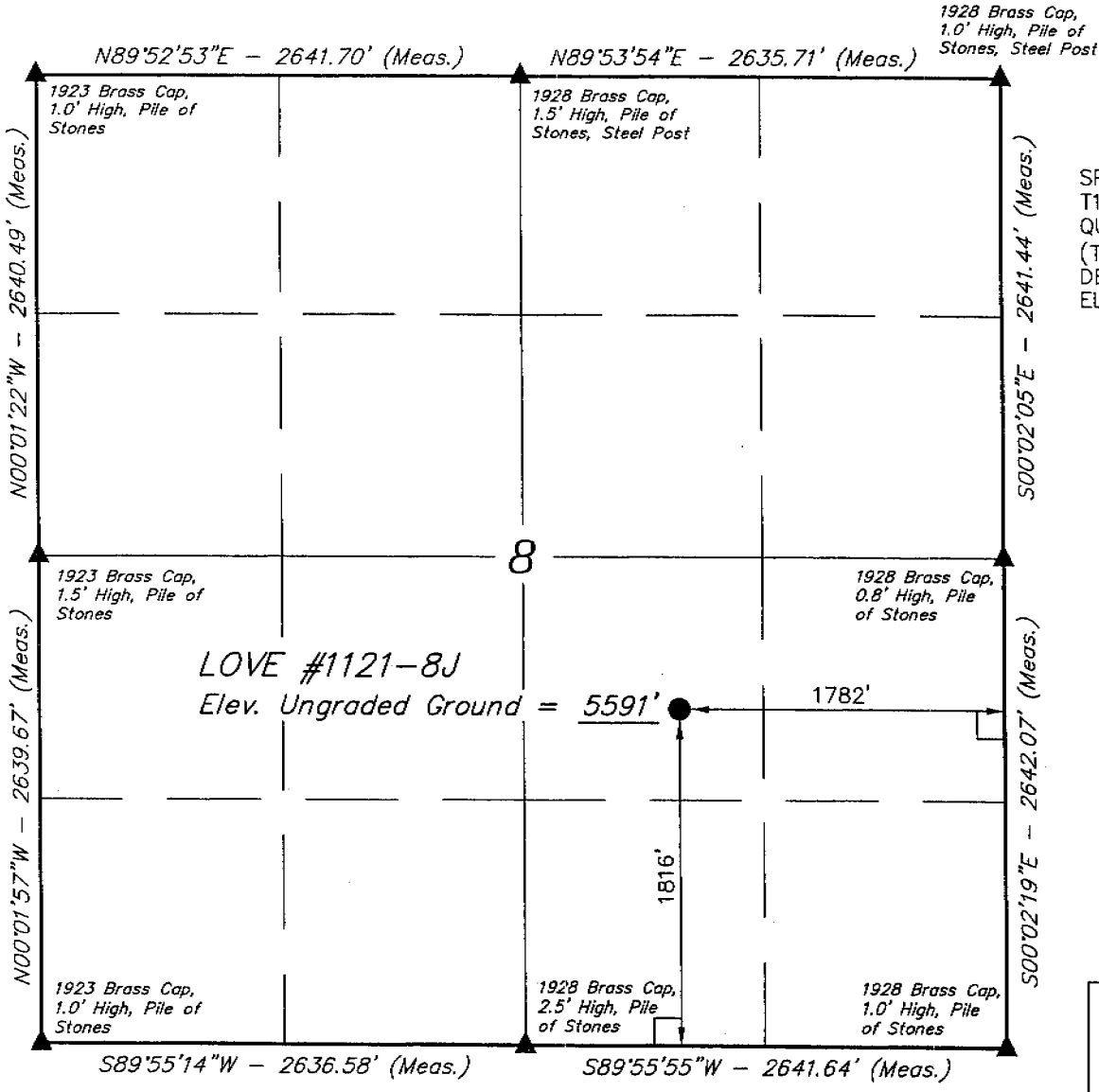
Federal Approval of this Action is Necessary

RECEIVED
OCT 2 0 2006
DIV. OF OIL, GAS & MINING

KERR McGEE OIL AND GAS ONSHORE LP

T11S, R21E, S.L.B.&M.

Well location, LOVE #1121-8J, located as shown in the NW 1/4 SE 1/4 of Section 8, T11S, R21E, S.L.B.&M. Uintah County, Utah.

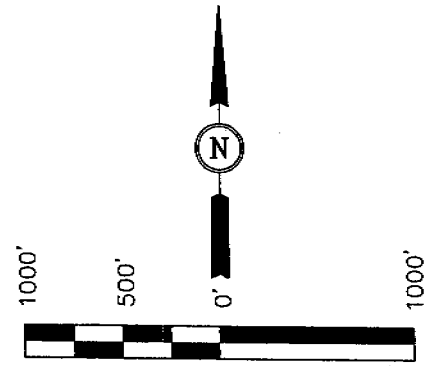


BASIS OF BEARINGS

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

BASIS OF ELEVATION

SPOT ELEVATION AT THE SOUTHEAST CORNER OF SECTION 2, T11S, R21E, S.L.B.&M. TAKEN FROM THE BIG PACK MTN NE, QUADRANGLE, UTAH, UINTAH COUNTY, 7.5 MINUTE QUAD. (TOPOGRAPHIC MAP) PUBLISHED BY THE UNITED STATES DEPARTMENT OF THE INTERIOR, GEOLOGICAL SURVEY. SAID ELEVATION IS MARKED AS BEING 5584 FEET.



SCALE

CERTIFICATE

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

REGISTERED LAND SURVEYOR
REGISTRATION NO.
STATE OF

Revised 9-22-06 T.D.

LEGEND:

└ = 90° SYMBOL

● = PROPOSED WELL HEAD.

▲ = SECTION CORNERS LOCATED.

(AUTONOMOUS NAD 83)
LATITUDE = 39°52'21.95" (39.872764)
LONGITUDE = 109°35'17.48" (109.588189)
(AUTONOMOUS NAD 27)
LATITUDE = 39°52'22.07" (39.872797)
LONGITUDE = 109°35'15.00" (109.587500)

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

SCALE	DATE SURVEYED:	DATE DRAWN:
1" = 1000'	12-16-04	12-23-04
PARTY: D.K. C.M. E.C.O.	REFERENCES: G.L.O. PLAT	
WEATHER: COLD	FILE: KERR McGEE OIL AND GAS ONSHORE LP	

LOVE 1121-8J
NW/SE SEC. 8, T11S,R21E
UINTAH COUNTY, UTAH
UTU-8345

ONSHORE ORDER NO. 1

DRILLING PROGRAM

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

Formation	Depth
Uinta	0- Surface
Green River	900'
Top of Birds Nest Water	1131'
Mahogany	1642'
Wasatch	4056'
Mesaverde	6862'
MVU2	7945'
MVL1	8455'
TD	9050'

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

Substance	Formation	Depth
	Green River	900'
Water	Top of Birds Nest Water	1131'
	Mahogany	1642'
Gas	Wasatch	4056'
Gas	Mesaverde	6862'
Gas	MVU2	7945'
Gas	MVL1	8455'
Water	N/A	
Other Minerals	N/A	

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

Please refer to the attached Drilling Program.

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

Please refer to the attached Drilling Program.

5. **Drilling Fluids Program:**

Please refer to the attached Drilling Program.

6. **Evaluation Program:**

Please refer to the attached Drilling Program.

7. **Abnormal Conditions:**

Maximum anticipated bottomhole pressure calculated at 9050' TD, approximately equals 5611 psi (calculated at 0.62 psi/foot).

Maximum anticipated surface pressure equals approximately 3620 psi (bottomhole pressure minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot).

8. **Anticipated Starting Dates:**

Drilling is planned to commence immediately upon approval of this application.

9. **Variances:**

Please refer to the attached Drilling Program.

10. **Other Information:**

Please refer to the attached Drilling Program.

KerrMcGee

KERR-McGEE OIL & GAS ONSHORE LP

DRILLING PROGRAM

COMPANY NAME	KERR-McGEE OIL & GAS ONSHORE LP	DATE	October 11, 2006		
WELL NAME	LOVE 1121-8J	TD	9,050' MD/TVD		
FIELD	Natural Buttes	COUNTY Uintah	STATE Utah	ELEVATION	5,591' GL KB 5,606'
SURFACE LOCATION	NWSE SEC. 8, T11S, R21E 1816'FSL, 1782'FEL			BHL	Straight Hole
	Latitude: 39.872764 Longitude: 109.588189				
OBJECTIVE ZONE(S)	Wasatch/Mesaverde				
ADDITIONAL INFO	Regulatory Agencies: BLM (SURF & MINERALS), UDOGM, Tri-County Health Dept.				

LOGS	GEOLOGICAL FORMATION TOPS	DEPTH	HOLE SIZE	MECHANICAL CASING SIZE	MUD WEIGHT
		40'	14"		
			12-1/4"	9-5/8", 32.3#, H-40, STC	Air mist
Catch water sample, if possible, from 0 to 4,056'	Green River @	0,900'			
	Top of Birds Nest Water @	1131'			
	Mahogany @	1,642'			
	Preset f/ GL @	1,800' MD			
Note: 12.25" surface hole will usually be drilled ±400' below the bottom of lost circulation zone. Drilled depth may be ±200' of the estimated set depth depending on the acutal depth of the loss zone.					
			7-7/8"	4-1/2",11.6#, I-80 or equivalent LTC casing	Water/Fresh Water Mud 8.3-11.5 ppg
Mud logging program TBD Open hole logging program f/ TD - surf csg	Wasatch @	4,056'			
	Mverde @	6,862'			
	MVU2 @	7,945'			
	MVL1 @	8,455'			
	TD @	9,050'			Max anticipated Mud required 11.5 ppg

KERR-McGEE OIL & GAS ONSHORE LP

DRILLING PROGRAM

CASING PROGRAM

	SIZE	INTERVAL			WT.	GR.	CPLG.	DESIGN FACTORS BURST	COLLAPSE	TENSION
CONDUCTOR	14"	0-40'						2270	1370	254000
SURFACE	9-5/8"	0	to	1800	32.30	H-40	STC	0.66********	1.63	4.99
								7780	6350	201000
PRODUCTION	4-1/2"	0	to	9050	11.60	I-80	LTC	2.27	1.17	2.19

1) Max Anticipated Surf. Press.(MASP) (Surface Casing) = (Pore Pressure at next csg point-(0.22 psi/ft-partial evac gradient x TVD of next csg point)

2) MASP (Prod Casing) = Pore Pressure at TD - (.22 psi/ft-partial evac gradient x TD)

(Burst Assumptions: TD = 11.5 ppg) .22 psi/ft = gradient for partially evac wellbore

(Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing*Buoy.Fact. of water)

MASP 3421 psi

******** Burst SF is low but csg is much stronger than formation at 2000'. EMW @ 2000' for 2270# is 21.8 ppg or 1.13 psi/ft

CEMENT PROGRAM

		FT. OF FILL	DESCRIPTION	SACKS	EXCESS	WEIGHT	YIELD
SURFACE	LEAD	500	Premium cmt + 2% CaCl + .25 pps flocele	215	60%	15.60	1.18
Option 1	TOP OUT CMT (1)	200	20 gals sodium silicate + Premium cmt + 2% CaCl + .25 pps flocele	50		15.60	1.18
	TOP OUT CMT (2)	as required	Premium cmt + 2% CaCl	as req.		15.60	1.18
SURFACE			**NOTE: If well will circulate water to surface, option 2 will be utilized**				
Option 2	LEAD	1500	Prem cmt + 16% Gel + 10 pps gilsonite +.25 pps Flocele + 3% salt BWOC	170	35%	11.00	3.82
	TAIL	500	Premium cmt + 2% CaCl + .25 pps flocele	180	35%	15.60	1.18
	TOP OUT CMT	as required	Premium cmt + 2% CaCl	as req.		15.60	1.18
PRODUCTION	LEAD	3,550'	Premium Lite II + 3% KCl + 0.25 pps celloflake + 5 pps gilsonite + 10% gel + 0.5% extender	390	60%	11.00	3.38
	TAIL	5,500'	50/50 Poz/G + 10% salt + 2% gel +.1% R-3	1540	60%	14.30	1.31

*Substitute caliper hole volume plus 0% excess for LEAD if accurate caliper is obtained

*Substitute caliper hole volume plus 10% excess for TAIL if accurate caliper is obtained

FLOAT EQUIPMENT & CENTRALIZERS

SURFACE	Guide shoe, 1 jt, insert float. Centralize first 3 joints with bow spring centralizers. Thread lock guide shoe.
PRODUCTION	Float shoe, 1 jt, float collar. Centralize first 3 joints & every third joint to top of tail cement with bow spring centralizers.

ADDITIONAL INFORMATION

Test casing head to 750 psi after installing. Test surface casing to 1,500 psi prior to drilling out.

BOPE: 11" 5M with one annular and 2 rams. Test to 5,000 psi (annular to 2,500 psi) prior to drilling out. Record on chart recorder & tour sheet. Function test rams on each trip. Maintain safety valve & inside BOP on rig floor at all times. Kelly to be equipped with upper & lower kelly valves.

Drop Totco surveys every 2000'. Maximum allowable hole angle is 5 degrees.

Most rigs have PVT Systems for mud monitoring. If no PVT is available, visual monitoring will be utililzed.

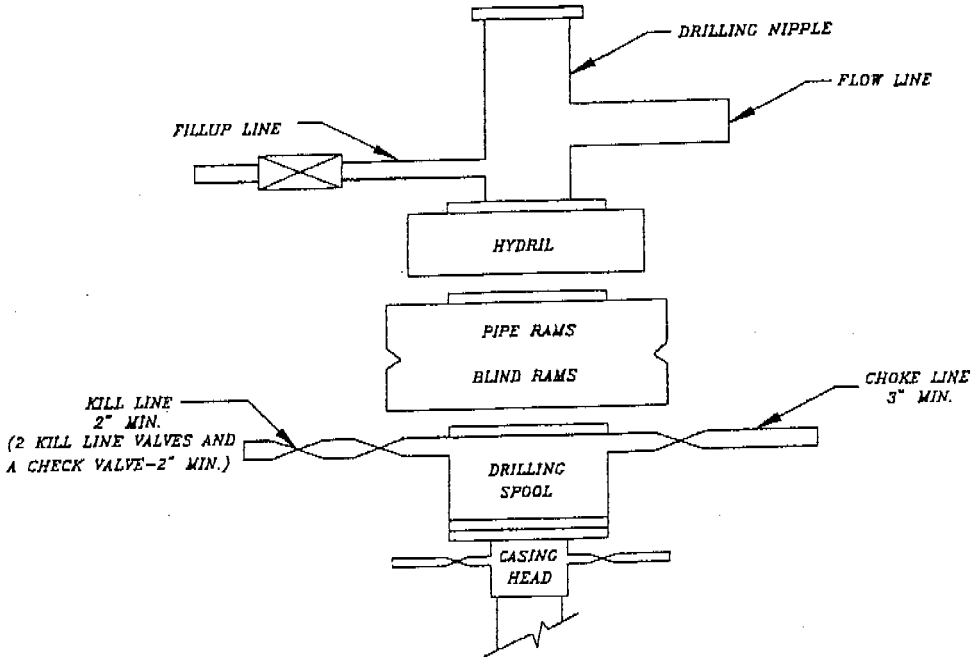
DRILLING ENGINEER: _____ **DATE:** _____

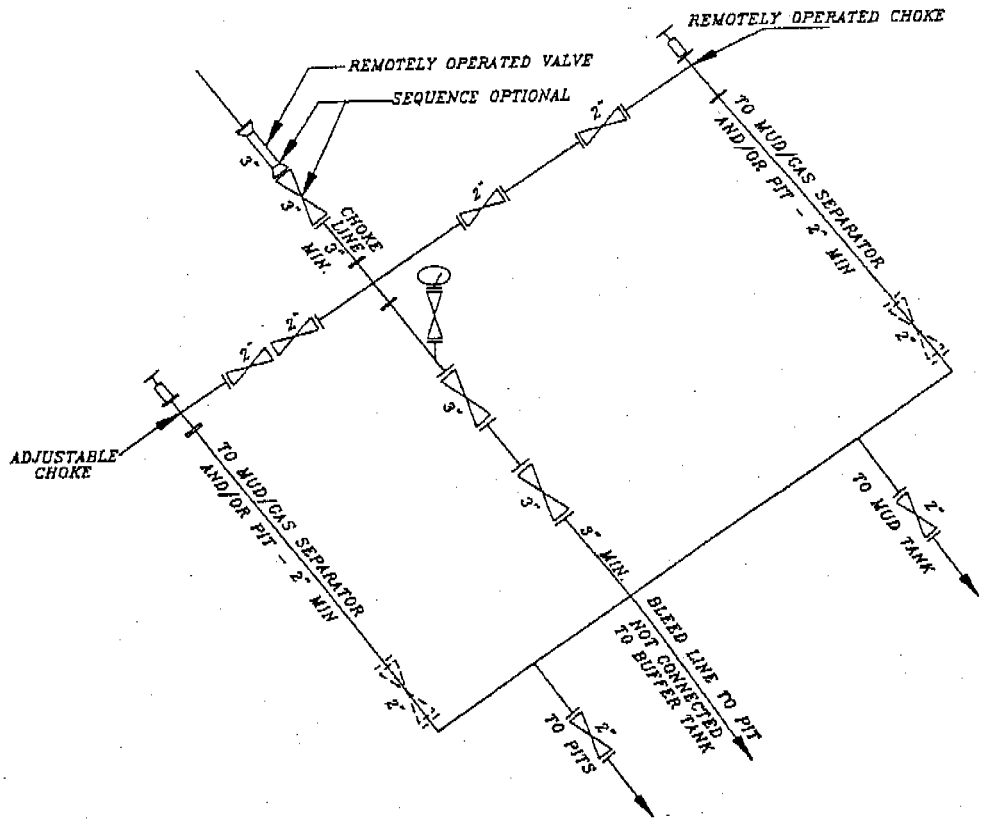
Brad Laney

DRILLING SUPERINTENDENT: _____ **DATE:** _____

Randy Bayne

5M BOP STACK and CHOKE MANIFOLD SYSTEM





LOVE 1121-8J
NW/SE SEC. 8, T11S, R21E
UINTAH COUNTY, UTAH
UTU-8345

ONSHORE ORDER NO. 1

MULTI-POINT SURFACE USE & OPERATIONS PLAN

1. **Existing Roads:**

Directions to the proposed location are attached.

Refer to Topo Maps A and B for location of access roads within a 2-mile radius.

All existing roads will be maintained and kept in good repair during all drilling and completion operations associated with this well.

2. **Planned Access Roads:**

Approximately 200' +/- miles of new access roads is proposed. Refer to Topo Map B.

Approximately 200' +/- of new access road is proposed. Refer to Topo Map B.

Approximately 1.5 +/- miles of an existing 2-track road needs upgraded. Refer to Topo Map B.

The access road will be crowned (2 to 3%), ditched and constructed with a running surface of 18 feet and a maximum disturbed width of 30 feet. Graveling or capping the roadbed will be performed as necessary to provide a well constructed, safe road. Prior to construction or upgrading, the proposed road shall be cleared of any snow and allowed to dry completely.

Surface disturbance and vehicular traffic will be limited to the proposed location and proposed access route. Any additional area needed will be approved in advance. All construction shall be in conformance with the standards outlined in the BLM and Forest Service publication: Surface Operating Standards for Oil and Gas Exploration and Development. 1989.

The road surface and shoulders will be kept in a safe and usable condition and will be maintained in accordance with the original construction standards. All drainage ditches will be kept clear and free-flowing and will be maintained according to original construction standards. The access road surface will be kept free of trash during operations. All traffic will be confined to the approved disturbed surface. Road drainage crossings shall be designed so they will not cause siltation or accumulation of debris in the drainage crossing or shall the drainages be blocked by the road bed. Erosion of drainage ditches by runoff water shall be prevented by diverting water off at frequent intervals by means of cutouts. Should mud holes develop, they shall be filled in and detours around them avoided. When snow is removed from the road during the winter months, the snow shall be pushed outside of the borrow ditches, and the turnouts kept clear so that snowmelt will be channeled away from the road.

3. **Location of Existing Wells Within a 1-Mile Radius:**

Please refer to Topo Map C.

4. **Location of Existing & Proposed Facilities & Pipelines:**

The following guidelines will apply if the well is productive.

All production facilities will be located on the disturbed portion of the well pad and at a minimum of 25 feet from the toe of the back slope or the top of the fill slope.

A dike will be constructed completely around those production facilities which contain fluids (i.e., production tanks, produced water tanks, and/or heater/treater). These dikes will be constructed of compacted subsoil, be impervious, hold 100% of the capacity of the largest tank, and be independent of the back cut.

All permanent (on-site six months or longer) above the ground structures constructed or installed, including pumping units, will be painted a flat, non-reflective, earthtone color to match one of the standard environmental colors, as determined by the five state Rocky Mountain Inter-Agency Committee.

All facilities will be painted within six months of installation. Facilities required to comply with the Occupational Safety and Health Act (OSHA) will be excluded. The requested color is Carlsbad Canyon (2.5 Y 6/2) as determined during the on-site inspection.

Any necessary pits will be properly fenced to protect livestock and prevent wildlife entry.

Variances to Best Management Practices (BMP) Requests:

Approximately 250' +/- of 4" steel pipeline is proposed from the location to tie-in to an existing pipeline. Please refer to the Topo Map D. The pipeline will be butt-welded together.

The pipeline shall be installed on surface within access corridor for the well location. As a Best Management Practice (BMP), the pipeline would be buried within the access road corridor if possible. The construction of pipelines requires the corridor of 30 feet.

This exception to the BMP should be granted by the BLM Authorized Officer because indurated bedrock, such as sandstone, is at or within 2 feet of the surface and the soil has a poor history for successful rehabilitation.

5. **Location and Type of Water Supply:**

Water for drilling purposes will be obtained from Dalbo Inc.'s underground well located in Ouray, Utah, Sec.32, T4S,R3E, Water User Claim #43-8496, Application #53617.

Water will be hauled to location over the roads marked on Maps A and B.
No water well is to be drilled on this lease.

6. **Source of Construction Materials:**

Surface and subsoil materials in the immediate area will be utilized.

Any gravel will be obtained from a commercial source.

7. **Methods of Handling Waste Materials:**

Drill cuttings will be contained and buried in the reserve pit.

Drilling fluids, including salts and chemicals, will be contained in the reserve pit. Upon termination of drilling and completion operations, the liquid contents of the reserve pit will be removed and disposed of at an approved waste disposal facility within 120 days after drilling is terminated.

The reserve pit will be constructed on the location and will not be located within natural drainage, where a flood hazard exists or surface runoff will destroy or damage the pit walls. The reserve pit will be constructed so that it will not leak, break, or allow discharge of liquids.

A plastic reinforced liner is to be used as discussed during on-site inspection. It will be a minimum of 20 mil thick and felt with sufficient bedding used to cover any rocks. The liner will overlap the pit walls and be covered with dirt and/or rocks to hold it in place. No trash or scrap that could puncture the liner will be disposed of in the pit.

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

A chemical porta-toilet will be furnished with the drilling rig.

Garbage, trash, and other waste materials will be collected in a portable, self-contained, fully enclosed trash cage during operations. No trash will be burned on location.

All debris and other waste material not contained in the trash cage will be cleaned up and removed from the location immediately after removal of the drilling rig.

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

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

Any produced water from the proposed well will be contained in a water tank and will then be hauled by truck to one of the pre-approved disposal sites: RNI, Sec. 5, T9S, R22E, NBU #159, Sec.35, T9S, R21E, Ace Oilfield, Sec. 2, T6S, R20E, MC&MC, Sec. 12, T6S, R19E. (Request is in lieu of filing Form 3160-5, after initial production).

8. **Ancillary Facilities:**

None are anticipated.

9. **Well Site Layout:** (See Location Layout Diagram)

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

Please see the attached diagram to describe rig orientation, parking areas, and access roads.

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

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

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

Standard steel, wood, or pipe posts shall be used between the corner braces. Maximum distance between any 2 fence posts shall be no greater than 16 feet.

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

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

10. **Plans for Reclamation of the Surface:**

Producing Location:

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

Immediately upon well completion, any hydrocarbons in the pit shall be removed in accordance with 43 CFR 3162.7-1.

Before any dirt work associated with location restoration takes place, the reserve pit shall be as dry as possible. All debris in it will be removed. Other waste and spoil materials will be disposed of immediately upon completion of operations.

The reserve pit and that portion of the location not needed for production facilities/operations will be recontoured to the approximate natural contours. The reserve pit will be reclaimed within 90 days from the date of well completion, weather permitting.

To prevent surface water (s) from standing (ponding) on the reclaimed reserve pit area, final reclamation of the reserve pit will consist of "mounding" the surface three feet above surrounding ground surface to allow the reclaimed pit area to drain effectively.

Upon completion of backfilling, leveling, and recontouring, the stockpiled topsoil will be spread evenly over the reclaimed area(s).

Dry Hole/Abandoned Location:

Abandoned well sites, roads, and other disturbed areas will be restored as near as practical to their original condition. Where applicable, these conditions include the re-establishment of irrigation systems, the re-establishment of appropriate soil conditions, and re-establishment of vegetation as specified.

All disturbed surfaces will be recontoured to the approximate natural contours, with reclamation of the well pad and access road to be performed as soon as practical after final abandonment. Reseeding operations will be performed after completion of other reclamation operations.

When the pit is backfilled, the topsoil pile shall be spread on the location up to the rig anchor points. The location will be reshaped to the original contour to the extent possible. The following seed mixture will be used to reclaim the surface for interim reclamation using appropriate reclamation methods. A total of 12 lbs/acre will be used if the seeds are drilled (24 lbs/acre if the seeds are broadcast). The per acre requirements for drilled seeds are:

Galleta Grass	20 lbs.

The operator shall call BLM for the seed mixture when final reclamation occurs.

11. **Surface Ownership:**

United States of America
Bureau of Land Management
170 South 500 East
Vernal, UT 84078
(435) 781-4400

13. **Other Information:**

A Class III archaeological survey has been performed and completed on February 4, 2005, the Archaeological Report No. 05-07.
A Paleontological survey has been performed and completed on January 10, 2005, the Paleontological Report No. 05-11. This report are submitted along with the Application for Permit to Drill (APD).

All lease and/or unit operations will be conducted in such a manner that full compliance is made with all applicable laws, regulations, the approved Plan of Operations, and any applicable Notice of

Lessees. The Operator is fully responsible for the actions of his subcontractors. A copy of these conditions will be furnished to the field representative to ensure compliance. The Operator will control noxious weeds along Rights-Of-Way for roads, pipelines, well sites, or other applicable facilities.

13. **Lessee's or Operators's Representative & Certification:**

Sheila Upchego
Regulatory Analyst
Kerr-McGee Oil & Gas Onshore LP
1368 South 1200 East
Vernal, UT 84078
(435) 781-7024

Randy Bayne
Drilling Manager
Kerr-McGee Oil & Gas Onshore LP
1368 South 1200 East
Vernal, UT 84078
(435)781-7018

Certification: All lease and/or unit operations will be conducted in such a manner that full compliance is made with all applicable laws, regulations, Onshore Oil and Gas Orders, the approved Plan of Operations, and any applicable Notice to Lessees.

The Operator will be fully responsible for the actions of its subcontractors. A complete copy of the approved "Application for Permit to Drill" will be furnished to the field representative(s) to ensure compliance and shall be on location during all construction and drilling operations.

Kerr-McGee Oil &Gas Onshore LP is considered to be the operator of the subject well. Westport Oil & Gas Company agrees to be responsible under the terms and the conditions of the lease for the operations conducted upon leased lands.

Bond coverage pursuant to 43 CFR 3104 for the lease activities is being provided by BLM Nationwide Bond #WY-2357.

I hereby certify that the proposed drill site and access route has been inspected and that I am familiar with the conditions that currently exist; that the statements made in this plan are, to the best of my knowledge, true and correct; and the work associated with the operations proposed herein will be performed by the Operator, its contractors, and subcontractors in conformity with this plan and the terms and conditions under which it is approved.

Sheila Upchego

October 11, 2006
Date

KERR McGEE OIL AND GAS ONSHORE L.P.

LOVE #1121-8J

SECTION 8, T11S, R21E, S.L.B.&M.

PROCEED IN A WESTERLY DIRECTION FROM VERNAL, UTAH ALONG U.S. HIGHWAY 40 APPROXIMATELY 14.0 MILES TO THE JUNCTION OF STATE HIGHWAY 88; EXIT LEFT AND PROCEED IN A SOUTHERLY DIRECTION APPROXIMATELY 17.0 MILES TO OURAY, UTAH; PROCEED IN A SOUTHERLY DIRECTION APPROXIMATELY 18.5 MILES ON THE SEEP RIDGE ROAD TO THE BEGINNING OF THE PROPOSED ACCESS TO THE NORTHEAST; FOLLOW ROAD FLAGS IN A NORTHEASTERLY DIRECTION APPROXIMATELY 200' TO AN EXISTING ROAD TO THE NORTHEAST; TURN LEFT AND PROCEED IN A NORTHEASTERLY DIRECTION APPROXIMATELY 1.5 MILES TO THE BEGINNING OF THE PROPOSED ACCESS ROAD TO THE NORTHWEST; FOLLOW ROAD FLAGS IN A NORTHWESTERLY DIRECTION APPROXIMATELY 200' TO THE PROPOSED LOCATION.

TOTAL DISTANCE FROM VERNAL, UTAH TO THE PROPOSED WELL LOCATION IS APPROXIMATELY 51.1 MILES.

KERR McGEE OIL AND GAS ONSHORE L.P.

LOVE #1121-8J

LOCATED IN UINTAH COUNTY, UTAH
SECTION 8, T11S, R21E, S.L.B.&M.

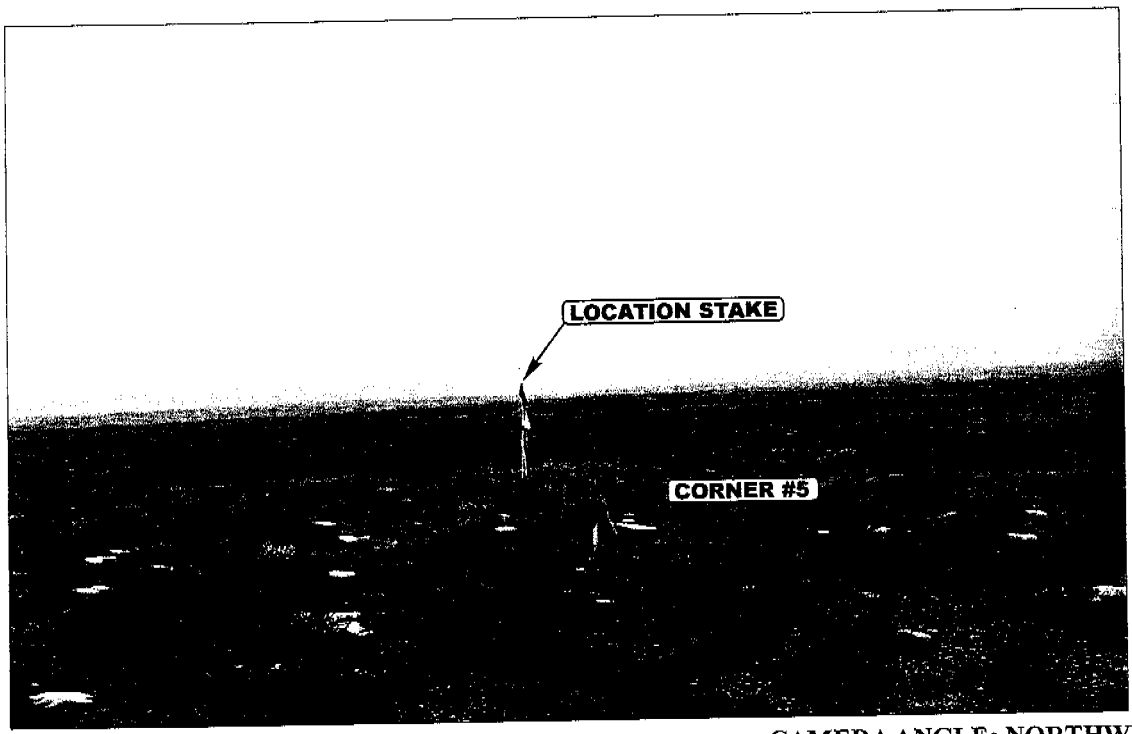


PHOTO: VIEW FROM CORNER #5 TO LOCATION STAKE **CAMERA ANGLE: NORTHWESTERLY**

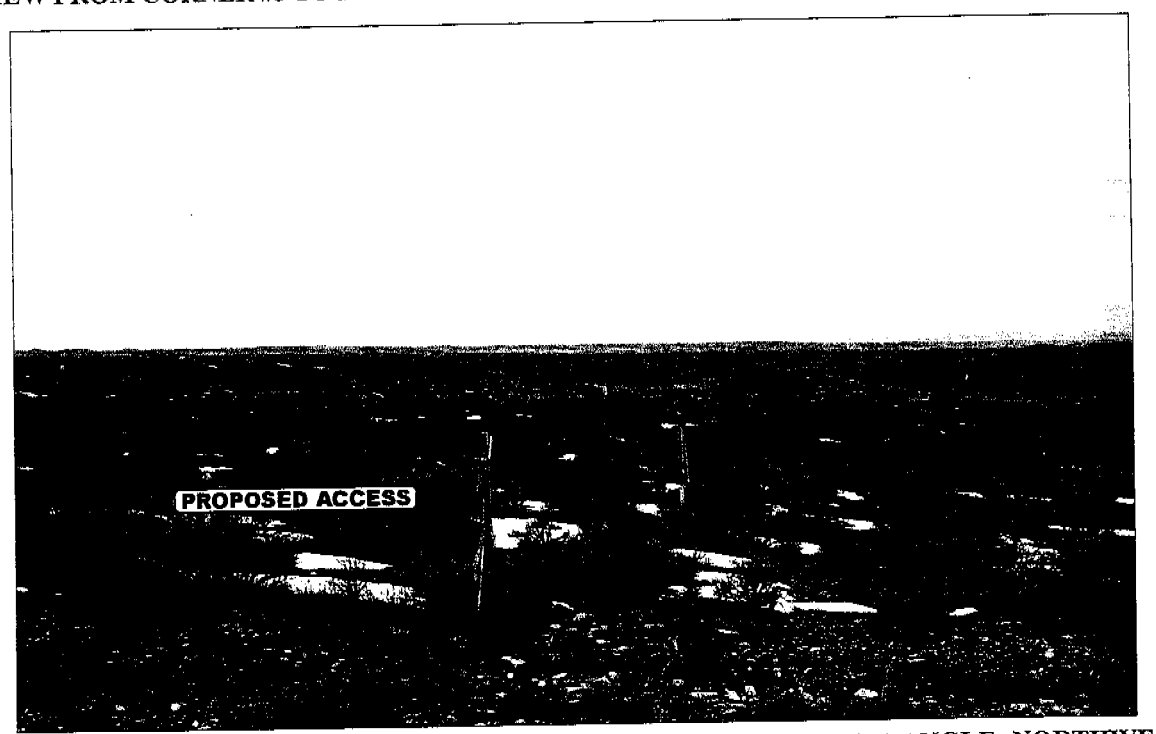
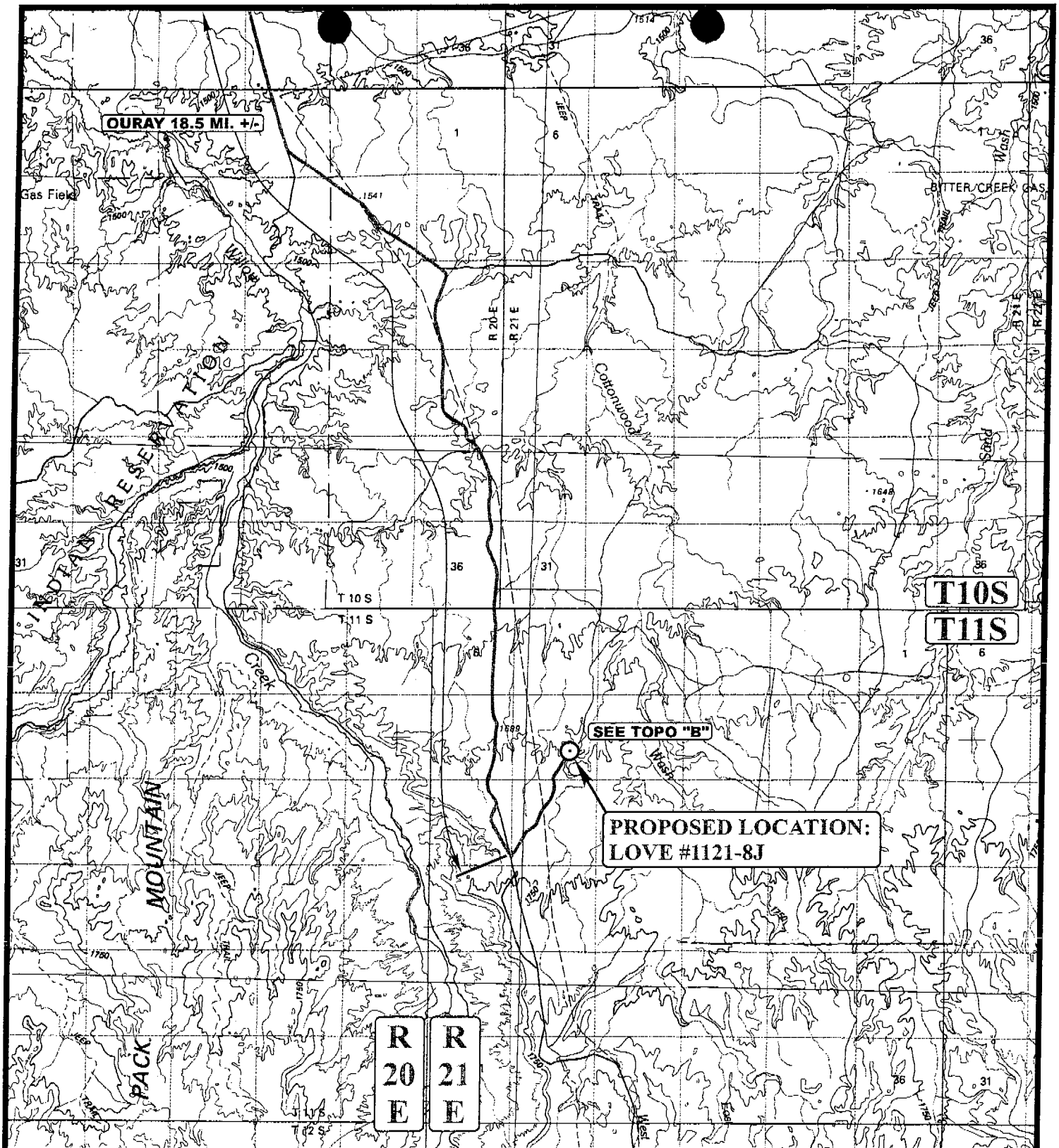


PHOTO: VIEW FROM BEGINNING OF PROPOSED ACCESS **CAMERA ANGLE: NORTHWESTERLY**

- Since 1964 -
Uintah Engineering & Land Surveying
85 South 200 East Vernal, Utah 84078
435-789-1017 uels@uelsinc.com

LOCATION PHOTOS	12 MONTH	17 DAY	04 YEAR	PHOTO
TAKEN BY: D.K.	DRAWN BY: P.M.	REV: 09-22-06 T.D.		



LEGEND:

⊙ PROPOSED LOCATION

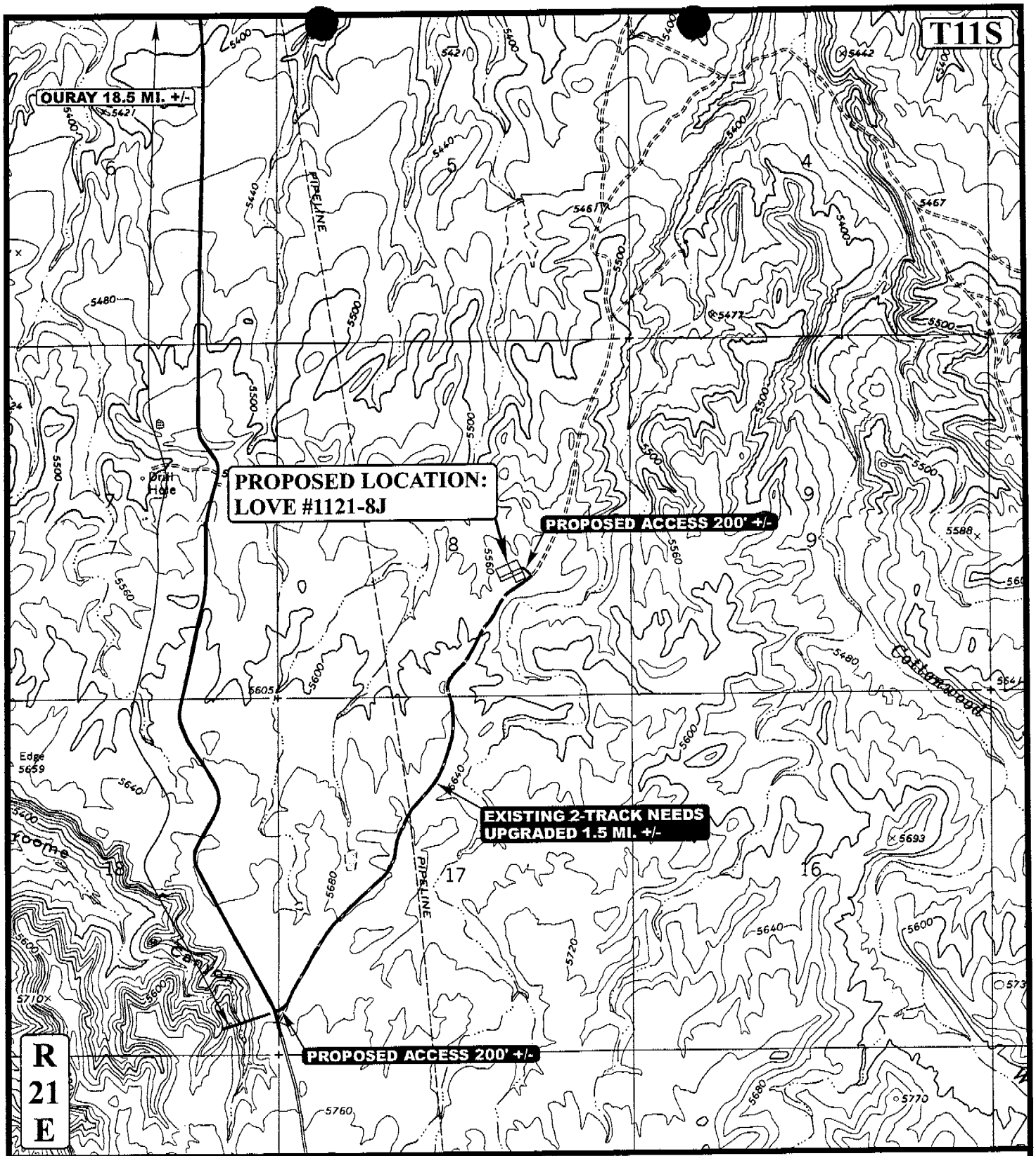
N

KERR McGEE OIL AND GAS ONSHORE L.P.

LOVE #1121-8J
SECTION 8, T11S, R21E, S.L.B.&M.
1816' FSL 1782' FEL

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

TOPOGRAPHIC MAP	12 MONTH	17 DAY	04 YEAR
SCALE: 1:100,000	DRAWN BY: P.M.	REV: 09-22-06 T.D.	A TOPO



LEGEND:

EXISTING ROAD

PROPOSED ACCESS ROAD

EXISTING 2-TRACK NEEDS UPGRADED

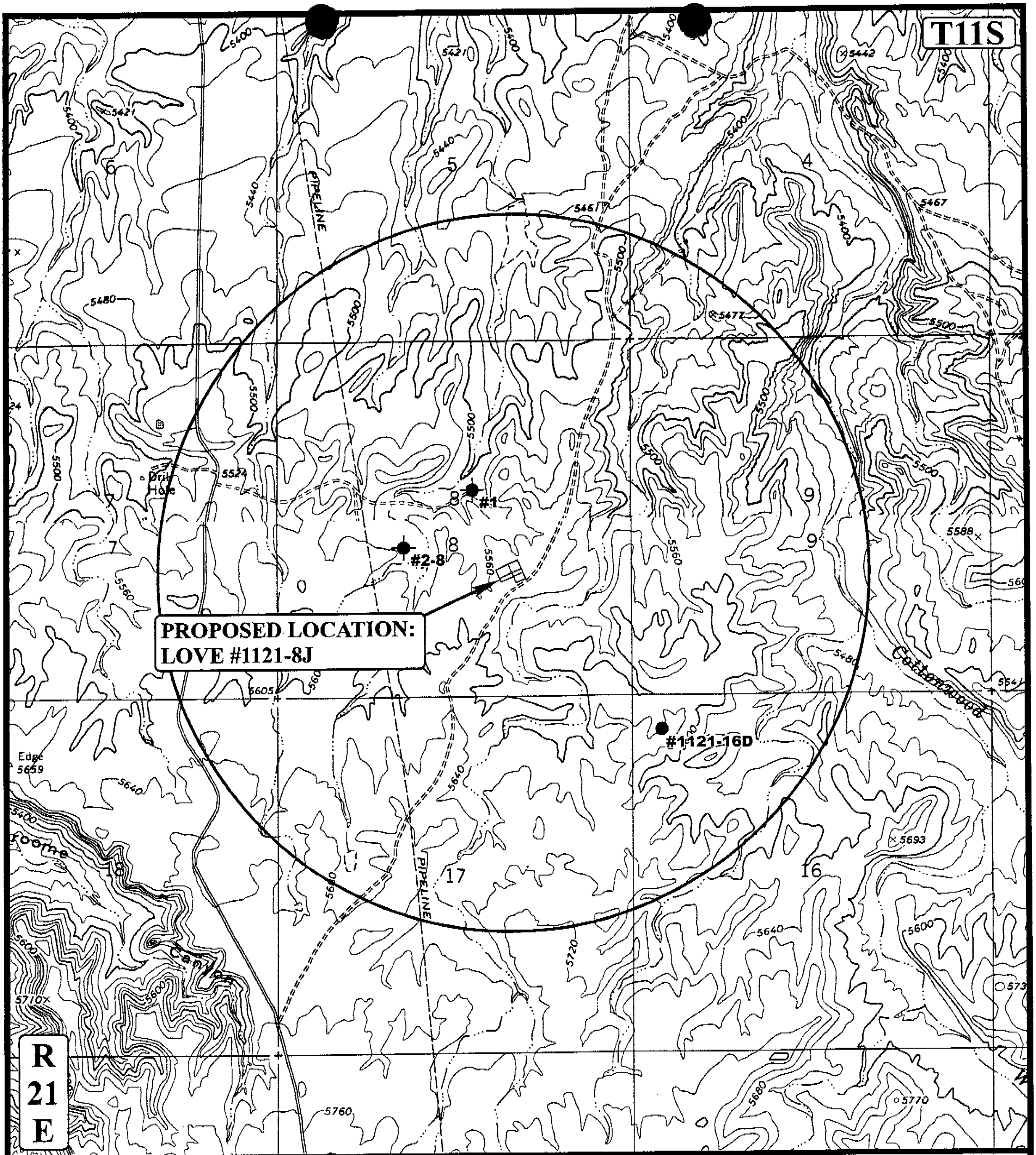
N

KERR McGEE OIL AND GAS ONSHORE L.P.

LOVE #1121-8J
SECTION 8, T11S, R21E, S.L.B.&M.
1816' FSL 1782' FEL

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

TOPOGRAPHIC MAP	12 MONTH	17 DAY	04 YEAR	B TOPO
SCALE: 1" = 2000'	DRAWN BY: P.M.	REV: 09-22-06 T.D.		



LEGEND:

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

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

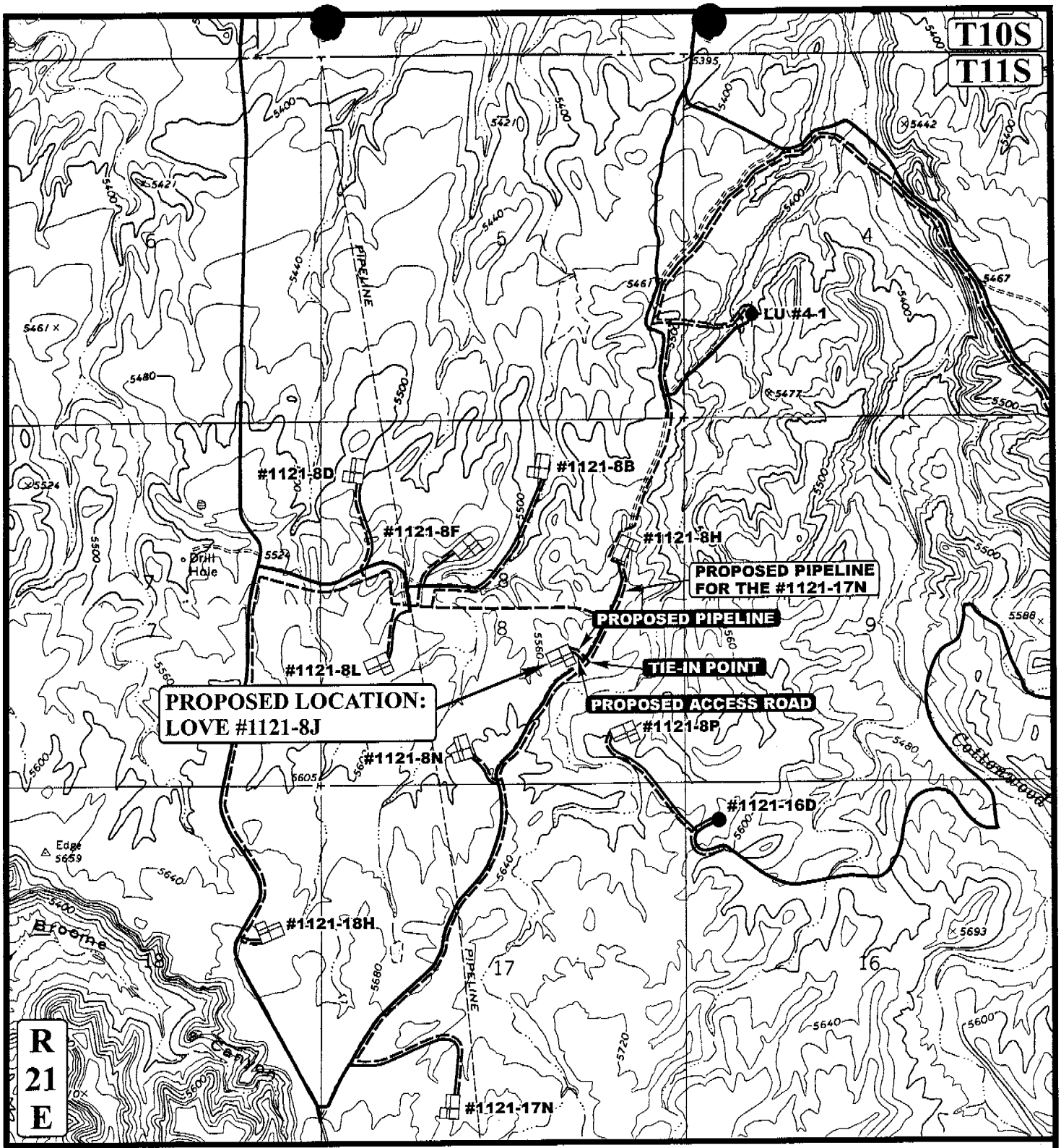
N

KERR McGEE OIL AND GAS ONSHORE L.P.

LOVE #1121-8J
SECTION 8, T11S, R21E, S.L.B.&M.
1816' FSL 1782' FEL

TOPOGRAPHIC MAP	12 MONTH	17 DAY	04 YEAR
SCALE: 1" = 2000'	DRAWN BY: P.M.	REV: 09-22-06 T.D.	

C TOPO



APPROXIMATE TOTAL PIPELINE DISTANCE = 250' +/-

LEGEND:

PROPOSED ACCESS ROAD
EXISTING PIPELINE
PROPOSED PIPELINE

N

KERR McGEE OIL AND GAS ONSHORE L.P.

LOVE #1121-8J
SECTION 8, T11S, R21E, S.L.B.&M.
1816' FSL 1782' FEL

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

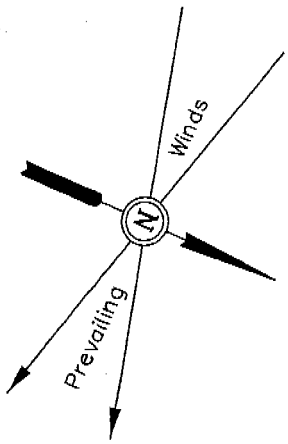
TOPOGRAPHIC MAP	12 MONTH	17 DAY	04 YEAR
SCALE: 1" = 2000'	DRAWN BY: P.M.	REV: 09-22-06 T.D.	D TOPO

KERR McGEE OIL AND GAS ONSHORE LP

FIGURE #1

LOCATION LAYOUT FOR

LOVE #1121-8J
SECTION 8, T11S, R21E, S.L.B.&M.
1816' FSL 1782' FEL



SCALE: 1" = 50'
DATE: 12-23-04
Drawn By: E.C.O.
Revised 9-22-06 T.D.

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

REGISTERED LAND SURVEYOR
No. 161389
ROBERT L. KAY
STATE OF UTAH

NOTES:

Elev. Ungraded Ground At Loc. Stake = 5590.9'
FINISHED GRADE ELEV. AT LOC. STAKE = 5587.7'

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

KE[illegible] McGEE OIL AND GAS ONS[illegible]ORE LP

FIGURE #2

TYPICAL CROSS SECTIONS FOR

LOVE #1121-8J

SECTION 8, T11S, R21E, S.L.B.&M.

1816' FSL 1782' FEL

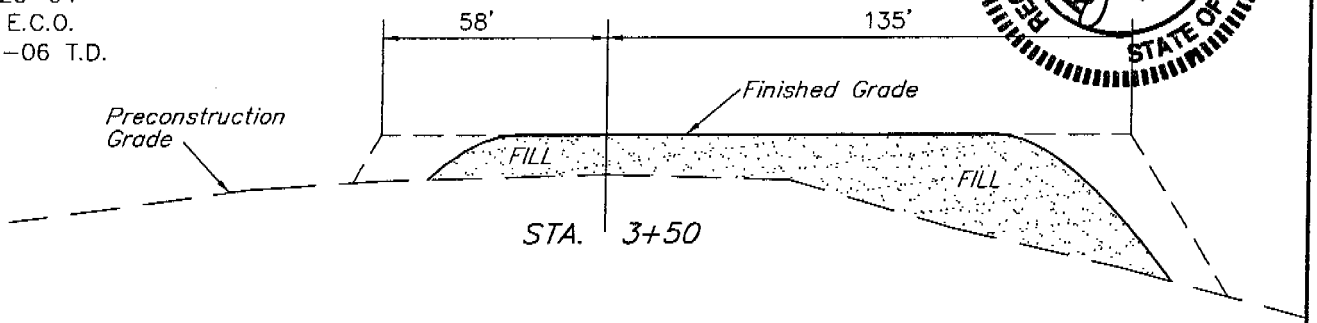
1" = 20'

X-Section Scale

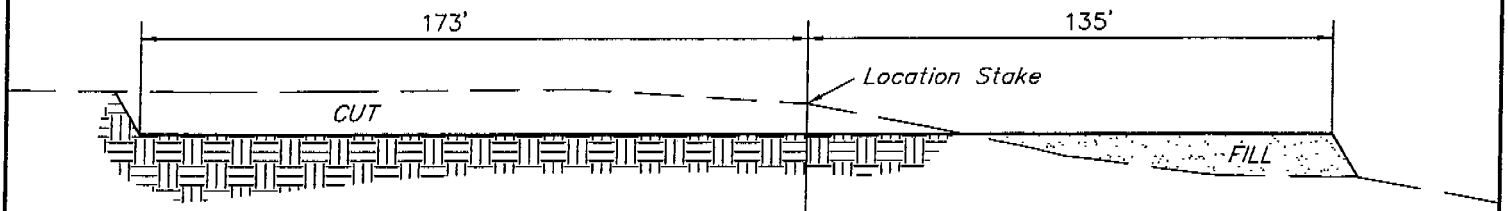
1" = 50'

DATE: 12-23-04
Drawn By: E.C.O.
Revised 9-22-06 T.D.

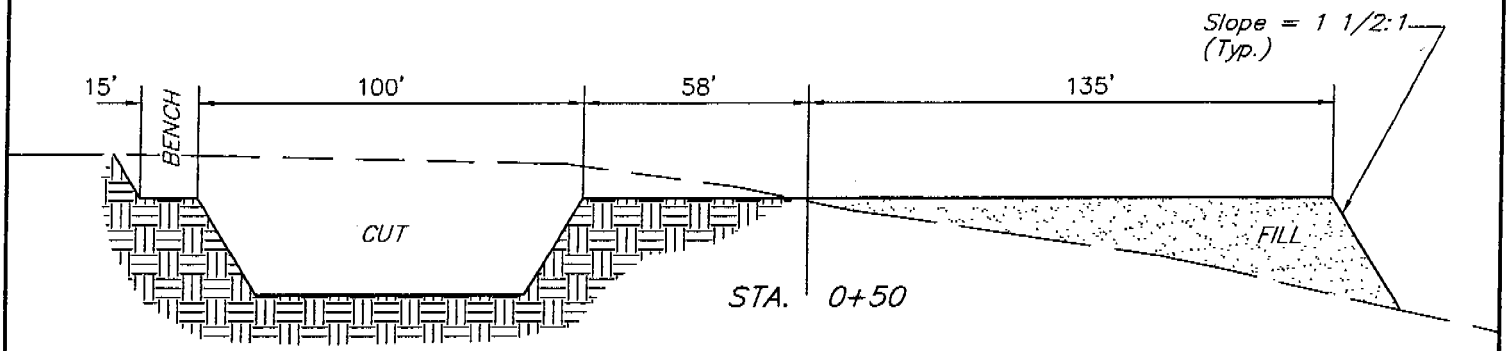
REGISTERED LAND SURVEYOR No. 161319 ROBERT L. KAY STATE OF UTAH



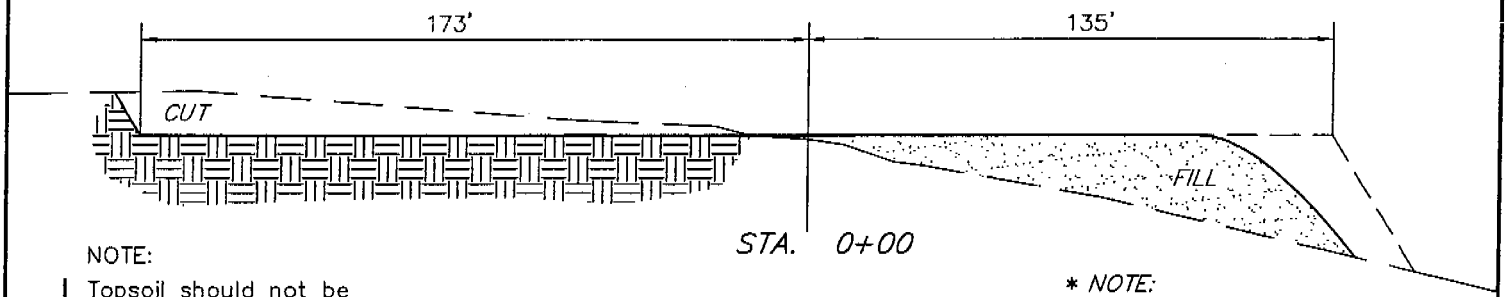
STA. 3+50



STA. 1+50



STA. 0+50



STA. 0+00

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

* NOTE:
FILL QUANTITY INCLUDES 5% FOR COMPACTION

APPROXIMATE YARDAGES

CUT

(6") Topsoil Stripping	=	1,930 Cu. Yds.
Remaining Location	=	9,840 Cu. Yds.
TOTAL CUT	=	11,770 CU.YDS.
FILL	=	7,700 CU.YDS.

EXCESS MATERIAL	=	4,070 Cu. Yds.
Topsoil & Pit Backfill (1/2 Pit Vol.)	=	4,070 Cu. Yds.
EXCESS UNBALANCE (After Rehabilitation)	=	0 Cu. Yds.

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

WORKSHEET
APPLICATION FOR PERMIT TO DRILL

APD RECEIVED: 10/20/2006

API NO. ASSIGNED: 43-047-38749

WELL NAME: LOVE 1121-8J

OPERATOR: KERR-MCGEE OIL & GAS (N2995)

PHONE NUMBER: 435-781-7024

CONTACT: SHEILA UPCHEGO

PROPOSED LOCATION:

NWSE 08 110S 210E

SURFACE: 1816 FSL 1782 FEL

BOTTOM: 1816 FSL 1782 FEL

COUNTY: UINTAH

LATITUDE: 39.87275 LONGITUDE: -109.5875

UTM SURF EASTINGS: 620797 NORTHINGS: 4414379

FIELD NAME: LOVE (622)

INSPECT LOCATN BY: / /

Tech Review	Initials	Date
Engineering		
Geology		
Surface		

LEASE TYPE: 1 - Federal

LEASE NUMBER: UTU-8345

PROPOSED FORMATION: WSMVD

SURFACE OWNER: 1 - Federal

COALBED METHANE WELL? NO

RECEIVED AND/OR REVIEWED:

✓ Plat

✓ Bond: Fed[1] Ind[] Sta[] Fee[]
(No. WY-2357)

NL Potash (Y/N)

NL Oil Shale 190-5 (B) or 190-3 or 190-13

✓ Water Permit
(No. 43-8496)

NL RDCC Review (Y/N)
(Date:)

NLA Fee Surf Agreement (Y/N)

NLA Intent to Commingle (Y/N)

LOCATION AND SITING:

___ R649-2-3.

Unit:

✓ R649-3-2. General
Siting: 460 From Qtr/Qtr & 920' Between Wells

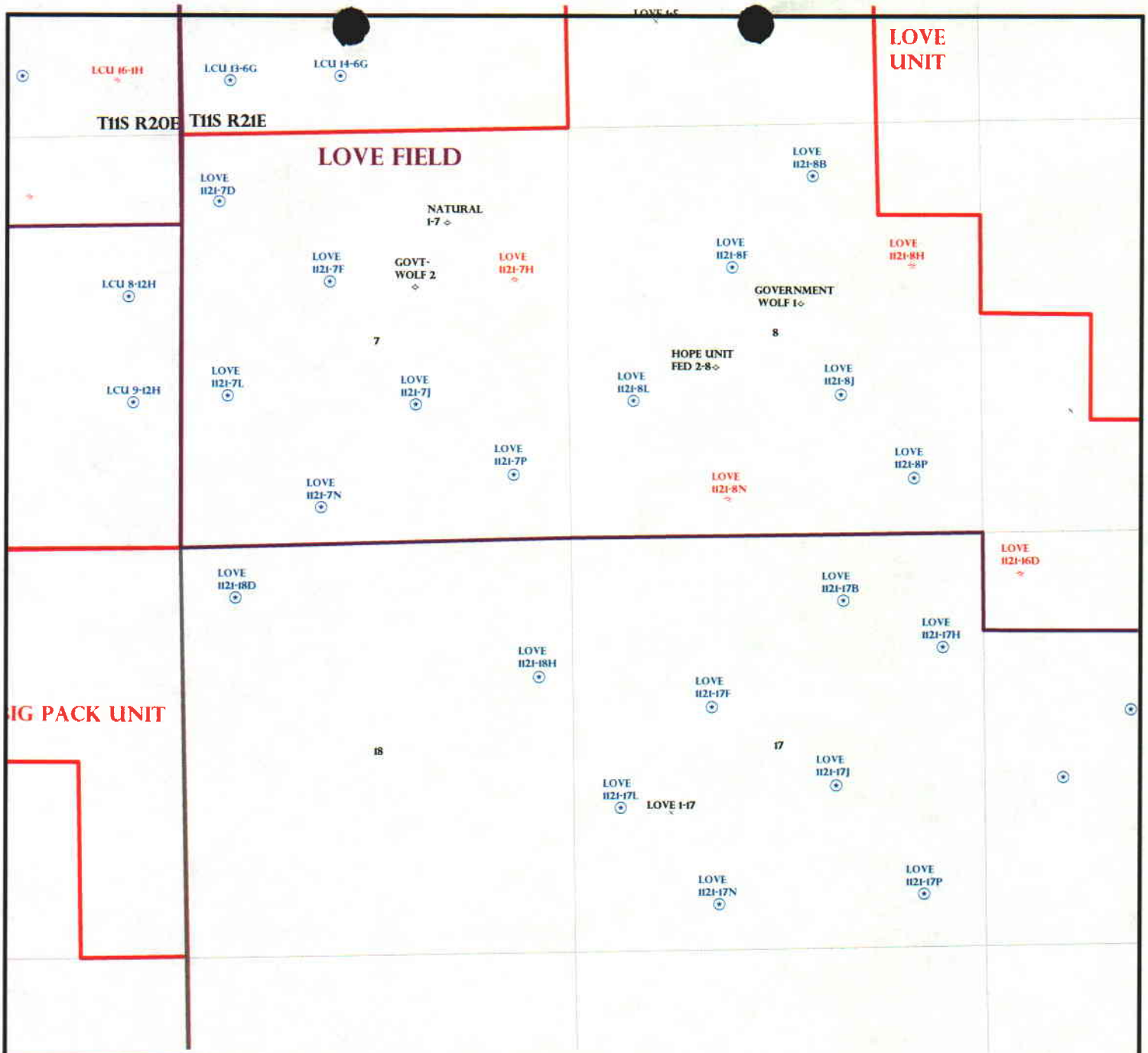
___ R649-3-3. Exception

___ Drilling Unit
Board Cause No:
Eff Date:
Siting:

___ R649-3-11. Directional Drill

COMMENTS:

STIPULATIONS: 1- Federal Approval
2- Spacing Slip



OPERATOR: KERR MCGEE O&G (N2995)

SEC: 7,8 T.11S R. 21E

FIELD: LOVE (622)

COUNTY: UINTAH

SPACING: R649-3-2 / GENERAL SITING

Field Status
- ABANDONED
- ACTIVE
- COMBINED
- INACTIVE
- PROPOSED
- STORAGE
- TERMINATED

Unit Status
- EXPLORATORY
- GAS STORAGE
- NF PP OIL
- NF SECONDARY
- PENDING
- PI OIL
- PP GAS
- PP GEOTHERML
- PP OIL
- SECONDARY
- TERMINATED

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

Utah Oil Gas and Mining

N
W E
S

PREPARED BY: DIANA WHITNEY
DATE: 24-OCTOBER-2006

JON M. HUNTSMAN, JR.
Governor

GARY R. HERBERT
Lieutenant Governor

State of Utah

Department of Natural Resources

MICHAEL R. STYLER
Executive Director

Division of Oil, Gas & Mining

JOHN R. BAZA
Division Director

October 24, 2006

Kerr-McGee Oil & Gas Onshore LP
1368 South 1200 East
Vernal, UT 84078

Re: Love 1121-8J Well, 1816' FSL, 1782' FEL, NW SE, Sec. 8, T. 11 South, R. 21 East, Uintah County, Utah

Gentlemen:

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

This approval shall expire one year from the above date unless substantial and continuous operation is underway, or a request for extension is made prior to the expiration date. The API identification number assigned to this well is 43-047-38749.

Sincerely,

Gil Hunt
Associate Director

pab
Enclosures

cc: Uintah County Assessor
Bureau of Land Management, Vernal District Office

Operator: Kerr-McGee Oil & Gas Onshore LP

Well Name & Number Love 1121-8J

API Number: 43-047-38749

Lease: UTU-8345

Location: NW SE **Sec.** 8 **T.** 11 South **R.** 21 East

Conditions of Approval

1. General

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

2. Notification Requirements

   Notify the Division within 24 hours of spudding the well.

   - Contact Carol Daniels at (801) 538-5284.

   Notify the Division prior to commencing operations to plug and abandon the well.

   - Contact Dan Jarvis at (801) 538-5338

3. Reporting Requirements

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

4. State approval of this well does not supersede the required federal approval, which must be obtained prior to drilling.

5. This proposed well is located in an area for which drilling units (well spacing patterns) have not been established through an order of the Board of Oil, Gas and Mining (the "Board"). In order to avoid the possibility of waste or injury to correlative rights, the operator is requested, once the well has been drilled, completed, and has produced, to analyze geological and engineering data generated therefrom, as well as any similar data from surrounding areas if available. As soon as is practicable after completion of its analysis, and if the analysis suggests an area larger than the quarter-quarter section upon which the well is located is being drained, the operator is requested to seek an appropriate order from the Board establishing drilling and spacing units in conformance with such analysis by filing a Request for Agency Action with the Board.

Form 3160-5
(August 1999)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB No. 1004-0135
Expires November 30, 2000

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or reenter an abandoned well. Use Form 3160-3 (APD) for such proposals.

SUBMIT IN TRIPLICATE – Other instructions on reverse side

5. Lease Serial No.
UTU-8345

6. If Indian, Allottee or Tribe Name

7. If Unit or CA/Agreement, Name and/or No.

1. Type of Well
☐ Oil Well ☒ Gas Well ☐ Other

8. Well Name and No.
LOVE 1121-8J

2. Name of Operator
KERR McGEE OIL AND GAS ONSHORE LP

9. API Well No.
4304738749

3a. Address
1368 SOUTH 1200 EAST VERNAL, UT 84078

3b. Phone No. *(include area code)*
435-781-7003

10. Field and Pool, or Exploratory Area
LOVE

4. Location of Well *(Footage, Sec., T., R., M., or Survey Description)*
1816'FSL-1782'FEL
NWSE SEC 8-T11S-R21E

11. County or Parish, State
UINTAH, UTAH

12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
☒ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
	☐ Alter Casing	☐ Fracture Treat	☐ Reclamation	☐ Well Integrity
☐ Subsequent Report	☐ Casing Repair	☐ New Construction	☐ Recomplete	☒ Other APD EXTENSION
	☐ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	DOGM
☐ Final Abandonment Notice	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal	

13. Describe Proposed or Completed Operations (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.

THE OPERATOR REQUESTS AUTHORIZATION FOR A ONE YEAR EXTENSION FOR THE SUBJECT WELL LOCATION SO THAT THE DRILLING OPERATIONS MAY BE COMPLETED. THE ORIGINAL APD WAS APPROVED BY THE DIVISION OF OIL AND GAS ON OCTOBER 24, 2006.

Approved by the
Utah Division of
Oil, Gas and Mining

9-28-07
RM

Date: 09-27-07
By:

14. I hereby certify that the foregoing is true and correct

Name *(Printed/Typed)*	Title
REBECCA WORTHEN	LAND SPECIALIST
Signature Rebecca Worthen	Date September 18, 2007

THIS SPACE FOR FEDERAL OR STATE USE

Approved by	Title	Date
Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.	Office	

Title 18 U.S.C. Section 1001, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on reverse)

RECEIVED
SEP 2 5 2007
DIV. OF OIL, GAS & MINING

[redacted]

Application for Permit to Drill
Request for Permit Extension
Validation
(this form should accompany the Sundry Notice requesting permit extension)

API: 4304738749
Well Name: LOVE 1121-8J
Location: NWSE, SEC 8-T11S-R21E
Company Permit Issued to: KERR-MCGEE OIL AND GAS ONSHORE LP
Date Original Permit Issued: 10/24/2006

The undersigned as owner with legal rights to drill on the property as permitted above, hereby verifies that the information as submitted in the previously approved application to drill, remains valid and does not require revision.

Following is a checklist of some items related to the application, which should be verified.

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

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

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

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

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

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

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

Rebecca Wootton
Signature

9/17/2007
Date

Title: LAND SPECIALIST

Representing: Kerr McGee Oil and Gas Onshore LP

RECEIVED
SEP 2 5 2007
DIV. OF OIL, GAS & MINING

Form 3160-3
(August 1999)

FORM APPROVED
OMB No. 1004-0136
Expires November 30, 2000

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

RECEIVED
OCT 24 2006
BLM VERNAL, UTAH

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No.
UTU-8345

6. If Indian, Allottee or Tribe Name

1a. Type of Work: [X] DRILL [ ] REENTER

7. If Unit or CA Agreement, Name and No.

b. Type of Well: [ ] Oil Well [X] Gas Well [ ] Other [ ] Single Zone [ ] Multiple Zone

8. Lease Name and Well No.
LOVE 1121-8J

2. Name of Operator
KERR McGEE OIL & GAS ONSHORE LP

9. API Well No.
43-047-38749

3A. Address
1368 SOUTH 1200 EAST VERNAL, UT 84078

3b. Phone No. *(include area code)*
(435) 781-7024

10. Field and Pool, or Exploratory
UNDESIGNATED

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*
At surface **NWSE 1816'FSL, 1782'FEL**
At proposed prod. Zone

11. Sec., T., R., M., or Blk, and Survey or Area
SEC. 8, T11S, R21E

14. Distance in miles and direction from nearest town or post office*
20 MILES SOUTH OF OURAY, UTAH

12. County or Parish
UINTAH

13. State
UTAH

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)
1782'

16. No. of Acres in lease
2486.60

17. Spacing Unit dedicated to this well
40.00

18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.
REFER TO TOPO C

19. Proposed Depth
9050'

20. BLM/BIA Bond No. on file
BOND NO: ~~WY-2357~~ WYB000291

21. Elevations (Show whether DF, KDB, RT, GL, etc.)
5591' UNGRADED GL

22. Approximate date work will start*

23. Estimated duration

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, shall be attached to this form:

1. Well plat certified by a registered surveyor.
2. A Drilling Plan.
3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO shall be filed with the appropriate Forest Service Office.
4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
5. Operator certification.
6. Such other site specific information and/or plans as may be required by the authorized office.

25. Signature: Sheila Upchego
Name *(Printed/Typed)*: **SHEILA UPCHEGO**
Date: **10/11/2006**

Title: **REGULATORY ANALYST**

Approved by *(Signature)*: Jerry Kenczka
Name *(Printed/Typed)*: Jerry Kenczka
Date: 1-16-2008

Title: **Assistant Field Manager Lands & Mineral Resources**
Office: **VERNAL FIELD OFFICE**

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.
Conditions of approval, if any, are attached. **CONDITIONS OF APPROVAL ATTACHED**

Title 18 U.S.C. Section 1001and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

**(Instructions on reverse)*

RECEIVED
JAN 22 2008
DIV. OF OIL, GAS & MINING

NOTICE OF APPROVAL

UDOGM

NOS

07BM4848A

UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
VERNAL FIELD OFFICE
170 South 500 East VERNAL, UT 84078 (435) 781-4400

CONDITIONS OF APPROVAL FOR APPLICATION FOR PERMIT TO DRILL

Company:	**Kerr-McGee Oil & Gas Onshore LP**	**Location:**	**NWSE, Sec. 8, T11S, R21E**
Well No:	**Love 1121-8J**	**Lease No:**	**UTU-8345**
API No:	**43-047-38749**	**Agreement:**	**N/A**

Title	Name	Office Phone Number	Cell Phone Number
Petroleum Engineer:	Matt Baker	(435) 781-4490	(435) 828-4470
Petroleum Engineer:	Michael Lee	(435) 781-4432	(435) 828-7875
Petroleum Engineer:	James Ashley	(435) 781-4470	(435) 828-7874
Petroleum Engineer:	Ryan Angus	(435) 781-4430	(435) 828-7368
Supervisory Petroleum Technician:	Jamie Sparger	(435) 781-4502	(435) 828-3913
NRS/Enviro Scientist:		(435) 781-4475	(435) 828-4029
NRS/Enviro Scientist:	Karl Wright	(435) 781-4484	(435) 828-7381
NRS/Enviro Scientist:	Holly Villa	(435) 781-4404	
NRS/Enviro Scientist:		(435) 781-4476	
NRS/Enviro Scientist:	Chuck Macdonald	(435) 781-4441	(435) 828-7481
NRS/Enviro Scientist:	Jannice Cutler	(435) 781-3400	(435) 828-3544
NRS/Enviro Scientist:	Michael Cutler	(435) 781-3401	(435) 828-3546
NRS/Enviro Scientist:	Anna Figueroa	(435) 781-3407	(435) 828-3548
NRS/Enviro Scientist:	Verlyn Pindell	(435) 781-3402	(435) 828-3547
NRS/Enviro Scientist:	Darren Williams	(435) 781-4447	
NRS/Enviro Scientist:	Nathan Packer	(435) 781-3405	(435) 828-3545
		Fax: (435) 781-3420	

A COPY OF THESE CONDITIONS SHALL BE FURNISHED TO YOUR FIELD REPRESENTATIVE TO INSURE COMPLIANCE

All lease and/or unit operations are to be conducted in such a manner that full compliance is made with the applicable laws, regulations (43 CFR Part 3160), and this approved Application for Permit to Drill including Surface and Downhole Conditions of Approval. The operator is considered fully responsible for the actions of his subcontractors. A copy of the approved APD must be on location during construction, drilling, and completion operations. **This permit is approved for a two (2) year period, or until lease expiration, whichever occurs first. An additional extension, up to two (2) years, may be applied for by sundry notice prior to expiration.**

NOTIFICATION REQUIREMENTS

Location Construction (Notify Environmental Scientist)	-	Forty-Eight (48) hours prior to construction of location and access roads.
Location Completion (Notify Environmental Scientist)	-	Prior to moving on the drilling rig.
Spud Notice (Notify Petroleum Engineer)	-	Twenty-Four (24) hours prior to spudding the well.
Casing String & Cementing (Notify Supv. Petroleum Tech.)	-	Twenty-Four (24) hours prior to running casing and cementing all casing strings.
BOP & Related Equipment Tests (Notify Supv. Petroleum Tech.)	-	Twenty-Four (24) hours prior to initiating pressure tests.
First Production Notice (Notify Petroleum Engineer)	-	Within Five (5) business days after new well begins or production resumes after well has been off production for more than ninety (90) days.

SURFACE USE PROGRAM
CONDITIONS OF APPROVAL (COAs)

- If there is an active Gilsonite mining operation within 2 miles of the well location, operator shall notify the Gilsonite operator at least 48 hours prior to any blasting during construction.

- If paleontological materials are uncovered during construction, the operator is to immediately stop work and contact the Authorized Officer (AO). A determination will be made by the AO as to what mitigation may be necessary for the discovered paleontologic material before construction can continue.

- The topsoil from the reserve pit shall be stripped and piled separately near the reserve pit. When the reserve pit is closed, it shall be recontoured and the topsoil respread, and the area shall be seeded in the same manner as the location topsoil.

- Once the location is plugged and abandoned, it shall be recontoured to natural contours, topsoil respread where appropriate, and the entire location seeded with the recommended seed mix. Seeding shall take place by broadcasting the seed and walking it into the soil with a dozer immediately after the dirt work is completed.

- The lessee/operator is given notice that lands in the lease have been identified as containing crucial pronghorn (antelope) habitat. It is requested that the lessee/operator not initiate surface disturbing activities or drilling from May 15 through June 20. A survey may be conducted by a qualified biologist or a BLM representative during this timing period to determine if pronghorn are in the area.

DOWNHOLE PROGRAM
CONDITIONS OF APPROVAL (COAs)

SITE SPECIFIC DOWNHOLE COAs:

- A formation integrity test shall be performed at the surface casing shoe.
- Production casing cement shall be brought to a minimum of 200' above the surface casing shoe.

All provisions outlined in Onshore Oil & Gas Order #2 Drilling Operations shall be strictly adhered to. The following items are emphasized:

DRILLING/COMPLETION/PRODUCING OPERATING STANDARDS

- The spud date and time shall be reported orally to Vernal Field Office within 24 hours of spudding.
- Notify Vernal Field Office Supervisory Petroleum Engineering Technician at least 24 hours in advance of casing cementing operations and BOPE & casing pressure tests.
- Blowout prevention equipment (BOPE) shall remain in use until the well is completed or abandoned. Closing unit controls shall remain unobstructed and readily accessible at all times. Choke manifolds shall be located outside of the rig substructure.
- All BOPE components shall be inspected daily and those inspections shall be recorded in the daily drilling report. Components shall be operated and tested as required by Onshore Oil & Gas Order No. 2 to insure good mechanical working order. All BOPE pressure tests shall be performed by a test pump with a chart recorder and **NOT** by the rig pumps. Test shall be reported in the driller's log.
- BOP drills shall be initially conducted by each drilling crew within 24 hours of drilling out from under the surface casing and weekly thereafter as specified in Onshore Oil & Gas Order No. 2.
- Casing pressure tests are required before drilling out from under all casing strings set and cemented in place.
- No aggressive/fresh hard-banded drill pipe shall be used within casing.
- **Cement baskets shall not be run on surface casing.**
- The operator must report all shows of water or water-bearing sands to the BLM. If flowing water is encountered it must be sampled, analyzed, and a copy of the analyses submitted to the BLM Vernal Field Office.
- The operator must report encounters of all non oil & gas mineral resources (such as Gilsonite, tar sands, oil shale, trona, etc.) to the Vernal Field Office, in writing, within 5 working days of each encounter. Each report shall include the well name/number, well location, date and depth (from KB or GL) of encounter, vertical footage of the encounter and, the name of the person making the report (along with a telephone number) should the BLM need to obtain additional information.

- A complete set of angular deviation and directional surveys of a directional well will be submitted to the Vernal BLM office engineer within 30 days of the completion of the well.

- While actively drilling, chronologic drilling progress reports shall be filed directly with the BLM, Vernal Field Office on a weekly basis in sundry, letter format or e-mail to the Petroleum Engineers until the well is completed.

- A cement bond log (CBL) will be run from the production casing shoe to the top of cement and shall be utilized to determine the bond quality for the production casing. Submit a field copy of the CBL to this office.

- **Please submit an electronic copy of all other logs run on this well in LAS format to UT_VN_Welllogs@BLM.gov. This submission will supersede the requirement for submittal of paper logs to the BLM.**

- There shall be no deviation from the proposed drilling, completion, and/or workover program as approved. Safe drilling and operating practices must be observed. Any changes in operation must have prior approval from the BLM Vernal Field Office.

OPERATING REQUIREMENT REMINDERS:

- All wells, whether drilling, producing, suspended, or abandoned, shall be identified in accordance with 43 CFR 3162.6. There shall be a sign or marker with the name of the operator, lease serial number, well number, and surveyed description of the well.

- In accordance with 43 CFR 3162.4-3, this well shall be reported on the "Monthly Report of Operations" (Oil and Gas Operations Report ((OGOR)) starting with the month in which operations commence and continue each month until the well is physically plugged and abandoned. This report shall be filed in duplicate, directly with the Minerals Management Service, P.O. Box 17110, Denver, Colorado 80217-0110, or call 1-800-525-7922 (303) 231-3650 for reporting information.

- Should the well be successfully completed for production, the BLM Vernal Field office must be notified when it is placed in a producing status. Such notification will be by written communication and must be received in this office by not later than the fifth business day following the date on which the well is placed on production. The notification shall provide, as a minimum, the following informational items:

    - Operator name, address, and telephone number.
    - Well name and number.
    - Well location (¼¼, Sec., Twn, Rng, and P.M.).
    - Date well was placed in a producing status (date of first production for which royalty will be paid).
    - The nature of the well's production, (i.e., crude oil, or crude oil and casing head gas, or natural gas and entrained liquid hydrocarbons).
    - The Federal or Indian lease prefix and number on which the well is located; otherwise the non-Federal or non-Indian land category, i.e., State or private.
    - Unit agreement and/or participating area name and number, if applicable.
    - Communitization agreement number, if applicable.

- Any venting or flaring of gas shall be done in accordance with Notice to Lessees (NTL) 4A and needs prior approval from the BLM Vernal Field Office.

- All undesirable events (fires, accidents, blowouts, spills, discharges) as specified in NTL 3A will be reported to the BLM, Vernal Field Office. Major events, as defined in NTL3A, shall be reported verbally within 24 hours, followed by a written report within 15 days. "Other than Major Events" will be reported in writing within 15 days. "Minor Events" will be reported on the Monthly Report of Operations and Production.

- Whether the well is completed as a dry hole or as a producer, "Well Completion and Recompletion Report and Log" (BLM Form 3160-4) shall be submitted not later than 30 days after completion of the well or after completion of operations being performed, in accordance with 43 CFR 3162.4-1. Two copies of all logs run, core descriptions, and all other surveys or

data obtained and compiled during the drilling, workover, and/or completion operations, shall be filed on BLM Form 3160-4. Submit with the well completion report a geologic report including, at a minimum, formation tops, and a summary and conclusions. Also include deviation surveys, sample descriptions, strip logs, core data, drill stem test data, and results of production tests if performed. Samples (cuttings, fluid, and/or gas) shall be submitted only when requested by the BLM, Vernal Field Office.

- All off-lease storage, off-lease measurement, or commingling on-lease or off-lease, shall have prior written approval from the BLM Vernal Field Office.

- Oil and gas meters shall be calibrated in place prior to any deliveries. The BLM Vernal Field Office Petroleum Engineers will be provided with a date and time for the initial meter calibration and all future meter proving schedules. A copy of the meter calibration reports shall be submitted to the BLM Vernal Field Office. All measurement facilities will conform to the API standards for liquid hydrocarbons and the AGA standards for natural gas measurement. All measurement points shall be identified as the point of sale or allocation for royalty purposes.

- A schematic facilities diagram as required by Onshore Oil & Gas Order No. 3 shall be submitted to the BLM Vernal Field Office within 30 days of installation or first production, whichever occurs first. All site security regulations as specified in Onshore Oil & Gas Order No. 3 shall be adhered to. All product lines entering and leaving hydrocarbon storage tanks will be effectively sealed in accordance with Onshore Oil & Gas Order No. 3.

- Any additional construction, reconstruction, or alterations of facilities, including roads, gathering lines, batteries, etc., which will result in the disturbance of new ground, shall require the filing of a suitable plan and need prior approval of the BLM Vernal Field Office. Emergency approval may be obtained orally, but such approval does not waive the written report requirement.

- No location shall be constructed or moved, no well shall be plugged, and no drilling or workover equipment shall be removed from a well to be placed in a suspended status without prior approval of the BLM Vernal Field Office. If operations are to be suspended for more than 30 days, prior approval of the BLM Vernal Field Office shall be obtained and notification given before resumption of operations.

- Pursuant to Onshore Oil & Gas Order No. 7, this is authorization for pit disposal of water produced from this well for a period of 90 days from the date of initial production. A permanent disposal method must be approved by this office and in operation prior to the end of this 90-day period. In order to meet this deadline, an application for the proposed permanent disposal method shall be submitted along with any necessary water analyses, as soon as possible, but no later than 45 days after the date of first production. Any method of disposal which has not been approved prior to the end of the authorized 90-day period will be considered as an Incident of Noncompliance and will be grounds for issuing a shut-in order until an acceptable manner for disposing of said water is provided and approved by this office.

- Unless the plugging is to take place immediately upon receipt of oral approval, the Field Office Petroleum Engineers must be notified at least 24 hours in advance of the plugging of the well, in order that a representative may witness plugging operations. If a well is suspended or abandoned, all pits must be fenced immediately until they are backfilled. The "Subsequent Report of Abandonment" (Form BLM 3160-5) must be submitted within 30 days after the actual plugging of the well bore, showing location of plugs, amount of cement in each, and amount of casing left in hole, and the current status of the surface restoration.

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

FORM 9

SUNDRY NOTICES AND REPORTS ON WELLS

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

5. LEASE DESIGNATION AND SERIAL NUMBER:	UTU-8345
6. IF INDIAN, ALLOTTEE OR TRIBE NAME:	NA
7. UNIT or CA AGREEMENT NAME:	
1. TYPE OF WELL: OIL WELL ☐ GAS WELL ☑ OTHER	8. WELL NAME and NUMBER: Love 1121-8J
2. NAME OF OPERATOR: Kerr McGee Oil and Gas Onshore, LP	9. API NUMBER: 4304738749
3. ADDRESS OF OPERATOR: PO Box 173779 CITY Denver STATE CO ZIP 80217-3779 PHONE NUMBER: (720) 929-6171	10. FIELD AND POOL, OR WILDCAT: Natural Buttes Field

4. LOCATION OF WELL

FOOTAGES AT SURFACE: 1816 FSL & 1782 FEL COUNTY: Uintah

QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: NWSE 8 11S 21E STATE: UTAH

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

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

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

Kerr McGee Oil and Gas Onshore, LP respectfully requests a one year extension for Love 1121-8J, in order to complete drilling operations. The Utah Division of Oil, Gas, and Mining initially approved this APD on 10/24/2006.

Approved by the
Utah Division of
Oil, Gas and Mining

Date: 09-16-08

By: [signature]

NAME (PLEASE PRINT) Victoria Marques TITLE Regulatory Intern

SIGNATURE Victoria Marques DATE 9/11/2008

(This space for State use only)

COPY SENT TO OPERATOR

Date: 9.17.2008

Initials: KS

(5/2000) (See Instructions on Reverse Side)

RECEIVED
SEP 15 2008
DIV. OF OIL, GAS & MINING

RESET

Application for Permit to Drill
Request for Permit Extension
Validation
(this form should accompany the Sundry Notice requesting permit extension)

API: 4304738749
Well Name: Love 1121-8J
Location: NWSE 1816 FSL 1782 FEL Sec. 8 T 11S R 21E
Company Permit Issued to: Kerr McGee Oil and Gas Onshore, LP
Date Original Permit Issued: 10/24/2006

The undersigned as owner with legal rights to drill on the property as permitted above, hereby verifies that the information as submitted in the previously approved application to drill, remains valid and does not require revision.

Following is a checklist of some items related to the application, which should be verified.

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

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

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

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

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

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

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

Victoria Marquez
Signature

9/11/2008
Date

Title: Regulatory Intern

Representing: Kerr McGee Oil and Gas Onshore, LP

RECEIVED
SEP 15 2008
DIV. OF OIL, GAS & MINING

API Well No: 43047387490000

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

FORM 9

5.LEASE DESIGNATION AND SERIAL NUMBER: UTU-8345

SUNDRY NOTICES AND REPORTS ON WELLS

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

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7.UNIT or CA AGREEMENT NAME:

1. TYPE OF WELL Gas Well

8. WELL NAME and NUMBER: LOVE 1121-8J

2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.

9. API NUMBER: 43047387490000

3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779

PHONE NUMBER: 720 929-6007 Ext

9. FIELD and POOL or WILDCAT: LOVE

4. LOCATION OF WELL
FOOTAGES AT SURFACE: 1816 FSL 1782 FEL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NWSE Section: 08 Township: 11.0S Range: 21.0E Meridian: S

COUNTY: UINTAH

STATE: UTAH

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

TYPE OF SUBMISSION	TYPE OF ACTION		
✓ NOTICE OF INTENT Approximate date work will start: 9/14/2009	☐ ACIDIZE	☐ ALTER CASING	☐ CASING REPAIR
☐ SUBSEQUENT REPORT Date of Work Completion:	☐ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME
☐ SPUD REPORT Date of Spud:	☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
☐ DRILLING REPORT Report Date:	☐ DEEPEN	☐ FRACTURE TREAT	☐ NEW CONSTRUCTION
	☐ OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK
	☐ PRODUCTION START OR RESUME	☐ RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION
	☐ REPERFORATE CURRENT FORMATION	☐ SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
	☐ TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL
	☐ WATER SHUTOFF	☐ SI TA STATUS EXTENSION	✓ APD EXTENSION
	☐ WILDCAT WELL DETERMINATION	☐ OTHER	OTHER:

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

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

Approved by the Utah Division of Oil, Gas and Mining

Date: September 14, 2009

By:

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Danielle Piernot	720 929-6156	Regulatory Analyst
SIGNATURE N/A		**DATE** 9/10/2009

RECEIVED September 10, 2009

The Utah Division of Oil, Gas, and Mining

- State of Utah
- Department of Natural Resources
Electronic Permitting System - Sundry Notices

Request for Permit Extension Validation Well Number 43047387490000

API: 43047387490000
Well Name: LOVE 1121-8J
Location: 1816 FSL 1782 FEL QTR NWSE SEC 08 TWNP 110S RNG 210E MER S
Company Permit Issued to: KERR-MCGEE OIL & GAS ONSHORE, L.P.
Date Original Permit Issued: 10/24/2006

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

- **If located on private land, has the ownership changed, if so, has the surface agreement been updated?** ○ **Yes** ◉ **No**
- **Have any wells been drilled in the vicinity of the proposed well which would affect the spacing or siting requirements for this location?** ○ **Yes** ◉ **No**
- **Has there been any unit or other agreements put in place that could affect the permitting or operation of this proposed well?** ○ **Yes** ◉ **No**
- **Have there been any changes to the access route including ownership, or rightof- way, which could affect the proposed location?** ○ **Yes** ◉ **No**
- **Has the approved source of water for drilling changed?** ○ **Yes** ◉ **No**
- **Have there been any physical changes to the surface location or access route which will require a change in plans from what was discussed at the onsite evaluation?** ○ **Yes** ◉ **No**
- **Is bonding still in place, which covers this proposed well?** ◉ **Yes** ○ **No**

Approved by the Utah Division of Oil, Gas and Mining

Signature: Danielle Piernot **Date:** 9/10/2009
Title: Regulatory Analyst **Representing:** KERR-MCGEE OIL & GAS ONSHORE, L.P.

Date: September 14, 2009
By:

RECEIVED September 10, 2009

API Well No: 43047387490000

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

FORM 9

5.LEASE DESIGNATION AND SERIAL NUMBER: UTU-8345

SUNDRY NOTICES AND REPORTS ON WELLS

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

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7.UNIT or CA AGREEMENT NAME:

1. TYPE OF WELL
Gas Well

8. WELL NAME and NUMBER:
LOVE 1121-8J

2. NAME OF OPERATOR:
KERR-MCGEE OIL & GAS ONSHORE, L.P.

9. API NUMBER:
43047387490000

3. ADDRESS OF OPERATOR:
P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779

PHONE NUMBER:
720 929-6007 Ext

9. FIELD and POOL or WILDCAT:
LOVE

4. LOCATION OF WELL
FOOTAGES AT SURFACE:
1816 FSL 1782 FEL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:
Qtr/Qtr: NWSE Section: 08 Township: 11.0S Range: 21.0E Meridian: S

COUNTY:
UINTAH

STATE:
UTAH

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

TYPE OF SUBMISSION	TYPE OF ACTION		
✓ NOTICE OF INTENT Approximate date work will start: 10/20/2010	☐ ACIDIZE	☐ ALTER CASING	☐ CASING REPAIR
☐ SUBSEQUENT REPORT Date of Work Completion:	☐ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME
☐ SPUD REPORT Date of Spud:	☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
☐ DRILLING REPORT Report Date:	☐ DEEPEN	☐ FRACTURE TREAT	☐ NEW CONSTRUCTION
	☐ OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK
	☐ PRODUCTION START OR RESUME	☐ RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION
	☐ REPERFORATE CURRENT FORMATION	☐ SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
	☐ TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL
	☐ WATER SHUTOFF	☐ SI TA STATUS EXTENSION	✓ APD EXTENSION
	☐ WILDCAT WELL DETERMINATION	☐ OTHER	OTHER:

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

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

Approved by the Utah Division of Oil, Gas and Mining

Date: October 25, 2010

By:

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Danielle Piernot	720 929-6156	Regulatory Analyst
SIGNATURE		**DATE**
N/A		10/19/2010

RECEIVED October 19, 2010

The Utah Division of Oil, Gas, and Mining

- State of Utah
- Department of Natural Resources
Electronic Permitting System - Sundry Notices

Request for Permit Extension Validation Well Number 43047387490000

API: 43047387490000
Well Name: LOVE 1121-8J
Location: 1816 FSL 1782 FEL QTR NWSE SEC 08 TWNP 110S RNG 210E MER S
Company Permit Issued to: KERR-MCGEE OIL & GAS ONSHORE, L.P.
Date Original Permit Issued: 10/24/2006

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

- **If located on private land, has the ownership changed, if so, has the surface agreement been updated?** ○ **Yes** ◉ **No**
- **Have any wells been drilled in the vicinity of the proposed well which would affect the spacing or siting requirements for this location?** ○ **Yes** ◉ **No**
- **Has there been any unit or other agreements put in place that could affect the permitting or operation of this proposed well?** ○ **Yes** ◉ **No**
- **Have there been any changes to the access route including ownership, or rightof- way, which could affect the proposed location?** ○ **Yes** ◉ **No**
- **Has the approved source of water for drilling changed?** ○ **Yes** ◉ **No**
- **Have there been any physical changes to the surface location or access route which will require a change in plans from what was discussed at the onsite evaluation?** ○ **Yes** ◉ **No**
- **Is bonding still in place, which covers this proposed well?** ◉ **Yes** ○ **No**

Approved by the Utah Division of Oil, Gas and Mining

Signature: Danielle Piernot **Date:** 10/19/2010
Title: Regulatory Analyst **Representing:** KERR-MCGEE OIL & GAS ONSHORE, L.P.

Date: October 25, 2010
By:

RECEIVED October 19, 2010

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

FORM 9

SUNDRY NOTICES AND REPORTS ON WELLS

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5.LEASE DESIGNATION AND SERIAL NUMBER: UTU-8345

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7.UNIT or CA AGREEMENT NAME:

1. TYPE OF WELL Gas Well

8. WELL NAME and NUMBER: LOVE 1121-8J

2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.

9. API NUMBER: 43047387490000

3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779

PHONE NUMBER: 720 929-6515 Ext

9. FIELD and POOL or WILDCAT: LOVE

4. LOCATION OF WELL
FOOTAGES AT SURFACE: 1816 FSL 1782 FEL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NWSE Section: 08 Township: 11.0S Range: 21.0E Meridian: S

COUNTY: UINTAH

STATE: UTAH

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

TYPE OF SUBMISSION	TYPE OF ACTION		
✓ NOTICE OF INTENT Approximate date work will start: 10/24/2011	☐ ACIDIZE	☐ ALTER CASING	☐ CASING REPAIR
☐ SUBSEQUENT REPORT Date of Work Completion:	☐ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME
	☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
	☐ DEEPEN	☐ FRACTURE TREAT	☐ NEW CONSTRUCTION
	☐ OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK
☐ SPUD REPORT Date of Spud:	☐ PRODUCTION START OR RESUME	☐ RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION
	☐ REPERFORATE CURRENT FORMATION	☐ SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
	☐ TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL
☐ DRILLING REPORT Report Date:	☐ WATER SHUTOFF	☐ SI TA STATUS EXTENSION	✓ APD EXTENSION
	☐ WILDCAT WELL DETERMINATION	☐ OTHER	OTHER:

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

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

Approved by the Utah Division of Oil, Gas and Mining

Date: 09/27/2011

By:

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Danielle Piernot	720 929-6156	Regulatory Analyst
SIGNATURE N/A		**DATE** 9/20/2011

RECEIVED Sep. 20, 2011

The Utah Division of Oil, Gas, and Mining

- State of Utah
- Department of Natural Resources

Electronic Permitting System - Sundry Notices

Request for Permit Extension Validation Well Number 43047387490000

API: 43047387490000
Well Name: LOVE 1121-8J
Location: 1816 FSL 1782 FEL QTR NWSE SEC 08 TWNP 110S RNG 210E MER S
Company Permit Issued to: KERR-MCGEE OIL & GAS ONSHORE, L.P.
Date Original Permit Issued: 10/24/2006

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

- **If located on private land, has the ownership changed, if so, has the surface agreement been updated?** ○ **Yes** ◉ **No**
- **Have any wells been drilled in the vicinity of the proposed well which would affect the spacing or siting requirements for this location?** ○ **Yes** ◉ **No**
- **Has there been any unit or other agreements put in place that could affect the permitting or operation of this proposed well?** ○ **Yes** ◉ **No**
- **Have there been any changes to the access route including ownership, or rightof- way, which could affect the proposed location?** ○ **Yes** ◉ **No**
- **Has the approved source of water for drilling changed?** ○ **Yes** ◉ **No**
- **Have there been any physical changes to the surface location or access route which will require a change in plans from what was discussed at the onsite evaluation?** ○ **Yes** ◉ **No**
- **Is bonding still in place, which covers this proposed well?** ◉ **Yes** ○ **No**

Signature: Danielle Piernot **Date:** 9/20/2011
Title: Regulatory Analyst **Representing:** KERR-MCGEE OIL & GAS ONSHORE, L.P.

RECEIVED Sep. 20, 2011

SUBMIT AS EMAIL | Print Form

BLM - Vernal Field Office - Notification Form

Operator KERR-McGEE OIL & GAS Rig Name/# PROPETRO #11
Submitted By JAIME SCHARNOV Phone Number 720.929.6304
Well Name/Number LOVE 1121-8J
Qtr/Qtr NWSE Section 08 Township 11S Range 21E
Lease Serial Number UTU-8345
API Number 4304738749

Spud Notice – Spud is the initial spudding of the well, not drilling out below a casing string.

Date/Time 01/03/2012 13:00 HRS AM ☐ PM ☐

Casing – Please report time casing run starts, not cementing times.

- ☑ Surface Casing
- ☐ Intermediate Casing
- ☐ Production Casing
- ☐ Liner
- ☐ Other

Date/Time 01/12/2012 08:00 HRS AM ☐ PM ☐

BOPE

- ☐ Initial BOPE test at surface casing point
- ☐ BOPE test at intermediate casing point
- ☐ 30 day BOPE test
- ☐ Other

Date/Time _____ _____ AM ☐ PM ☐

Remarks ESTIMATED DATE AND TIME. PLEASE CONTACT KENNY GATHINGS AT 435.828.0986 OR LOVEL YOUNG AT 435.781.7051

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

FORM 9

5.LEASE DESIGNATION AND SERIAL NUMBER: UTU-8345

SUNDRY NOTICES AND REPORTS ON WELLS

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

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7.UNIT or CA AGREEMENT NAME:

1. TYPE OF WELL
Gas Well

8. WELL NAME and NUMBER:
LOVE 1121-8J

2. NAME OF OPERATOR:
KERR-MCGEE OIL & GAS ONSHORE, L.P.

9. API NUMBER:
43047387490000

3. ADDRESS OF OPERATOR:
P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779

PHONE NUMBER:
720 929-6515

9. FIELD and POOL or WILDCAT:
UNDESIGNATED

4. LOCATION OF WELL
FOOTAGES AT SURFACE:
1816 FSL 1782 FEL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:
Qtr/Qtr: NWSE Section: 08 Township: 11.0S Range: 21.0E Meridian: S

COUNTY:
UINTAH

STATE:
UTAH

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

TYPE OF SUBMISSION	TYPE OF ACTION		
☐ NOTICE OF INTENT Approximate date work will start:	☐ ACIDIZE	☐ ALTER CASING	☐ CASING REPAIR
☐ SUBSEQUENT REPORT Date of Work Completion:	☐ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME
	☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
	☐ DEEPEN	☐ FRACTURE TREAT	☐ NEW CONSTRUCTION
	☐ OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK
☑ SPUD REPORT Date of Spud: 1/3/2012	☐ PRODUCTION START OR RESUME	☐ RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION
	☐ REPERFORATE CURRENT FORMATION	☐ SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
	☐ TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL
☐ DRILLING REPORT Report Date:	☐ WATER SHUTOFF	☐ SI TA STATUS EXTENSION	☐ APD EXTENSION
	☐ WILDCAT WELL DETERMINATION	☐ OTHER	OTHER:

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

MIRU PETE MARTIN BUCKET RIG. DRILLED 20" CONDUCTOR HOLE TO 40'. RAN 14" 36.7# SCHEDULE 10 PIPE. CMT W/28 SX READY MIX. SPUD WELL ON 01/03/2012 AT 1300 HRS.

Accepted by the Utah Division of Oil, Gas and Mining
FOR RECORD ONLY
January 10, 2012

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Sheila Wopsock	435 781-7024	Regulatory Analyst
SIGNATURE		**DATE**
N/A		1/10/2012

RECEIVED: Jan. 10, 2012

Federal Approval of this Action is Necessary

FORM 9

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

5.LEASE DESIGNATION AND SERIAL NUMBER:
UTU-8345

SUNDRY NOTICES AND REPORTS ON WELLS

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

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7.UNIT or CA AGREEMENT NAME:

1. TYPE OF WELL
Gas Well

8. WELL NAME and NUMBER:
LOVE 1121-8J

2. NAME OF OPERATOR:
KERR-MCGEE OIL & GAS ONSHORE, L.P.

9. API NUMBER:
43047387490000

3. ADDRESS OF OPERATOR:
P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779

PHONE NUMBER:
720 929-6515 Ext

9. FIELD and POOL or WILDCAT:
LOVE

4. LOCATION OF WELL
FOOTAGES AT SURFACE:
1816 FSL 1782 FEL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:
Qtr/Qtr: NWSE Section: 08 Township: 11.0S Range: 21.0E Meridian: S

COUNTY:
UINTAH

STATE:
UTAH

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

TYPE OF SUBMISSION	TYPE OF ACTION		
✓ NOTICE OF INTENT Approximate date work will start: 12/19/2011	☐ ACIDIZE	☐ ALTER CASING	☐ CASING REPAIR
	✓ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME
	☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
☐ SUBSEQUENT REPORT Date of Work Completion:	☐ DEEPEN	☐ FRACTURE TREAT	☐ NEW CONSTRUCTION
	☐ OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK
	☐ PRODUCTION START OR RESUME	☐ RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION
☐ SPUD REPORT Date of Spud:	☐ REPERFORATE CURRENT FORMATION	☐ SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
	☐ TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL
☐ DRILLING REPORT Report Date:	☐ WATER SHUTOFF	☐ SI TA STATUS EXTENSION	☐ APD EXTENSION
	☐ WILDCAT WELL DETERMINATION	☐ OTHER	OTHER:

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

The operator requests approval for changes in the drilling plan. Specifically, the Operator requests approval to deepen to the Blackhawk formation (part of the Mesaverde Group), FIT Waiver, closed loop drilling option, surface casing size change, and a production casing change. All other aspects of the previously approved drilling plan will not change. These proposals do not deviate from previously submitted and approved plans. Please see attachments. Thank you.

Approved by the Utah Division of Oil, Gas and Mining

Date: 12/29/2011

By:

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Jaime Scharnowske	720 929-6304	Regulartory Analyst
SIGNATURE		**DATE**
N/A		12/19/2011

RECEIVED Dec. 19, 2011

Federal Approval of this Action is Necessary

Kerr-McGee Oil & Gas Onshore. L.P.

LOVE 1121-8J

Surface: 1816 FSL / 1782 FEL NWSE

Section 8 T11S R21E

Unitah County, Utah
Mineral Lease: UTU-8345

ONSHORE ORDER NO. 1

DRILLING PROGRAM

1. & 2. **Estimated Tops of Important Geologic Markers:**
Estimated Depths of Anticipated Water, Oil, Gas, or Mineral Formations:

Formation	Depth	Resource
Uinta	0 - Surface	
Green River	938'	
Birds Nest	1,146'	Water
Mahogany	1,411'	Water
Wasatch	4,055'	Gas
Mesaverde	6,860'	Gas
Sego	9,154'	Gas
Castlegate	9,257'	Gas
Blackhawk	9,609'	Gas
TVD	10,209'	
TD	10,209'	

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

Please refer to the attached Drilling Program

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

Please refer to the attached Drilling Program

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Federal Approval of this Action is Necessary

5. Drilling Fluids Program:

Please refer to the attached Drilling Program

6. Evaluation Program:

Please refer to the attached Drilling Program

7. Abnormal Conditions:

Maximum anticipated bottom hole pressure calculated at 10209' TVD, approximately equals 6,738 psi (0.66 psi/ft = actual bottomhole gradient)

Maximum Anticipated Bottom Hole Pressure (MABHP) = Pore Pressure at TD

Maximum anticipated surface pressure equals approximately 4,538 psi (bottom hole pressure minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot, per Onshore Order No. 2).

Per Onshore Order No. 2 - Max Anticipated Surf. Press.(MASP) = (Pore Pressure at next csg point-
(0.22 psi/ft-partial evac gradient x TVD of next csg point))

8. Anticipated Starting Dates:

Drilling is planned to commence immediately upon approval of this application.

9. Variances:

Please refer to the attached Drilling Program.
Onshore Order #2 – Air Drilling Variance

Kerr-McGee Oil & Gas Onshore LP (KMG) respectfully requests a variance to several requirements associated with air drilling outlined in Onshore Order 2

- Blowout Prevention Equipment (BOPE) requirements;
- Mud program requirements; and
- Special drilling operation (surface equipment placement) requirements associated with air drilling.

This Standard Operating Practices addendum provides supporting information as to why KMG current air drilling practices for constructing the surface casing hole should be granted a variance to Onshore Order 2 air drilling requirements.

The reader should note that the air rig is used only to construct a stable surface casing hole through a historically difficult lost circulation zone. A conventional rotary rig follows the air rig, and is used to drill and construct the majority of the wellbore.

RECEIVED Dec. 19, 2011

More notable, KMG has used the air rig layout and procedures outlined below to drill the surface casing hole in approximately 675 wells without incident of blow out or loss of life.

Background

In a typical well, KMG utilizes an air rig for drilling the surface casing hole, an interval from the surface to surface casing depths, which varies in depth from 1,700 to 2,800 feet. The air rig drilling operation does not drill through productive or over pressured formations in KMG field, but does penetrate the Uinta and Green River Formations. The purpose of the air drilling operation is to overcome the severe loss circulation zone in the Green River known as the Bird's Nest while creating a stable hole for the surface casing. The surface casing hole is generally drilled to approximately 500 feet below the Bird's Nest.

Before the surface air rig is mobilized, a rathole rig is utilized to set and cement conductor pipe through a competent surface formation. Generally, the conductor is set at 40 feet. In some cases, conductor may be set deeper in areas that the surface formation is not found competent. This rig also drills the rat and mouse holes in preparation for the surface casing and production string drilling operations.

The air rig is then mobilized to drill the surface casing hole by drilling a 12 1/4 inch hole for the first 200 feet, then will drill a 11inch hole to just above the Bird's Nest interval with an air hammer. The hammer is then tripped and replaced with a 11 inch tri-cone bit. The tri-cone bit is used to drill to the surface casing point, approximately 500 feet below the loss circulation zone (Bird's Nest). The 8-5/8 inch surface casing is then run and cemented in place, thereby isolating the lost circulation zone.

KMG fully appreciates Onshore Order 2 well control and safety requirements associated with a typical air drilling operations. However, the requirements of Onshore Order 2 are excessive with respect to the air rig layout and drilling operation procedures that are currently in practice to drill and control the surface casing hole in KMG Fields.

Variance for BOPE Requirements

The air rig operation utilizes a properly lubricated and maintained air bowl diverter system which diverts the drilling returns to a six-inch blooie line. The air bowl is the only piece of BOPE equipment which is installed during drilling operations and is sufficient to contain the air returns associated with this drilling operation. As was discussed earlier, the drilling of the surface hole does not encounter any over pressured or productive zones, and as a result standard BOPE equipment should not be required. In addition, standard drilling practices do not support the use of BOPE on 40 feet of conductor pipe.

Variance for Mud Material Requirements

Onshore Order 2 also states that sufficient quantities of mud materials shall be maintained or readily accessible for the purpose of assuring adequate well control. Once again, the surface hole drilling operations does not encounter over pressured or productive intervals, and as a result there is not a need to control pressure in the surface hole with a mud system. Instead of mud, the air rigs utilize water from the reserve pit for well control, if necessary. A skid pump which is located near the reserve pit (see attachment) will supply the water to the well bore.

Variance for Special Drilling Operation (surface equipment placement) Requirements
Onshore Order 2 requires specific safety distances or setbacks for the placement of associated standard air drilling equipment, wellbore, and reserve pits. The air rigs used to drill the surface holes are not typical of an air rig used to drill a producing hole in other parts of the US. These are smaller in nature and designed to fit a KMG location. The typical air rig layout for drilling surface hole in the field is attached.

Typically the blooie line discharge point is required to be 100 feet from the well bore. In the case of a KMG well, the reserve pit is only 45 feet from the rig and is used for the drill cuttings. The blooie line, which transports the drill cuttings from the well to the reserve pit, subsequently discharges only 45 feet from the well bore.

Typically the air rig compressors are required to be located in the opposite direction from the blooie line and a minimum of 100 feet from the well bore. At the KMG locations, the air rig compressors are approximately 40 feet from the well bore and approximately 60 feet from the blooie line discharge due to the unique air rig design. The air compressors (see attachment) are located on the rig (1250 cfm) and on a standby trailer (1170 cfm). A booster sits between the two compressors and boosts the output from 350 psi to 2000 psi. The design does put the booster and standby compressor opposite from the blooie line.

Lastly, Onshore Order 2 addresses the need for an automatic igniter or continuous pilot light on the blooie line. The air rig does not utilize an igniter as the surface hole drilling operation does not encounter productive formations.

Variance for FIT Requirements
KMG also respectfully requests a variance to Onshore Order 2, Section III, Part Bi, for the pressure integrity test (PIT, also known as a formation integrity test (FIT)). This well is not an exploratory well and is being drilled in an area where the formation integrity is well known. Additionally, when an FIT is run with the mud weight as required, the casing shoe frequently breaks down and causes subsequent lost circulation when drilling the entire depth of the well.

Conclusion
The air rig operating procedures and the attached air rig layout have effectively maintained well control while drilling the surface holes in KMG Fields. KMG respectfully requests a variance from Onshore Order 2 with respect to air drilling well control requirements as discussed above.

10. Other Information:

Please refer to the attached Drilling Program.

Federal Approval of this Action is Necessary

KERR-McGEE OIL & GAS ONSHORE LP

DRILLING PROGRAM

COMPANY NAME	KERR-McGEE OIL & GAS ONSHORE LP			DATE	December 19, 2011
WELL NAME	**LOVE 1121-8J**			TD	10,209' TVD 10,209' MD
FIELD	Natural Buttes	COUNTY Uintah	STATE Utah		FINISHED ELEVATION 5,588'
SURFACE LOCATION	NWSE 1816 FSL 1782 FEL	Sec 8	T 11S	R 21E	
	Latitude: 39.872764	Longitude: -109.588189		NAD 83	
OBJECTIVE ZONE(S)	BLACKHAWK (Part of the Mesaverde Group)				
ADDITIONAL INFO	Regulatory Agencies: BLM (Minerals), BLM (Surface), UDOGM Tri-County Health Dept.				

GEOLOGICAL			MECHANICAL		
LOGS	FORMATION TOPS	DEPTH	HOLE SIZE	CASING SIZE	MUD WEIGHT
		40'		14"	
			12 1/4"	8-5/8", 28#, IJ-55, LTC	Air mist
		200'			
			11"	8-5/8", 28#, IJ-55, LTC	Air mist
	Green River @	938'			
	Top of Birds Nest @	1,146'			
	Mahogany @	1,411'			
	Preset f/ GL @	1,860' TVD			
			7-7/8"	4-1/2" 11.6# HCP-110 Ultra DQX/LTC csg	Water / Fresh Water Mud 8.3-13.0 ppg
	Wasatch @	4,055'			
	Mverde @	6,860' TVD			
	Sego @	9,154' TVD			
	Castlegate @	9,257' TVD			
	Blackhawk @	9,609' TVD			
	TD @	10,209' TVD 10,209' MD			

All water flows encountered while drilling will be reported to the appropriate agencies.

Note: 11" surface hole will usually be drilled ±400' below the lost circulation zone (aka bird's nest). Drilled depth may be ±200' of the estimated set depth depending on the acutal depth of the loss zone.

Mud logging program TBD
Cased hole logging program from TD - surf csg

Max anticipated Mud required 13.0 ppg

Federal Approval of this Action is Necessary

KERR-McGEE OIL & GAS ONSHORE LP

DRILLING PROGRAM

CASING PROGRAM

	SIZE	INTERVAL			WT.	GR.	CPLG.	DESIGN FACTORS BURST	COLLAPSE	TENSION LTC	TENSION DQX
CONDUCTOR	14"	0-40'									
								3,390	1,880	348,000	N/A
SURFACE	8-5/8"	0	to	1,860	28.00	IJ-55	LTC	2.89	2.16	7.63	N/A
								10,690	8,650	279,000	367,000
PRODUCTION	4-1/2"	0	to	5,000	11.60	HCP-110	DQX	1.19	1.25		3.87
	4-1/2"	5,000	to	10,209'	11.60	HCP-110	LTC	1.19	1.25	5.76	

Surface Casing:

(Burst Assumptions: TD = 13.0 ppg) 0.73 psi/ft = frac gradient @ surface shoe

Fracture at surface shoe with 0.1 psi/ft gas gradient above

(Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing*Buoy.Fact. of water)

Production casing:

(Burst Assumptions: Pressure test with 8.4ppg @ 9000 psi) 0.66 psi/ft = bottomhole gradient

(Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing*Buoy.Fact. of water)

CEMENT PROGRAM

		FT. OF FILL	DESCRIPTION	SACKS	EXCESS	WEIGHT	YIELD
SURFACE	LEAD	500'	Premium cmt + 2% CaCl	180	60%	15.80	1.15
Option 1			+ 0.25 pps flocele				
	TOP OUT CMT (6 jobs)	1,200'	20 gals sodium silicate + Premium cmt	270	0%	15.80	1.15
			+ 2% CaCl + 0.25 pps flocele				
SURFACE		**NOTE: If well will circulate water to surface, option 2 will be utilized**					
Option 2	LEAD	1,360'	65/35 Poz + 6% Gel + 10 pps gilsonite	130	35%	11.00	3.82
			+ 0.25 pps Flocele + 3% salt BWOW				
	TAIL	500'	Premium cmt + 2% CaCl	150	35%	15.80	1.15
			+ 0.25 pps flocele				
	TOP OUT CMT	as required	Premium cmt + 2% CaCl	as req.		15.80	1.15
PRODUCTION	LEAD	3,549'	Premium Lite II +0.25 pps	290	35%	12.00	3.38
			celloflake + 5 pps gilsonite + 10% gel				
			+ 0.5% extender				
	TAIL	6,660'	50/50 Poz/G + 10% salt + 2% gel	1,570	35%	14.30	1.31
			+ 0.1% R-3				

*Substitute caliper hole volume plus 0% excess for LEAD if accurate caliper is obtained

*Substitute caliper hole volume plus 10% excess for TAIL if accurate caliper is obtained

FLOAT EQUIPMENT & CENTRALIZERS

SURFACE	Guide shoe, 1 jt, insert float. Centralize first 3 joints with bow spring centralizers. Thread lock guide shoe
PRODUCTION	Float shoe, 1 jt, float collar. 15 centralizers for a Mesaverde and 20 for a Blackhawk well. 1 centralizer on the first 3 joints and one every third joint thereafter.

ADDITIONAL INFORMATION

Test casing head to 750 psi after installing. Test surface casing to 1,500 psi prior to drilling out.

BOPE: 11" 5M with one annular and 2 rams. The BOPE will be installed before the production hole is drilled and tested to 5,000 psi (annular to 2,500 psi) prior to drilling out the surface casing shoe. Record on chart recorder and tour sheet. Function test rams on each trip. Maintain safety valve and inside BOP on rig floor at all times. Most rigs have top drives; however, if used, the Kelly is to be equipped with upper and lower kelly valves.

Surveys will be taken at 1,000' minimum intervals.

Most rigs have PVT System for mud monitoring. If no PVT is available, visual monitoring will be utilized.

DRILLING ENGINEER: _____ **DATE:** _____

Nick Spence / Danny Showers / Chad Loesel

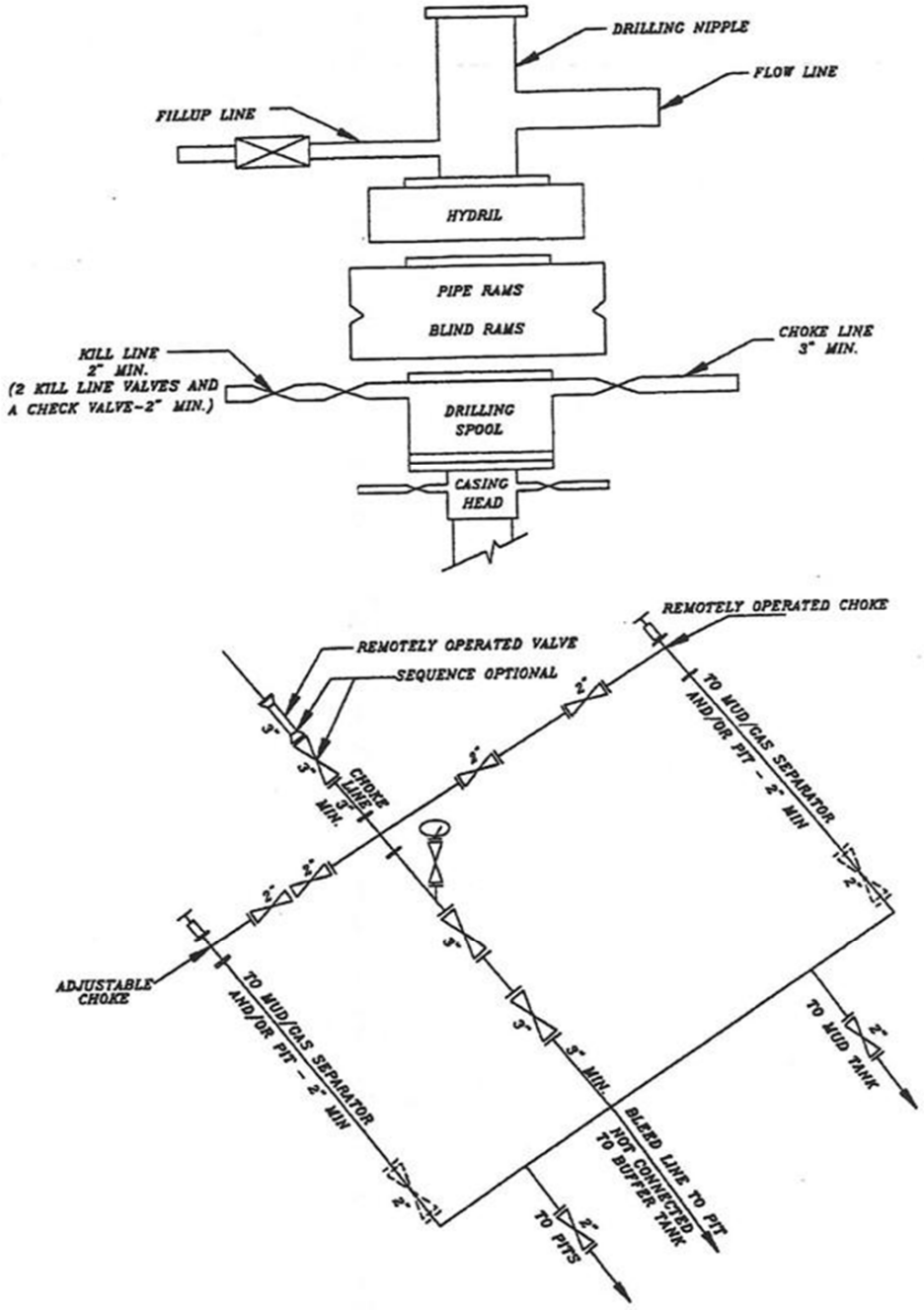
DRILLING SUPERINTENDENT: _____ **DATE:** _____

Kenny Gathings / Lovel Young

RECEIVED Dec. 19, 2011

Federal Approval of this Action is Necessary

EXHIBIT A
LOVE 1121-8J



SCHEMATIC DIAGRAM OF 5,000 PSI BOP STACK

Requested Drilling Options:

Kerr-McGee will use either a closed loop drilling system that will require one pit and one cuttings storage area to be constructed on the drilling pad or a traditional drilling operation with one pit used for drilling and completion operations. The cuttings storage area will be used to contain only the de-watered drill cuttings and will be lined and bermed to prevent any liquid runoff. The drill cuttings will be buried in the completion pit once completion operations are completed according to traditional pit closure standards. The pit will be constructed to allow for completion operations. The completion operations pit will be lined with a synthetic material 20 mil or thicker and will be used for the completing of the wells on the pad or used as part of our Aandarko Completions Transportation System (ACTS). Using the closed loop drilling system will allow Kerr-McGee to decrease the amount of disturbance/footprint on location compared to a single large drilling/completions pit.

If Kerr-McGee does not use a closed loop drilling system, it will construct a traditional drilling/completions pit to contain drill cuttings and for use in completion operations. The pit will be lined with a synthetic material 20 mil or thicker. The drill cuttings will be buried in the pit using traditional pit closure standards.

RECEIVED Dec. 19, 2011

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

FORM 6

ENTITY ACTION FORM

Operator: KERR McGEE OIL & GAS ONSHORE LP
Operator Account Number: N 2995
Address: 1368 SOUTH 1200 EAST
city VERNAL
state UT zip 84078
Phone Number: (435) 781-7024

Well 1

API Number	Well Name		QQ	Sec	Twp	Rng	County
4304738749	LOVE 1121-8J		NWSE	8	11S	21E	UINTAH
Action Code	**Current Entity Number**	**New Entity Number**	**Spud Date**			**Entity Assignment Effective Date**	
A	99999	18367	1/3/2012			1/18/2012	

Comments: MIRU PETE MARTIN BUCKET RIG. MVRD
SPUD WELL LOCATION ON 01/03/2012 AT 1300 HRS.

Well 2

API Number	Well Name		QQ	Sec	Twp	Rng	County
4304738748	LOVE 1121-8L		NWSW	8	11S	21E	UINTAH
Action Code	**Current Entity Number**	**New Entity Number**	**Spud Date**			**Entity Assignment Effective Date**	
A	99999	18368	1/4/2012			1/18/2012	

Comments: MIRU PETE MARTIN BUCKET RIG. MVRD
SPUD WELL LOCATION ON 01/04/2012 AT 0830 HRS.

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)

SHEILA WOPSOCK
Name (Please Print)
Signature
REGULATORY ANALYST
Title
1/10/2012
Date

(5/2000)

RECEIVED
JAN 10 2012
DIV. OF OIL, GAS & MINING

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

FORM 9

SUNDRY NOTICES AND REPORTS ON WELLS

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

5.LEASE DESIGNATION AND SERIAL NUMBER: UTU-8345

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7.UNIT or CA AGREEMENT NAME:

1. TYPE OF WELL
Gas Well

8. WELL NAME and NUMBER:
LOVE 1121-8J

2. NAME OF OPERATOR:
KERR-MCGEE OIL & GAS ONSHORE, L.P.

9. API NUMBER:
43047387490000

3. ADDRESS OF OPERATOR:
P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779

PHONE NUMBER:
720 929-6515

9. FIELD and POOL or WILDCAT:
LOVE Ext

4. LOCATION OF WELL
FOOTAGES AT SURFACE:
1816 FSL 1782 FEL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:
Qtr/Qtr: NWSE Section: 08 Township: 11.0S Range: 21.0E Meridian: S

COUNTY:
UINTAH

STATE:
UTAH

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

TYPE OF SUBMISSION	TYPE OF ACTION		
☐ NOTICE OF INTENT Approximate date work will start:	☐ ACIDIZE	☐ ALTER CASING	☐ CASING REPAIR
☐ SUBSEQUENT REPORT Date of Work Completion:	☐ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME
☐ SPUD REPORT Date of Spud:	☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
✓ DRILLING REPORT Report Date: 2/3/2012	☐ DEEPEN	☐ FRACTURE TREAT	☐ NEW CONSTRUCTION
	☐ OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK
	☐ PRODUCTION START OR RESUME	☐ RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION
	☐ REPERFORATE CURRENT FORMATION	☐ SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
	☐ TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL
	☐ WATER SHUTOFF	☐ SI TA STATUS EXTENSION	☐ APD EXTENSION
	☐ WILDCAT WELL DETERMINATION	☐ OTHER	OTHER:

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

MIRU AIR RIG ON FEB 2, 2012. DRILLED SURFACE HOLE TO 1913'. RAN SURFACE CASING AND CEMENTED. WELL IS WAITING ON ROTARY RIG. DETAILS OF CEMENT JOB WILL BE INCLUDED WITH WELL COMPLETION REPORT.

Accepted by the
Utah Division of
Oil, Gas and Mining
FOR RECORD ONLY
February 07, 2012

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Jaime Scharnowske	720 929-6304	Regulartory Analyst
SIGNATURE		**DATE**
N/A		2/6/2012

RECEIVED: Feb. 06, 2012

FEDERAL APPROVAL OF THIS ACTION IS NECESSARY

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

FORM 9

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9. API NUMBER:
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3. ADDRESS OF OPERATOR:
P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779

PHONE NUMBER:
720 929-6515 Ext

9. FIELD and POOL or WILDCAT:
UNDESIGNATED

4. LOCATION OF WELL
FOOTAGES AT SURFACE:
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QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:
Qtr/Qtr: NWSE Section: 08 Township: 11.0S Range: 21.0E Meridian: S

COUNTY:
UINTAH

STATE:
UTAH

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✓ NOTICE OF INTENT Approximate date work will start: 2/22/2012	☐ ACIDIZE	☐ ALTER CASING	☐ CASING REPAIR
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☐ DRILLING REPORT Report Date:	☐ WATER SHUTOFF	☐ SI TA STATUS EXTENSION	☐ APD EXTENSION
	☐ WILDCAT WELL DETERMINATION	☐ OTHER	OTHER:

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The Operator requests approval for changes in the drilling plan. Specifically, the Operator requests approval for a production casing change to 4-1/2 inch I-80 11.6 LB Ultra DQX/LTC casing. Please see the attachment. Thank you.

Accepted by the Utah Division of Oil, Gas and Mining

Date: March 05, 2012

By: Dark K Quist

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Jaime Scharnowske	720 929-6304	Regulartory Analyst
SIGNATURE		**DATE**
N/A		2/22/2012

RECEIVED: Feb. 22, 2012

Kerr-McGee Oil & Gas Onshore. L.P.

LOVE 1121-8J

Surface:	1816 FSL / 1782 FEL	NWSE
BHL:	1816 FSL / 1782 FEL	NWSE

Section 8 T11S R21E

Unitah County, Utah
Mineral Lease: UTU-8345

ONSHORE ORDER NO. 1

DRILLING PROGRAM

1. & 2. **Estimated Tops of Important Geologic Markers:**
Estimated Depths of Anticipated Water, Oil, Gas, or Mineral Formations:

Formation	Depth	Resource
Uinta	0 - Surface	
Green River	938	
Birds Nest	1146	Water
Mahogany	1411	Water
Wasatch	4055	Gas
Mesaverde	6860	Gas
Sego	9154	Gas
TD	9154	

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

Please refer to the attached Drilling Program

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

Please refer to the attached Drilling Program

RECEIVED: Feb. 22, 2012

5. Drilling Fluids Program:

Please refer to the attached Drilling Program

6. Evaluation Program:

Please refer to the attached Drilling Program

7. Abnormal Conditions:

Maximum anticipated bottom hole pressure calculated at 9154' TVD, approximately equals 5,859 psi (0.64 psi/ft = actual bottomhole gradient)

Maximum Anticipated Bottom Hole Pressure (MABHP) = Pore Pressure at TD

Maximum anticipated surface pressure equals approximately 3,832 psi (bottom hole pressure minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot, per Onshore Order No. 2).

Per Onshore Order No. 2 - Max Anticipated Surf. Press.(MASP) = (Pore Pressure at next csg point-
(0.22 psi/ft-partial evac gradient x TVD of next csg point))

8. Anticipated Starting Dates:

Drilling is planned to commence immediately upon approval of this application.

9. Variances:

Please refer to the attached Drilling Program.
Onshore Order #2 – Air Drilling Variance

Kerr-McGee Oil & Gas Onshore LP (KMG) respectfully requests a variance to several requirements associated with air drilling outlined in Onshore Order 2

- Blowout Prevention Equipment (BOPE) requirements;
- Mud program requirements; and
- Special drilling operation (surface equipment placement) requirements associated with air drilling.

This Standard Operating Practices addendum provides supporting information as to why KMG current air drilling practices for constructing the surface casing hole should be granted a variance to Onshore Order 2 air drilling requirements.

The reader should note that the air rig is used only to construct a stable surface casing hole through a historically difficult lost circulation zone. A conventional rotary rig follows the air rig, and is used to drill and construct the majority of the wellbore.

More notable, KMG has used the air rig layout and procedures outlined below to drill the surface casing hole in approximately 675 wells without incident of blow out or loss of life.

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Background

In a typical well, KMG utilizes an air rig for drilling the surface casing hole, an interval from the surface to surface casing depths, which varies in depth from 1,700 to 2,800 feet. The air rig drilling operation does not drill through productive or over pressured formations in KMG field, but does penetrate the Uinta and Green River Formations. The purpose of the air drilling operation is to overcome the severe loss circulation zone in the Green River known as the Bird's Nest while creating a stable hole for the surface casing. The surface casing hole is generally drilled to approximately 500 feet below the Bird's Nest.

Before the surface air rig is mobilized, a rathole rig is utilized to set and cement conductor pipe through a competent surface formation. Generally, the conductor is set at 40 feet. In some cases, conductor may be set deeper in areas that the surface formation is not found competent. This rig also drills the rat and mouse holes in preparation for the surface casing and production string drilling operations.

The air rig is then mobilized to drill the surface casing hole by drilling a 12 1/4 inch hole for the first 200 feet, then will drill a 11inch hole to just above the Bird's Nest interval with an air hammer. The hammer is then tripped and replaced with a 11 inch tri-cone bit. The tri-cone bit is used to drill to the surface casing point, approximately 500 feet below the loss circulation zone (Bird's Nest). The 8-5/8 inch surface casing is then run and cemented in place, thereby isolating the lost circulation zone.

KMG fully appreciates Onshore Order 2 well control and safety requirements associated with a typical air drilling operations. However, the requirements of Onshore Order 2 are excessive with respect to the air rig layout and drilling operation procedures that are currently in practice to drill and control the surface casing hole in KMG Fields.

Variance for BOPE Requirements

The air rig operation utilizes a properly lubricated and maintained air bowl diverter system which diverts the drilling returns to a six-inch blooie line. The air bowl is the only piece of BOPE equipment which is installed during drilling operations and is sufficient to contain the air returns associated with this drilling operation. As was discussed earlier, the drilling of the surface hole does not encounter any over pressured or productive zones, and as a result standard BOPE equipment should not be required. In addition, standard drilling practices do not support the use of BOPE on 40 feet of conductor pipe.

Variance for Mud Material Requirements

Onshore Order 2 also states that sufficient quantities of mud materials shall be maintained or readily accessible for the purpose of assuring adequate well control. Once again, the surface hole drilling operations does not encounter over pressured or productive intervals, and as a result there is not a need to control pressure in the surface hole with a mud system. Instead of mud, the air rigs utilize water from the reserve pit for well control, if necessary. A skid pump which is located near the reserve pit (see attachment) will supply the water to the well bore.

Variance for Special Drilling Operation (surface equipment placement) Requirements

Onshore Order 2 requires specific safety distances or setbacks for the placement of associated standard air drilling equipment, wellbore, and reserve pits. The air rigs used to drill the surface holes are not typical of an air rig used to drill a producing hole in other parts of the US. These are smaller in nature

RECEIVED: Feb. 22, 2012

and designed to fit a KMG location. The typical air rig layout for drilling surface hole in the field is attached.

Typically the blooie line discharge point is required to be 100 feet from the well bore. In the case of a KMG well, the reserve pit is only 45 feet from the rig and is used for the drill cuttings. The blooie line, which transports the drill cuttings from the well to the reserve pit, subsequently discharges only 45 feet from the well bore.

Typically the air rig compressors are required to be located in the opposite direction from the blooie line and a minimum of 100 feet from the well bore. At the KMG locations, the air rig compressors are approximately 40 feet from the well bore and approximately 60 feet from the blooie line discharge due to the unique air rig design. The air compressors (see attachment) are located on the rig (1250 cfm) and on a standby trailer (1170 cfm). A booster sits between the two compressors and boosts the output from 350 psi to 2000 psi. The design does put the booster and standby compressor opposite from the blooie line.

Lastly, Onshore Order 2 addresses the need for an automatic igniter or continuous pilot light on the blooie line. The air rig does not utilize an igniter as the surface hole drilling operation does not encounter productive formations.

Variance for FIT Requirements
KMG also respectfully requests a variance to Onshore Order 2, Section III, Part Bi, for the pressure integrity test (PIT, also known as a formation integrity test (FIT)). This well is not an exploratory well and is being drilled in an area where the formation integrity is well known. Additionally, when an FIT is run with the mud weight as required, the casing shoe frequently breaks down and causes subsequent lost circulation when drilling the entire depth of the well.

Conclusion
The air rig operating procedures and the attached air rig layout have effectively maintained well control while drilling the surface holes in KMG Fields. KMG respectfully requests a variance from Onshore Order 2 with respect to air drilling well control requirements as discussed above.

10. Other Information:

Please refer to the attached Drilling Program.

RECEIVED: Feb. 22, 2012

KerrMcGee

KERR-McGEE OIL & GAS ONSHORE LP

DRILLING PROGRAM

COMPANY NAME	KERR-McGEE OIL & GAS ONSHORE LP	DATE	February 22, 2012
WELL NAME	**LOVE 1121-8J**	TD	9,154' TVD 9,154' MD
FIELD	Natural Buttes	COUNTY Uintah STATE Utah	FINISHED ELEVATION 5,588'
SURFACE LOCATION	NWSE 1816 FSL 1782 FEL	Sec 8 T 11S R 21E	
	Latitude: 39.872797	Longitude: -109.587500	NAD 83
BTM HOLE LOCATION	NWSE 1816 FSL 1782 FEL	Sec 8 T 11S R 21E	
	Latitude: 39.872797	Longitude: -109.587500	NAD 83
OBJECTIVE ZONE(S)	Wasatch/Mesaverde		
ADDITIONAL INFO	Regulatory Agencies: BLM (Minerals), BLM (Surface), UDOGM Tri-County Health Dept.		

GEOLOGICAL			MECHANICAL		
LOGS	FORMATION TOPS	DEPTH	HOLE SIZE	CASING SIZE	MUD WEIGHT
		40'	14"		
			12 1/4"	8-5/8", 28#, IJ-55, LTC	Air mist
		200'			
			11'	8-5/8", 28#, IJ-55, LTC	Air mist
All water flows encountered while drilling will be reported to the appropriate agencies.					
	Green River @	0,938'			
	Top of Birds Nest @	1,146'			
	Mahogany @	1,411'			
	Preset f/ GL @	1,926' TVD			
	Note: 12 1/4" surface hole will usually be drilled ±400' below the lost circulation zone (aka bird's nest). Drilled depth may be ±200' of the estimated set depth depending on the acutal depth of the loss zone.				
	Wasatch @	4,055' TVD			
Mud logging program TBD Cased hole logging program from TD - surf csg			7-7/8"	4-1/2" 11.6# I-80 Ultra DQX/LTC csg	Water / Fresh Water Mud 8.3-12.5 ppg
	Mverde @	6,860' TVD			
Max anticipated Mud required 12.5 ppg	TD @	9,154' TVD 9,154' MD			

KERR-McGEE OIL & GAS ONSHORE LP

DRILLING PROGRAM

CASING PROGRAM

	SIZE	INTERVAL			WT.	GR.	CPLG.	DESIGN FACTORS BURST	COLLAPSE	TENSION LTC	TENSION DQX
CONDUCTOR	14"	0-40'									
								3,390	1,880	348,000	N/A
SURFACE	8-5/8"	0	to	1,926	28.00	IJ-55	LTC	2.79	2.09	7.37	N/A
								7,780	6,350	223,000	267,035
PRODUCTION	4-1/2"	0	to	5,000	11.60	I-80	DQX	1.11	1.07		3.11
	4-1/2"	5,000	to	9,154'	11.60	I-80	LTC	1.11	1.07	5.72	

Surface Casing:

(Burst Assumptions: TD = 12.5 ppg) 0.73 psi/ft = frac gradient @ surface shoe

Fracture at surface shoe with 0.1 psi/ft gas gradient above

(Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing*Buoy.Fact. of water)

Production casing:

(Burst Assumptions: Pressure test with 8.4ppg @ 7000 psi) 0.64 psi/ft = bottomhole gradient

(Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing*Buoy.Fact. of water)

CEMENT PROGRAM

		FT. OF FILL	DESCRIPTION	SACKS	EXCESS	WEIGHT	YIELD
SURFACE	LEAD	500'	Premium cmt + 2% CaCl	180	60%	15.80	1.15
Option 1			+ 0.25 pps flocele				
	TOP OUT CMT (6 jobs)	1,200'	20 gals sodium silicate + Premium cmt	270	0%	15.80	1.15
			+ 2% CaCl + 0.25 pps flocele				
SURFACE			**NOTE: If well will circulate water to surface, option 2 will be utilized**				
Option 2	LEAD	1,426'	65/35 Poz + 6% Gel + 10 pps gilsonite	130	35%	11.00	3.82
			+ 0.25 pps Flocele + 3% salt BWOW				
	TAIL	500'	Premium cmt + 2% CaCl	150	35%	15.80	1.15
			+ 0.25 pps flocele				
	TOP OUT CMT	as required	Premium cmt + 2% CaCl	as req.		15.80	1.15
PRODUCTION	LEAD	3,554'	Premium Lite II +0.25 pps	290	35%	11.00	3.38
			celloflake + 5 pps gilsonite + 10% gel				
			+ 0.5% extender				
	TAIL	5,600'	50/50 Poz/G + 10% salt + 2% gel	1,320	35%	14.30	1.31
			+ 0.1% R-3				

*Substitute caliper hole volume plus 0% excess for LEAD if accurate caliper is obtained

*Substitute caliper hole volume plus 10% excess for TAIL if accurate caliper is obtained

FLOAT EQUIPMENT & CENTRALIZERS

SURFACE	Guide shoe, 1 jt, insert float. Centralize first 3 joints with bow spring centralizers. Thread lock guide shoe
PRODUCTION	Float shoe, 1 jt, float collar. No centralizers will be used.

ADDITIONAL INFORMATION

Test casing head to 750 psi after installing. Test surface casing to 1,500 psi prior to drilling out.

BOPE: 11" 5M with one annular and 2 rams. The BOPE will be installed before the production hole is drilled and tested to 5,000 psi (annular to 2,500 psi) prior to drilling out the surface casing shoe. Record on chart recorder and tour sheet. Function test rams on each trip. Maintain safety valve and inside BOP on rig floor at all times. Most rigs have top drives; however, if used, the Kelly is to be equipped with upper and lower kelly valves.

Surveys will be taken at 1,000' minimum intervals.

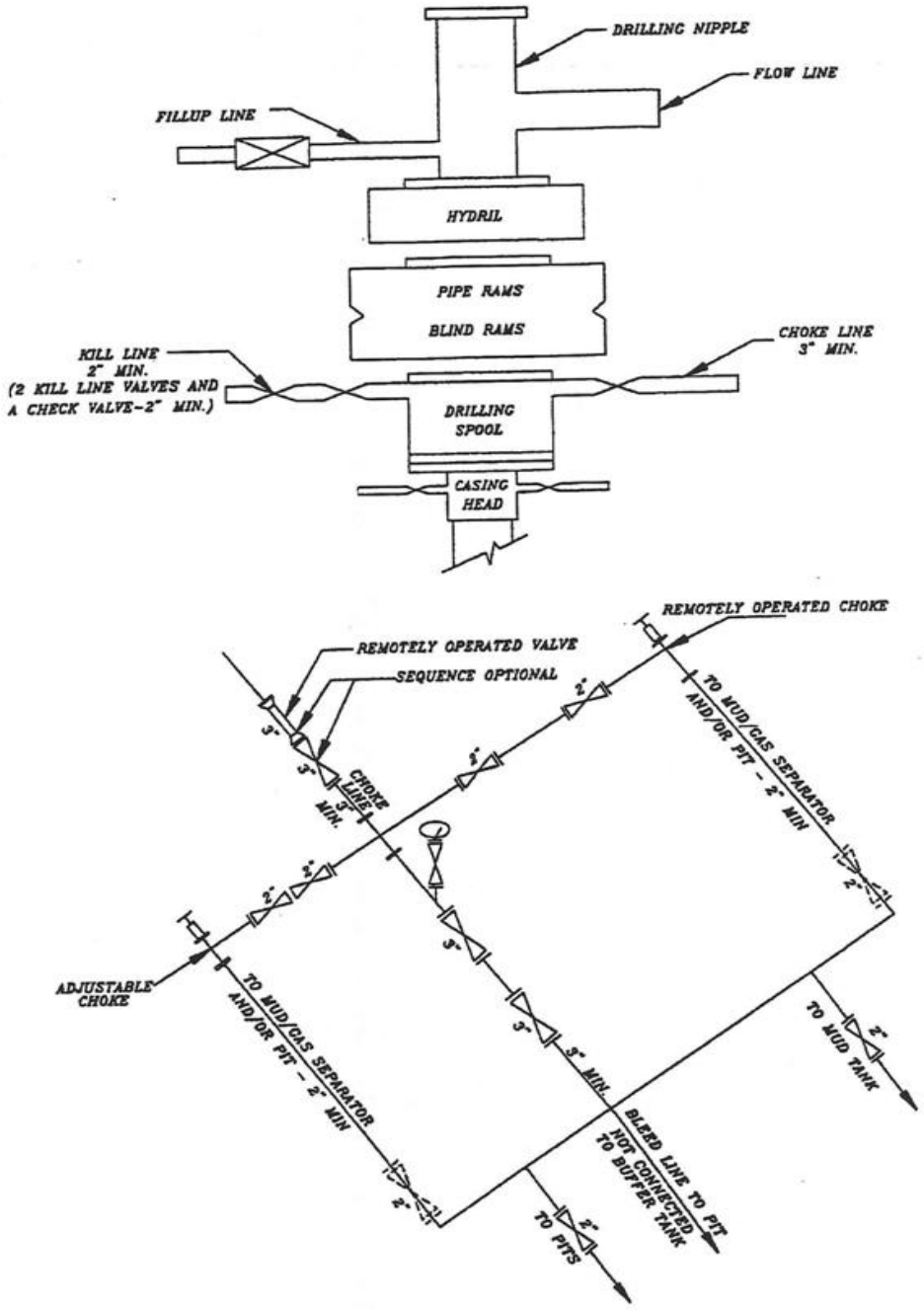
Most rigs have PVT System for mud monitoring. If no PVT is available, visual monitoring will be utilized.

DRILLING ENGINEER: Nick Spence / Danny Showers / Chad Loesel **DATE:**

DRILLING SUPERINTENDENT: Kenny Gathings / Lovel Young **DATE:**

RECEIVED: Feb. 22, 2012

EXHIBIT A
LOVE 1121-8J



SCHEMATIC DIAGRAM OF 5,000 PSI BOP STACK

RECEIVED: Feb. 22, 2012

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

FORM 9

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9. API NUMBER:
43047387490000

3. ADDRESS OF OPERATOR:
P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779

PHONE NUMBER:
720 929-6515 Ext

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

MIRU ROTARY RIG. FINISHED DRILLING FROM 1,913' TO 9,154' ON MARCH 16, 2012. RAN 4-1/2" 11.6# I-80 PRODUCING CASING. CEMENTED PRODUCTION CASING. RELEASED SST 54 RIG ON MARCH 19, 2012 @ 02:00 HRS. DETAILS OF CEMENT JOB WILL BE INCLUDED WITH THE WELL COMPLETION REPORT. WELL IS WAITING ON FINAL COMPLETION ACTIVITIES.

Accepted by the Utah Division of Oil, Gas and Mining
FOR RECORD ONLY
March 26, 2012

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Jaime Scharnowske	720 929-6304	Regulartory Analyst
SIGNATURE		**DATE**
N/A		3/20/2012

RECEIVED: Mar. 20, 2012

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

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	☐ WILDCAT WELL DETERMINATION	☐ OTHER	OTHER:

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

THE SUBJECT WELL WAS PLACED ON PRODUCTION ON 04/17/2012 AT 1145 HRS. THE CHRONOLOGICAL WELL HISTORY WILL BE SUBMITTED WITH THE WELL COMPLETION REPORT.

Accepted by the Utah Division of Oil, Gas and Mining
FOR RECORD ONLY
May 08, 2012

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Sheila Wopsock	435 781-7024	Regulatory Analyst
SIGNATURE		**DATE**
N/A		4/19/2012

RECEIVED: Apr. 19, 2012

Form 3160-4
(August 2007)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB No. 1004-0137
Expires: July 31, 2010

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

5. Lease Serial No. UTU8345

1a. Type of Well ☐ Oil Well ☒ Gas Well ☐ Dry ☐ Other
b. Type of Completion ☒ New Well ☐ Work Over ☐ Deepen ☐ Plug Back ☐ Diff. Resvr.
Other

6. If Indian, Allottee or Tribe Name

7. Unit or CA Agreement Name and No.

2. Name of Operator KERR MCGEE OIL & GAS ONSHORE LP Contact: CARA MAHLER E-Mail: cara.mahler@anadarko.com

8. Lease Name and Well No. LOVE 1121-8J

3. Address 1099 18TH STREET, SUITE 1800 DENVER, CO 80202

3a. Phone No. (include area code) Ph: 720-929-6029

9. API Well No. 43-047-38749

4. Location of Well (Report location clearly and in accordance with Federal requirements)*

At surface NWSE 1816FSL 1782FEL 39.872763 N Lat, 109.588188 W Lon

At top prod interval reported below NWSE 1816FSL 1782FEL 39.872763 N Lat, 109.588188 W Lon

At total depth NWSE ~~1816~~ 1810 FSL ~~1782~~ 1760 FEL 39.872763 N Lat, 109.588188 W Lon BHL by HSM

10. Field and Pool, or Exploratory NATURAL BUTTES

11. Sec., T., R., M., or Block and Survey or Area Sec 8 T11S R21E Mer SLB

12. County or Parish UINTAH

13. State UT

14. Date Spudded 01/03/2012

15. Date T.D. Reached 03/16/2012

16. Date Completed ☐ D & A ☒ Ready to Prod. 04/17/2012

17. Elevations (DF, KB, RT, GL)* 5588 GL

18. Total Depth: MD 9154 TVD 9152

19. Plug Back T.D.: MD 9110 TVD 9108

20. Depth Bridge Plug Set: MD TVD

21. Type Electric & Other Mechanical Logs Run (Submit copy of each)
BHV-SSD/SDSN/SACTR-CBL/GR/COLLARS

22. Was well cored? ☒ No ☐ Yes (Submit analysis)
Was DST run? ☒ No ☐ Yes (Submit analysis)
Directional Survey? No ☒ Yes (Submit analysis)

23. Casing and Liner Record *(Report all strings set in well)*

Hole Size	Size/Grade	Wt. (#/ft.)	Top (MD)	Bottom (MD)	Stage Cementer Depth	No. of Sks. & Type of Cement	Slurry Vol. (BBL)	Cement Top*	Amount Pulled
20.000	14.000 STL	36.7	0	40		28			
11.000	8.625 IJ-55	28.0	0	1887		540		0	
7.875	4.500 I-80	11.6	0	9154		1786		80	

24. Tubing Record

Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)
2.375	8329							

25. Producing Intervals / 26. Perforation Record

	Formation	Top	Bottom	Perforated Interval	Size	No. Holes	Perf. Status
A)	WASATCH	6376	6884	6376 TO 6884	0.360	48	OPEN
B)	MESAVERDE	7280	8668	7280 TO 8668	0.360	144	OPEN
C)							
D)							

27. Acid, Fracture, Treatment, Cement Squeeze, Etc.

Depth Interval	Amount and Type of Material
6376 TO 8668	PUMP 7662 BBLS SLICK H2O & 170,277 LBS 30/50 OTTAWA SAND

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DIV. OF OIL, GAS & MINING

28. Production - Interval A

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
04/17/2012	04/28/2012	24	→	0.0	1494.0	391.0			FLOWS FROM WELL

Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Well Status
20/64	974 SI	1350.0	→	0	1494	391		PGW

28a. Production - Interval B

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
			→						

Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Well Status
			→					

(See Instructions and spaces for additional data on reverse side)

ELECTRONIC SUBMISSION #139441 VERIFIED BY THE BLM WELL INFORMATION SYSTEM

**** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED ****

28b. Production - Interval C

Date First Produced	Test Date	Hours Tested	Test Production →	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method

Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate →	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Well Status

28c. Production - Interval D

Date First Produced	Test Date	Hours Tested	Test Production →	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method

Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate →	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Well Status

29. Disposition of Gas *(Sold, used for fuel, vented, etc.)*
SOLD

30. 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.

31. Formation (Log) Markers

Formation	Top	Bottom	Descriptions, Contents, etc.	Name	Top Meas. Depth
				GREEN RIVER	942
				BIRD'S NEST	1160
				WASATCH	4021
				MESAVERDE	6963

32. Additional remarks (include plugging procedure):
The first 210? of the surface hole was drilled with a 12 ?? bit. The remainder of surface hole was drilled with an 11? bit. DQX csg was run from surface to 5041?; LTC csg was run from 5041? to 9154?. Attached is the chronological well history, perforation report & final survey.

33. Circle enclosed attachments:

1. Electrical/Mechanical Logs (1 full set req'd.)
2. Geologic Report
3. DST Report
4. Directional Survey
5. Sundry Notice for plugging and cement verification
6. Core Analysis
7 Other:

34. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records (see attached instructions):

Electronic Submission #139441 Verified by the BLM Well Information System.
For KERR MCGEE OIL & GAS ONSHORE L, sent to the Vernal

Name *(please print)* CARA MAHLER Title AUTHORIZED REPRESENTATIVE

Signature (Electronic Submission) Date 05/31/2012

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fradulent statements or representations as to any matter within its jurisdiction.

**** ORIGINAL ** ORIGINAL ** ORIGINAL ** ORIGINAL ** ORIGINAL ** ORIGINAL ** ORIGINAL ****

US ROCKIES REGION

Operation Summary Report

Well: LOVE 1121-8J		Spud Date: 2/2/2012
Project: UTAH-UINTAH	Site: LOVE 1121-8J	Rig Name No: PROPETRO 11/11, SST 54/54
Event: DRILLING	Start Date: 1/9/2012	End Date: 3/21/2012
Active Datum: RKB @5,606.01ft (above Mean Sea Level)	UWI: NW/SE/0/11/S/21/E/8/0/0/26/PM/S/1816/E/0/1782/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
2/2/2012	2:00 - 7:00	5.00	MIRU	01	A	P		MI F/LOVE 1121-8L
	7:00 - 13:30	6.50	MIRU	01	B	P		INSTALL DIVERTOR HEAD AND BLUEY LINE. BUILD DITCH. SPOT IN RIG. SPOT IN CATWALK AND PIPE RACKS. RIG UP PIT PUMP. RIG UP PUMP. PRIME PUMP. INSPECT RIG. HELD PRE-SPUD SAFETY MEETING. SPUD 13:30 02/02/2012
	13:30 - 15:00	1.50	MIRU	02	B	P		DRILL 12.25" HOLE 44'- 210'. (166', 110.66'/HR) RPM=45, WOB 5-15K. PSI ON/OFF 600/400. UP/DOWN/ ROT 20/20/20 K. DRAG 0 K. CIRC RESERVE W. 8.3# WATER. DRILL DOWN TO 210' W/ 6" COLLARS.
	15:00 - 16:00	1.00	MIRU	06	A	P		POOH, PU, 11" BIT AND DIRECTIONAL TOOLS
	16:00 - 18:30	2.50	DRLSUR	22	L	Z		WAIT ON MWD TOOL TO ESTABLISH COMMUNICATION
	18:30 - 19:00	0.50	DRLSUR	06	A	P		TIH T/210'
	19:00 - 0:00	5.00	DRLSUR	02	B	P		DRILL F/210 T/1030 (820' @ 164' PER HR) WOB 20K, PSI ON/OFF 1280/960, RPM 45 UP/DWN/ROT 61/42/56
2/3/2012	0:00 - 7:00	7.00	DRLSUR	02	B	P		DRILL F/1030-1913 (883' @ 135' PER HR) WOB 20K, PSI ON/OFF 1500/1230, RPM 42 UP/DWN/ROT 71/54/64 TD @ 07:00
	7:00 - 9:00	2.00	DRLSUR	05	D	P		CIRC F/CSNG
	9:00 - 12:00	3.00	DRLSUR	06	D	P		LDDS, BHA & DIR. TOOLS
	12:00 - 13:00	1.00	DRLSUR	12	A	P		MOVE PIPE RACKS AND CATWALK. PULL DIVERTER HEAD. RIG UP TO RUN CSG. AND MOVE CSG INTO POSITION TO P/U
	13:00 - 15:00	2.00	DRLSUR	12	C	P		RUN 42 JTS 8 5/8, 28# CSNG. SHOE SET @ 1873', BAFFLE SET @ 1825'
	15:00 - 16:00	1.00	DRLSUR	12	B	P		HOLD SAFETY MEETING, RUN 200' OF 1". RIG DOWN RIG MOVE OFF WELL, REBUILD DITCH. RIG UP CEMENT TRUCK, 2" HARD LINES,. CEMENT HEAD, LOAD PLUG. LAND CSNG @ 15:15
	16:00 - 17:30	1.50	DRLSUR	12	E	P		PRESSURE TEST LINES TO 2000 PSI. PUMP 30 BBLS OF WATER AHEAD. PUMP 20 BBLS OF 8.3# GEL WATER AHEAD. PUMP (150 SX) 102 BBLS OF 11.0# 3.82 YD. PUMP 200 SX (41 BBLS) TAIL, 15.8#, 1.15 YD. DROP PLUG ON FLY. DISLPACE WITH 111 BBLS OF H20. 40 BBLS CMT T/SURFACE. FINAL LIFT 400PSI AT 4 BBLS MIN. BUMP PLUG WITH 900 PSI HELD FOR 5 MIN. FLOAT HELD. PUMP 150 SX (30.7 BBLS) OF SAME TAIL CEMENT WITH 2% CACL DOWN 1". SHUT DOWN AND CLEAN TRUCK. CEMENT TO SURFACE. FELL BACK RELEASE RIG 17:30
	17:30 - 17:30	0.00	DRLSUR	13	A	P		WOC

US ROCKIES REGION

Operation Summary Report

Well: LOVE 1121-8J		Spud Date: 2/2/2012
Project: UTAH-UINTAH	Site: LOVE 1121-8J	Rig Name No: PROPETRO 11/11, SST 54/54
Event: DRILLING	Start Date: 1/9/2012	End Date: 3/21/2012
Active Datum: RKB @5,606.01ft (above Mean Sea Level)	UWI: NW/SE/0/11/S/21/E/8/0/0/26/PM/S/1816/E/0/1782/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
	17:30 - 17:30	0.00	DRLSUR	12	E	P		PUMP 40 SKS (8.1 BLS) 15.8 # 1.15 YD DWN BACK SIDE. CMT T/SURFACE CMT STAYED @ SURFACE
3/11/2012	12:00 - 17:00	5.00	MIRU	01	E	P		DERRICK DOWN AND OFF FLOOR READY GO TO NEW LOCATION IN AM. AT NOON 3 TRUCKS W/LOW BOYS 3 DRIVERS OFF LOCATION 17:00 RIG MOVE 60% RIG UP 15%
	17:00 - 0:00	7.00	MIRU	01	E	P		W/O/DAYLIGHT
3/12/2012	0:00 - 6:30	6.50	MIRU	01	B	P		W/O/DAY LIGHT
	6:30 - 7:00	0.50	MIRU	01	B	P		SAFETY MEETING W/ WESTROC & RIG CREW.
	7:00 - 18:00	11.00	MIRU	01	B	P		RIG DOWN SUB & CAMP MOVE TO NEW LOCATION, RIG UP, LOCATION VERY TIGHT SET GEN.SET LAST DUE TO SMALL LOCATION SLOWED RIG MOVE,DERRICK UP @ 1800
	18:00 - 0:00	6.00	MIRU	01	B	P		RIG UP PREPARE TO PICK UP TOP DRIVE GROUND SUPPORT,RIG FLOOR. TRUCKS ON LOC. 5 BED TRUCKS, 5 HAUL TRUCKS, 2 FORK LIFTS,1 CRANE, 10 DRIVERS,2 HELPERS,2 TRUCK PUSHERS,2 F/L DRIVERS, 1 GRAN OPERATOR 2 SWAMPERS. TRUCKS OFF LOCATION@ 18:30.
3/13/2012	0:00 - 7:00	7.00	MIRU	01	B	P		FINISH RIGGING UP. RIG UP WIND WALLS, CHECK ALL SENSORS, SERVICE RIG, CHECK ALL VALVES. BRIDLE DOWN READY TO PICK UP TOP DRIVE
	7:00 - 11:00	4.00	MIRU	01	B	P		SAFETY MEETING W/WESTROC & RIG CREWS SPOT AND PICK UP TOP DRIVE HANG AND RIG UP SAME.
	11:00 - 13:00	2.00	DRLPRV	14	A	P		NIPPLE UP BOP
	13:00 - 17:00	4.00	DRLPRV	15	A	P		TEST BOP 250 LOW & 5000 HIGH, PIPE RAMS & INSIDE VALVES,RAMS OUTSIDE VALVES,CHOKE LINE,CHECK VALVE,INSIDE MANIFOLD VALVES,BLIND RAMS,CHOKE LINE & MANIFOLD VALVES ALL FLOOR VALVES. TEST 250 LOW 3000 HIGH, HYDRILL,STAND PIPE,KELLY HOSE, MUD LINE, TEST STRATA SYSTEM 300 LOW, 2000 HIGH, TEST CASING 1500 PSI. 1/2 HR. GOOD TEST RIG DOWN A-1TESTING.
	17:00 - 23:00	6.00	DRLPRV	06	A	P		SET WEAR BUSHING,SAFETY MEETING,RIG UP LAY DOWN MACHINE,PICK UP BHA ORIENT MUD MOTOR, TRIP IN HOLE PICKING UP BHA & DRILL PIPE.
	23:00 - 0:00	1.00	DRLPRV	09	A	P		RIG DOWN LAY DOWN MACHINE, CUT OFF 10 WRAPS
3/14/2012	0:00 - 1:30	1.50	DRLPRO	02	D	P		DRILL SHOE TRACK - 1,836' TO 1,887' CLEAN OUT TO 1,927'

US ROCKIES REGION

Operation Summary Report

Well: LOVE 1121-8J			Spud Date: 2/2/2012
Project: UTAH-UINTAH	Site: LOVE 1121-8J		Rig Name No: PROPETRO 11/11, SST 54/54
Event: DRILLING	Start Date: 1/9/2012		End Date: 3/21/2012
Active Datum: RKB @5,606.01ft (above Mean Sea Level)	UWI: NW/SE/0/11/S/21/E/8/0/0/26/PM/S/1816/E/0/1782/0/0		

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
	1:30 - 15:30	14.00	DRLPRO	02	D	P		DRILL / SLIDE / SURVEY F/ 1,927' TO 4,266' = 2,339' = ROP 167' FPH WOB 18,000 / 21,000 PU WT 83,000 SO WT 75,000 ROT WT 78,000 PUMPING 510 GPM 104 SPM TDRPM 45 MMRPM 107 TOTAL RPM 152 DIFF 255 PSI ON/OFF 1,700 / 1,450 TORQUE ON/OFF 6,810 / 5,120 NOV RUNNING BOTH CENTRIFUGE DEWATERING STRATA OFFLINE MUD WT. 8.4 VIS. 27 SLIDE 60' = 2.5% OF FOOTAGE DRILLED SLIDE 4.5 MIN = .05% OF HRS DRILLED
	15:30 - 16:00	0.50	MAINT	07	A	P		RIG SERVICE / FUNCTION BOP
	16:00 - 0:00	8.00	DRLPRO	02	D	P		DRILL / SLIDE / SURVEY F/ 4,266' TO 5,500' = 1,234' ROP 155.2' FPH WOB 20,000 / 22,000 PU 155,000 SO 125,000 RT 145,000 PUMPING 590 GPM 120 SPM TDRPM 45 MMRPM 124 TOTAL RPM 152 DIFF 290 PSI ON/OFF 2,075 / 1,785 TORQUE ON/OFF 8,210 / 3,540 NOV DEWATERING 8 HRS STRATA ON LNE @ 4,360'. HOLDING 110 PSI BACK PRESSURE WHILE DRILLING. 140 PSI CONN BACK PRESSURE. MUD WT. 8.4 VIS. 27 SLIDE 58' = 4.74% OF FOOTAGE SLIDE TIME = 44 MIN = 9.16% OF TIME

Operation Summary Report

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Project: UTAH-UINTAH	Site: LOVE 1121-8J	Rig Name No: PROPETRO 11/11, SST 54/54
Event: DRILLING	Start Date: 1/9/2012	End Date: 3/21/2012
Active Datum: RKB @5,606.01ft (above Mean Sea Level)	UWI: NW/SE/0/11/S/21/E/8/0/0/26/PM/S/1816/E/0/1782/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
3/15/2012	0:00 - 10:30	10.50	DRLPRO	02	D	P		DRILL / SLIDE / SURVEY F/ 5,500' TO 6,550' = 1,050' = ROP 100' FPH WOB 18,000 / 22,000 PU 162,000 SO 126,000 RT 133,000 PUMPING 599 GPM 122 SPM TDRPM 45 MMRPM 125 TOTAL RPM 170 DIFF 260 PSI ON/OFF 2,080/ 1,820 TORQUE ON/OFF 6,890 / 4,380 NOV DEWATERING STRATA ON LNE HOLDING 120 PSI ON DRILLING, 140 PSI ON CONNECTIONS MUD WT. 8.4 VIS. 27 SLIDE 25' = 2.4% OF FOOTAGE SLIDE TIME = 20 MIN = 1.9% OF TIME NO LOSSES NO FLARE 14.34' N AND 11.69' W OF CENTER
	10:30 - 11:00	0.50	MAINT	07	A	P		RIG SERVICE, FUNCTION BOP
	11:00 - 0:00	13.00	DRLPRO	02	D	P		DRILL / SLIDE / SURVEY F/ 6,500' TO 7617' = 1067' = ROP 82' FPH WOB 18,000 / 24,000 PU 195,000 SO 150,000 RT 175,000 PUMPING 589 GPM 120 SPM TD RPM 50 MM RPM 124 TOTAL RPM 174 DIFF 285 PSI ON/OFF 2,406 / 2,121 TORQUE ON/OFF 8,260 / 4,420 NOV DEWATERING STRATA ON LNE HOLDING 120 PSI ON DRILLING, 140 PSI ON CONNECTIONS MUD WT. 8.3 VIS. 27 SLIDE 57' = 5.34% OF FOOTAGE SLIDE TIME = 95 MIN = 12.18% OF TIME NO LOSSES NO FLARE 14.34' N AND 11.69' W OF CENTER

US ROCKIES REGION

Operation Summary Report

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Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
3/16/2012	0:00 - 15:00	15.00	DRLPRO	02	D	P		DRILL / SLIDE / SURVEY F/ 7,617' TO 8,741' = 1,124' = ROP 74.9' FPH WOB 22,000 / 24,000 PU 210,000 SO 160,000 RT 185,000 PUMPING 570 GPM 116 SPM TD RPM 45 MM RPM 120 TOTAL RPM 165 DIFF 210 PSI ON/OFF 2,590 / 2,380 TORQUE ON/OFF 11,890 / 6,130 NOV DEWATERING TILL 8,370' THEN RUNNING CONVENTIONAL STRATA ON LNE HOLDING 120 PSI ON DRILLING, 140 PSI ON CONNECTIONS MUD WT. 8.5 VIS. 30 SLIDE 32' = 2.8% OF FOOTAGE SLIDE TIME = 90 MIN = 10% OF TIME NO LOSSES NO FLARE 16.62' N AND .99' W OF CENTER
	15:00 - 15:30	0.50	MAINT	07	A	P		SERVICE RIG, FUNCTION BOP
	15:30 - 21:30	6.00	DRLPRO	02	D	P		DRILL / SLIDE / SURVEY F/ 8,741' TO TD 9,154' = 413' = ROP 68.8' FPH WOB 20,000 / 22,000 PU 210,000 SO 160,000 RT 185,000 PUMPING 570 GPM 116 SPM TD RPM 45 MM RPM 120 TOTAL RPM 165 DIFF 210 PSI ON/OFF 2,600 / 2,390 TORQUE ON/OFF 11,890 / 6,130 NOV RUNNING CONVENTIONAL STRATA ON LNE HOLDING 120 PSI ON DRILLING, 140 PSI ON CONNECTIONS MUD WT. 8.5 VIS. 30 SLIDE 32' = 2.8% OF FOOTAGE SLIDE TIME = 90 MIN = 10% OF TIME NO LOSSES 2' FLARE 6.23' S AND 14.93' E OF CENTER
	21:30 - 0:00	2.50	DRLPRO	05	G	P		DISPLACE WATER IN HOLE WITH MW 10.3 45 VIS MUD, BUILD VOLUME IN PITS
3/17/2012	0:00 - 2:00	2.00	DRLPRO	05	C	P		CIRCULATE AND CONDITION HOLE MUD WT 10.5 VIS 41
	2:00 - 3:30	1.50	DRLPRO	06	E	P		WIPER TRIP. WORK TIGHT HOLE 90' OFF BOTTOM. WASH BACK TO BOTTOM.

US ROCKIES REGION

Operation Summary Report

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Project: UTAH-UINTAH	Site: LOVE 1121-8J	Rig Name No: PROPETRO 11/11, SST 54/54
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Active Datum: RKB @5,606.01ft (above Mean Sea Level)	UWI: NW/SE/0/11/S/21/E/8/0/0/26/PM/S/1816/E/0/1782/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
	3:30 - 6:30	3.00	DRLPRO	05	B	P		CIRCULATE AND CONDITION MUD. RAISE MW TO 11.1 VIS TO 50.
	6:30 - 7:30	1.00	DRLPRO	06	E	P		WIPER TRIP. WORK TIGHT HOLE .
	7:30 - 15:00	7.50	DRLPRO	05	B	P		CIRCULATE AND CONDITION MUD RAISE MW TO 11.8 VIS 50.
	15:00 - 22:00	7.00	DRLPRO	06	E	P		WIPER TRIP TO 1880'. WASH THROUGH BRIDGE @ 3693', WASH 285' TO BOTTOM. 6' FILL.
	22:00 - 0:00	2.00	DRLPRO	05	A	P		CIRCULATE AND CONDITION HOLE FOR LOGS
3/18/2012	0:00 - 6:00	6.00	DRLPRO	06	A	P		TRIP OUT OF HOLE. LAY DOWN DIRECTIONAL TOOLS.
	6:00 - 10:00	4.00	DRLPRO	11	D	P		PJSM. RIG UP HALLIBURTON AND RUN TRIPLE COMBO LOG. TOOLS STOOD UP @ 4218'. LOG OUT.
	10:00 - 11:00	1.00	DRLPRO	06	B	P		TRIP IN DP OPEN ENDED TO 2000'. INSTALL ROTATING RUBBER.
	11:00 - 13:00	2.00	DRLPRO	09	A	P		SLIP & CUT 99' DRLG LINE
	13:00 - 14:30	1.50	DRLPRO	06	B	P		TRIP DP IN HOLE TO 5903', OPEN ENDED.
	14:30 - 20:00	5.50	DRLPRO	11	D	P		RIG UP HALLIBURTON & RUN SLIM TRIPLE COMBO LOG THROUGH DP @ 5903'. LOGGERS DEPTH 9178'.
	20:00 - 0:00	4.00	DRLPRO	06	A	P		PJSM. RIG UP FRANKS LAY DOWN MACHINE & LAY DOWN DP.
3/19/2012	0:00 - 5:00	5.00	DRLPRO	06	D	P		LAY DOWN DP.
	5:00 - 6:00	1.00	DRLPRO	24	A	P		PULL WEAR BUSHING & ROTATING RUBBER.
	6:00 - 16:00	10.00	DRLPRO	12		P		PJSM. RIG UP FRANKS CASING CREW & RUN 9169' OF 4 1/2" CASING. 97 JTS OF 4 1/2", 11.6#, L-80, LT&C AND 120 JTS OF 4 1/2", 11.6#, L-80, DQX CASING WITH WEATHERFORD GUIDE SHOE AND FLOAT COLLAR LOCATED 1 JT ABOVE SHOE. 23 CENTRALIZERS SPACED 10' ABOVE SHOE, 2ND & 3RD COLLARS, & EVERY 3RD COLLAR TO 6430'. MARKER JT @ 6854'. CROSS OVER JT @ 5041'. LANDED CASING @ 9154' KB.
	16:00 - 17:30	1.50	DRLPRO	05	D	P		CIRCULATE CASING WITH RIG PUMP.
	17:30 - 21:00	3.50	DRLPRO	12	E	P		PJSM. RIG UP BJ CEMENTERS & CEMENT CASING WITH 460 SX LEAD CEMENT. PREMIUM LITE CEMENT WITH 0.05 #/SX STATIC FREE, 0.4% R-3, 0.25 #/SX CELLO FLAKE, 5 #/SX KOL SEAL, 0.2% SODIUM METASILICATE, 0.4% FL-52A, & 8% GEL. TAILED IN WITH 1326 SX 50/50 POZ CEMENT WITH 10% SALT, 0.2% R-3, 0.002 GPS FP-6L, & 2% GEL. PUMPED 5 BBL FRESH WATER & 40 BBL WEIGHTED SEAL BOND SPACER AHEAD OF CEMENT. MIXED LEAD CEMENT @ 12.5 PPG WITH YIELD OF 2.02 CF/SX. MIXED TAIL CEMENT @ 14.3 PPG WITH YIELD OF 1.31 CF/SX. GOOD RETURNS THROUGH OUT JOB. CIRCULATED 22 BBL CEMENT TO SURFACE. TOP OF TAIL CALCULATED @ 3573'. FINAL LIFT PRESSURE WAS 2556 PSI. BUMPED PLUG TO 3228 PSI. FLOATS HELD. DISPLACED WITH 142 BBLS FRESH WATER WITH CLAY CARE & MAGNACIDE. BUMPED PLUG @ 20:32, 3/19/2012.
	21:00 - 22:00	1.00	DRLPRO	14	A	P		NIPPLE DOWN BOP. BREAK OUT STRATA EQUIPMENT

US ROCKIES REGION

Operation Summary Report

Well: LOVE 1121-8J			Spud Date: 2/2/2012
Project: UTAH-UINTAH	Site: LOVE 1121-8J		Rig Name No: PROPETRO 11/11, SST 54/54
Event: DRILLING	Start Date: 1/9/2012		End Date: 3/21/2012
Active Datum: RKB @5,606.01ft (above Mean Sea Level)	UWI: NW/SE/0/11/S/21/E/8/0/0/26/PM/S/1816/E/0/1782/0/0		

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
	22:00 - 0:00	2.00	DRLPRO	14	A	P		SET SLIPS & CUT OFF CASING. BREAK OUT STRATA EQUIPMENT.
3/20/2012	0:00 - 2:00	2.00	DRLPRO	14	A	P		NIPPLE DOWN & CLEAN MUD TANKS. RELEASE RIG @ 02:00, 3/20/2012.

1 General

1.1 Customer Information

Company	US ROCKIES REGION
Representative	
Address	

1.2 Well/Wellbore Information

Well	LOVE 1121-8J	**Wellbore No.**	OH
Well Name	LOVE 1121-8J	**Wellbore Name**	LOVE 1121-8J
Report No.	1	**Report Date**	4/2/2012
Project	UTAH-UINTAH	**Site**	LOVE 1121-8J
Rig Name/No.		**Event**	COMPLETION
Start Date	4/2/2012	**End Date**	4/16/2012
Spud Date	2/2/2012	**Active Datum**	RKB @5,606.01ft (above Mean Sea Level)
UWI	NW/SE/0/11/S/21/E/8/0/0/26/PM/S/1816/E/0/1782/0/0		

1.3 General

Contractor		**Job Method**		**Supervisor**	
Perforated Assembly		**Conveyed Method**			

1.4 Initial Conditions

Fluid Type		**Fluid Density**	
Surface Press		**Estimate Res Press**	
TVD Fluid Top		**Fluid Head**	
Hydrostatic Press		**Press Difference**	
Balance Cond	NEUTRAL		

1.5 Summary

Gross Interval	6,376.0 (ft)-8,668.0 (ft)	**Start Date/Time**	4/3/2012 12:00AM
No. of Intervals	29	**End Date/Time**	4/3/2012 12:00AM
Total Shots	192	**Net Perforation Interval**	56.00 (ft)
Avg Shot Density	3.43 (shot/ft)	**Final Surface Pressure**	
		Final Press Date	

2 Intervals

2.1 Perforated Interval

Date	Formation/ Reservoir	CCL@ (ft)	CCL-TS (ft)	MD Top (ft)	MD Base (ft)	Shot Density (shot/ft)	Misfires/ Add. Shot	Diameter (in)	Carr Type /Carr Manuf	Carr Size (in)	Phasing (°)	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
4/3/2012 12:00AM	WASATCH/			6,376.0	6,377.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTION	

2.1 Perforated Interval (Continued)

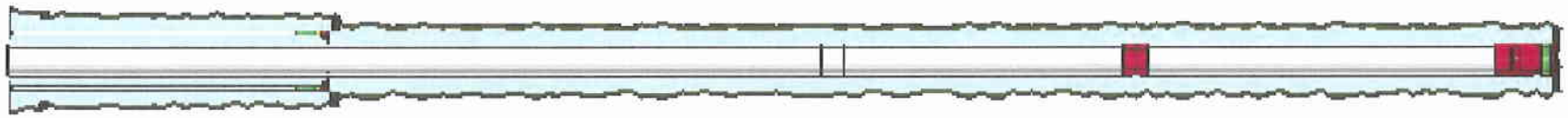
Date	Formation/ Reservoir	CCL@ (ft)	CCL-TS (ft)	MD Top (ft)	MD Base (ft)	Shot Density (shot/ft)	Misfires/ Add. Shot	Diameter (in)	Carr Type /Carr Manuf	Carr Size (in)	Phasing (°)	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
4/3/2012 12:00AM	WASATCH/			6,647.0	6,652.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTION	
4/3/2012 12:00AM	WASATCH/			6,844.0	6,846.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTION	
4/3/2012 12:00AM	WASATCH/			6,880.0	6,884.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTION	
4/3/2012 12:00AM	MESAVERDE/			7,280.0	7,282.0	3.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTION	
4/3/2012 12:00AM	MESAVERDE/			7,314.0	7,315.0	3.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTION	
4/3/2012 12:00AM	MESAVERDE/			7,328.0	7,329.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
4/3/2012 12:00AM	MESAVERDE/			7,343.0	7,344.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
4/3/2012 12:00AM	MESAVERDE/			7,355.0	7,356.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
4/3/2012 12:00AM	MESAVERDE/			7,376.0	7,378.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
4/3/2012 12:00AM	MESAVERDE/			7,498.0	7,500.0	4.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
4/3/2012 12:00AM	MESAVERDE/			7,560.0	7,562.0	4.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
4/3/2012 12:00AM	MESAVERDE/			7,588.0	7,590.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTION	
4/3/2012 12:00AM	MESAVERDE/			7,638.0	7,640.0	3.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTION	
4/3/2012 12:00AM	MESAVERDE/			7,669.0	7,672.0	3.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTION	
4/3/2012 12:00AM	MESAVERDE/			7,686.0	7,687.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
4/3/2012 12:00AM	MESAVERDE/			7,738.0	7,740.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
4/3/2012 12:00AM	MESAVERDE/			7,879.0	7,881.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
4/3/2012 12:00AM	MESAVERDE/			7,941.0	7,942.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
4/3/2012 12:00AM	MESAVERDE/			8,028.0	8,030.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
4/3/2012 12:00AM	MESAVERDE/			8,082.0	8,084.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
4/3/2012 12:00AM	MESAVERDE/			8,094.0	8,095.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	

2.1 Perforated Interval (Continued)

Date	Formation/ Reservoir	CCL@ (ft)	CCL-TS (ft)	MD Top (ft)	MD Base (ft)	Shot Density (shot/ft)	Misfires/ Add. Shot	Diameter (in)	Carr Type /Carr Manuf	Carr Size (in)	Phasing (°)	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
4/3/2012 12:00AM	MESAVERDE/			8,370.0	8,372.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
4/3/2012 12:00AM	MESAVERDE/			8,403.0	8,404.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
4/3/2012 12:00AM	MESAVERDE/			8,442.0	8,443.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
4/3/2012 12:00AM	MESAVERDE/			8,470.0	8,472.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
4/3/2012 12:00AM	MESAVERDE/			8,486.0	8,488.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
4/3/2012 12:00AM	MESAVERDE/			8,560.0	8,562.0	4.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	
4/3/2012 12:00AM	MESAVERDE/			8,664.0	8,668.0	4.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTION	

3 Plots

3.1 Wellbore Schematic



US ROCKIES REGION

Operation Summary Report

Well: LOVE 1121-8J			Spud Date: 2/2/2012
Project: UTAH-UINTAH	Site: LOVE 1121-8J		Rig Name No: GWS 1/1
Event: COMPLETION	Start Date: 4/2/2012		End Date: 4/16/2012
Active Datum: RKB @5,606.01ft (above Mean Sea Level)	UWI: NW/SE/0/11/S/21/E/8/0/0/26/PM/S/1816/E/0/1782/0/0		

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
2/2/2012	-							
4/4/2012	13:30 - 15:00	1.50	COMP	33		P		FILL SURFACE CSG. MIRU B&C QUICK TEST. PSI TEST T/ 1000 PSI. HELD FOR 15 MIN LOST 15 PSI. PSI TEST T/ 3500 PSI. HELD FOR 15 MIN LOST 10 PSI. 1ST PSI TEST T/ 7000 PSI. HELD FOR 30 MIN LOST 53 PSI. NO COMMUNICATION OR MIGRATION WITH SURFACE CSG BLEED OFF PSI. SWIFN
4/10/2012	7:00 - 7:30	0.50	COMP	48		P		HSM, RIGGING UP 0 PSI WELL
	7:30 - 10:30	3.00	COMP	47	A	P		MIRU, SPOT EQUIP, N/D WH, N/U BOPS
	10:30 - 17:00	6.50	COMP	31	I			P/U 3 7/8" SBB, POBS, 1.875 XN NIPPLE RIH W/ 238JTS 2 3/8" J-55 TBG TO 7520' POOH STD BACK 40 STANDS,EOT @ 5000' 5 PM SWI, SDFN
4/11/2012	7:00 - 7:30	0.50	COMP	48		P		HSM, WORKING W/ WL 0 PSI ON WELL
	7:30 - 14:00	6.50	COMP	31	I	P		EOT @ 5000', POOH STND 79 STNDS IN DERRICK, N/D BOPS, N/U FV. MIRU B & C QUICK TEST, PRESS TEST FRAC VALVE'S, SURFACE CSG VALVE OPEN & LOCKED. FILL SURFACE CSG & 4 1/2" CSG. INSTAL PLUG IN TBG HEAD & PRESS TEST FRAC VALVE'S TO 7,000 PSI FOR 10 MIN, TEST GOOD, NO VISIBLE LEAKS, 4 1/2" CSG HAS ALREADY BEEN TESTED 4/4/2012. NO COMMUNICATION WITH SURFACE CSG, RDMO B & C QUICK TEST. MIRU CASED HOLE SOLUTIONS, PERF STG 1) PU 3 1/8 EXP GUN, 23 GRM, .36 HOLE SIZE, 120 & 180 DEG PHASING, RIH PERF AS PER DESIGN, POOH, MIRU SUPERIOR PREP TO FRAC IN AM, DRAIN & WINTERIZE EQUIP, SWI, SDFN.
4/12/2012	7:00 - 7:30	0.50	COMP	48		P		HSM, FRACING

Operation Summary Report

Well: LOVE 1121-8J		Spud Date: 2/2/2012
Project: UTAH-UINTAH	Site: LOVE 1121-8J	Rig Name No: GWS 1/1
Event: COMPLETION	Start Date: 4/2/2012	End Date: 4/16/2012
Active Datum: RKB @5,606.01ft (above Mean Sea Level)	UWI: NW/SE/0/11/S/21/E/8/0/0/26/PM/S/1816/E/0/1782/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
	7:30 - 18:30	11.00	COMP	36	B			PRIME UP PUMPS & PRESS TEST LINES TO 7,500 PSI, LOST 50 PSI, NO VISIBLE LEAKS, MANUAL POPOFF SET @ 6800 PSI, SURFACE CSG VALVE OPEN & LOCKED. FRAC STG 1) WHP 120 PSI, BRK 4157 PSI @ 4.7 BPM, ISIP 2780 PSI, FG .76 CALC PERFS OPEN INJ RATE 50.3 BPM @ 5264 PSI = 24/24 HOLES OPEN 100%. ISIP 2916 PSI, FG .78, NPI 136 PSI. MP 6642 PSI, MR 50.8 BPM, AP 5003 PSI, AR 47.6 BPM, PUMPED 30/50 OTTAWA SAND. SWI, X-OVER FOR WL. PERF STG 2) PU 4 1/2" 8K HAL CBP & 3 1/8 EXP GUN, 23 GRM, .36 HOLE SIZE. 120 DEG PHASING, RIH SET 8K CBP @ 8518' P/U PERF AS PER DESIGN, POOH, X-OVER FOR FRAC CREW. FRAC STG 2) WHP 969 PSI, BRK 3712 PSI @ 4.7 BPM, ISIP 3121PSI, FG .81. CALC PERFS OPEN INJ RATE48.2 BPM @ 5,462 PSI = 24/24 HOLES OPEN 100%. ISIP 3121 PSI, FG .82, NPI 130 PSI. MP 5633 PSI, MR 51.7 BPM, AP 5262 PSI, AR 49.97 BPM, PUMPED 30/50 OTTAWA SAND. SWI, X-OVER FOR WL. PERF STG 3) PU 4 1/2" 8K HAL CBP & 3 1/8 EXP GUN, 23 GRM, .36 HOLE SIZE. 120 DEG PHASING, RIH SET 8K CBP @ 8125' P/U PERF AS PER DESIGN, POOH, X-OVER FOR FRAC CREW. FRAC STG 3) WHP 370 PSI, BRK 2629 PSI @ 4.6 BPM, ISIP 2914 PSI, FG ..69. CALC PERFS OPEN INJ RATE 51.2BPM @ 4896 PSI = 21/24 HOLES OPEN 89%. ISIP 2914 PSI, FG .80, NPI 874 PSI. MP 4925 PSI, MR 51.7 BPM, AP 4668 PSI, AR 51.2 BPM, PUMPED 30/50 OTTAWA SAND. SWI, X-OVER FOR WL. PERF STG 4) PU 4 1/2" 8K HAL CBP & 3 1/8 EXP GUN, 23 GRM, .36 HOLE SIZE. , 120, DEG PHASING, RIH SET 8K CBP @ 7770' P/U PERF AS PER DESIGN, POOH, X-OVER FOR FRAC CREW. FRAC STG 4) WHP 800 PSI, BRK 2752 PSI @ 4.8 BPM, ISIP 1894 PSI, FG .69 CALC PERFS OPEN INJ RATE 51.2 BPM @ 4292 PSI = 24/24 HOLES OPEN 100%. ISIP 2,583 PSI, FG .77, NPI 689 PSI.

Operation Summary Report

Well: LOVE 1121-8J		Spud Date: 2/2/2012	
Project: UTAH-UINTAH	Site: LOVE 1121-8J		Rig Name No: GWS 1/1
Event: COMPLETION	Start Date: 4/2/2012		End Date: 4/16/2012
Active Datum: RKB @5,606.01ft (above Mean Sea Level)	UWI: NW/SE/0/11/S/21/E/8/0/0/26/PM/S/1816/E/0/1782/0/0		

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
								MP 4635 PSI, MR 52.0 BPM, AP 4,292 PSI, AR 50.8 BPM, PUMPED 30/50 OTTAWA SAND. SWI, X-OVER FOR WL. PERF STG 5) PU 4 1/2" 8K HAL CBP & 3 1/8 EXP GUN, 23 GRM, .36 HOLE SIZE. 90, DEG PHASING, RIH SET 8K CBP @ 7620' P/U PERF AS PER DESIGN, POOH, X-OVER FOR FRAC CREW. FRAC STG 5) WHP 1459 PSI, BRK 2,588 PSI @ 6.8 BPM, ISIP 2337 PSI, FG .75. CALC PERFS OPEN INJ RATE 51.2 BPM @ 5056 PSI = 22/24 HOLES OPEN 91%. ISIP 2736 PSI, FG .80, NPI 399 PSI. MP 5,264 PSI, MR 51.8 BPM, AP 4,771 PSI, AR 51.2 BPM, PUMPED 30/50 OTTAWA SAND. SWI, X-OVER FOR WL. PERF STG 6) PU 4 1/2" 8K HAL CBP & 3 1/8 EXP GUN, 23 GRM, .36 HOLE SIZE. 90 DEG PHASING, RIH SET 8K CBP @ 7408' P/U PERF AS PER DESIGN, POOH, X-OVER FOR FRAC CREW. FRAC STG 6) WHP 1139 PSI, BRK 2,453 PSI @ 6.7 BPM, ISIP 2021 PSI, FG .71. CALC PERFS OPEN INJ RATE 51.5 BPM @ 4,350 PSI = 24/24 HOLES OPEN 100%. ISIP 2,980 PSI, FG .85, NPI 959 PSI. MP 4948 PSI, MR 51.8 BPM, AP 4,387 PSI, AR 51.3 BPM, X/O WL PERF STG 7) PU 4 1/2" 8K HAL CBP & 3 1/8 EXP GUN, 23 GRM, .36 HOLE SIZE. 90 DEG PHASING, RIH SET 8K CBP @ 6914' P/U PERF AS PER DESIGN, POOH, X-OVER FOR FRAC CREW. FRAC STG 7 WHP 220 PSI, BRK 2,914 PSI @ 4.8 BPM, ISIP 2910 PSI, FG .72. CALC PERFS OPEN INJ RATE 51.2 BPM @ 5217 PSI = 18/24 HOLES OPEN 74%. ISIP 2,910 PSI, FG .86, NPI 1,004 PSI. MP 5,448 PSI, MR 52.2 BPM, AP 4,619 PSI, AR 51.4 BPM, X/O WL PERF STG 8) PU 4 1/2" 8K HAL CBP & 3 1/8 EXP GUN, 23 GRM, .36 HOLE SIZE. 90 DEG PHASING, RIH SET 8K CBP @ 6,682' P/U PERF AS PER DESIGN, POOH, X-OVER FOR FRAC CREW. FRAC STG 8 WHP 305 PSI, BRK 1520 PSI @ 4.9 BPM, ISIP 1,068 PSI, FG .60.

Operation Summary Report

Well: LOVE 1121-8J		Spud Date: 2/2/2012
Project: UTAH-UINTAH	Site: LOVE 1121-8J	Rig Name No: GWS 1/1
Event: COMPLETION	Start Date: 4/2/2012	End Date: 4/16/2012
Active Datum: RKB @5,606.01ft (above Mean Sea Level)	UWI: NW/SE/0/11/S/21/E/8/0/0/26/PM/S/1816/E/0/1782/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
								CALC PERFS OPEN INJ RATE 51.5 BPM @ 4,515 PSI = 17/24 HOLES OPEN 72%. ISIP 3174 PSI, FG .93, NPI 2106 PSI. MP 4739 PSI, MR 51.9 BPM, AP 4,632 PSI, AR 51.3 BPM, TOTAL BBLS = 7662 TOTAL SAND = 170277 X/O WL SET KP @ 6335' R/D SUPERIOR R/D CASED HOLE 630 PM, SWI, SDFN
4/13/2012	7:00 - 7:30	0.50	COMP	48		P		HSM, PWR SWVL CONNECTIONS 0 PSI ON WELL
	7:30 - 15:30	8.00	COMP	31	I	P		N/D FV, N/U BOPS, P/U 3 7/8" SBB, POBS, XN NIPPLE, RIH W/ 200 JTS J-55 TBG, R/U PWR SWIVEL, PSI TEST BOPS W/ RIG PUMP TO 3000 PSI, 0 LOSS 15 MIN TAG @ 6635' C/O 0' SAND D/O CBP @ 6635' 10MIN 0 INC 0 = FCP RIH TAG @ 6667' C/O 15' SAND D/O CBP @ 6682" 10MIN 400# kick 50#= FCP RIH TAG @ 6899' C/O 15' SAND D/O CBP @ 6914' 10MIN 800# kick 50# = FCP TAG @ 7383' C/O XX' SAND D/O CBP @ 7408' 10 MIN 500# mkick 100# = FCP CLEAN WELL UP, PULL ABOVE PERFS EOT @ 6369' SWI, SDFN
4/16/2012	7:00 - 7:30	0.50	COMP	48		P		HSM, LANDING WELL UNDER PSI 0 SITP, 750 SICP

US ROCKIES REGION

Operation Summary Report

Well: LOVE 1121-8J		Spud Date: 2/2/2012
Project: UTAH-UINTAH	Site: LOVE 1121-8J	Rig Name No: GWS 1/1
Event: COMPLETION	Start Date: 4/2/2012	End Date: 4/16/2012
Active Datum: RKB @5,606.01ft (above Mean Sea Level)	UWI: NW/SE/0/11/S/21/E/8/0/0/26/PM/S/1816/E/0/1782/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
	7:30 - 12:00	4.50	COMP	44	C	P		EOT @ 6838' RIH W/ 34 JTS, TAG @ 7590' C/O 30' SAND D/O CBP @ 7620' 10MIN 50 INC 50 = FCP RIH TAG @ 7755' C/O 15' SAND D/O CBP @ 7770" 10MIN 250# KICK 50#= FCP RIH TAG @ 8110' C/O 15' SAND D/O CBP @ 8125' 10MIN 400# KICK 50# = FCP TAG @ 8488' C/O 30' SAND D/O CBP @ 8518' 10 MIN 1300# KICK 100# = FCP BTM PERF @8668', RIH TO 8803', CLEAN WELL UP, L/D 15 JTS LAND @ 8329.48' KB = ...18' HANGER = ... .83' 262 JTS 2 3/8" J-55 TUBING = ...8308.52 1.875" XN NIPPLE = ...2.2' N/D BOPS, N/U WH, PUMP OFF BIT @ 2800 PSI, UNLOAD TBG VOL TO PIT, PSI TEST HAL 9000 TO 3000 PSI, 15 MIN, W/ RIG PUMP, T/O TO FB CREW & PROD, RDMO, MIRU LOVE 1-12. FTP =0 SICP = 650#
	12:00 - 16:00	4.00	COMP	47	A			RDMO, MOVE RIG TO LOVE 1-12,
4/17/2012	-							
	11:45 -		PROD	50				WELL TURNED TO SALES AT 1145 HR ON 4/17/2012 - 240 MCFD, 960 BWPD, FCP 625#, FTP 625#, CK 20/64

US ROCKIES REGION

Operation Summary Report

Well: LOVE 1121-8J		Spud Date: 2/2/2012	
Project: UTAH-UINTAH	Site: LOVE 1121-8J		Rig Name No: GWS 1/1
Event: COMPLETION	Start Date: 4/2/2012		End Date: 4/16/2012
Active Datum: RKB @5,606.01ft (above Mean Sea Level)	UWI: NW/SE/0/11/S/21/E/8/0/0/26/PM/S/1816/E/0/1782/0/0		

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (ft)	Operation
4/28/2012	7:00 -			50				WELL IP'D ON 4/28/2012 - 1494 MCFD, 0 BOPD, 391 BWPD, CP 1350#, FTP 974#, CK 20/64, LP 108#, 24 HRS

Project: UTAH - UTM (feet), NAD27, Zone 12N
Site: UINTAH_LOVE 1121-8J
Well: LOVE 1121-8J
Wellbore: LOVE 1121-8J
Section:
SHL:
Design: LOVE 1121-8J
Latitude: 39.872797
Longitude: -109.587500
GL: 5591.00
KB: 18' RKB + 5591' GL @ 5609.00ft

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
4055.00	4056.62	WASATCH
6860.00	6861.62	MESAVERDE
9154.00	9155.62	SEGO

WELL DETAILS: LOVE 1121-8J

+N/-S	+E/-W	Northing	Ground Level: Easting	5591.00 Latittude	Longitude	Slot
0.00	0.00	14482858.15	2036739.27	39.872797	-109.587500	

CASING DETAILS

TVD	MD	Name	Size
1886.17	1887.00	8-5/8"	8-5/8

Azimuths to True North
Magnetic North: 11.01°

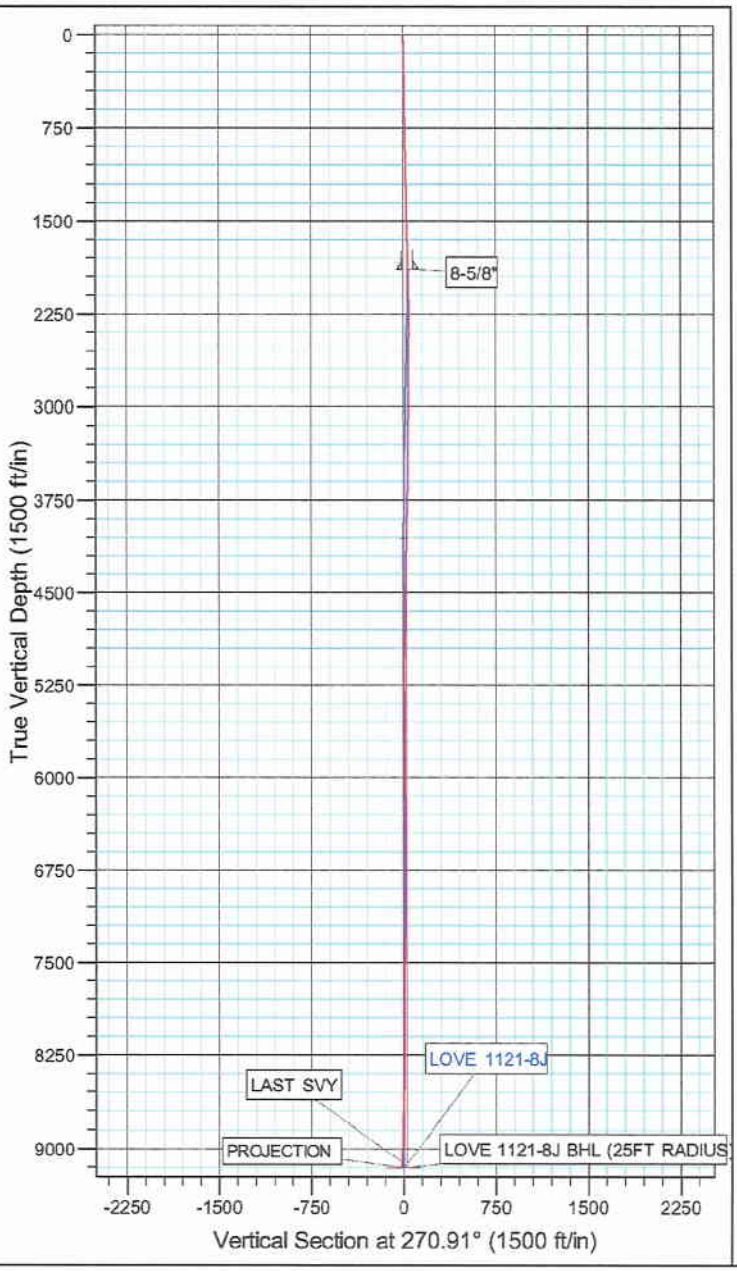
Magnetic Field
Strength: 52180.3snT
Dip Angle: 65.73°
Date: 1/30/2012
Model: IGRF2010

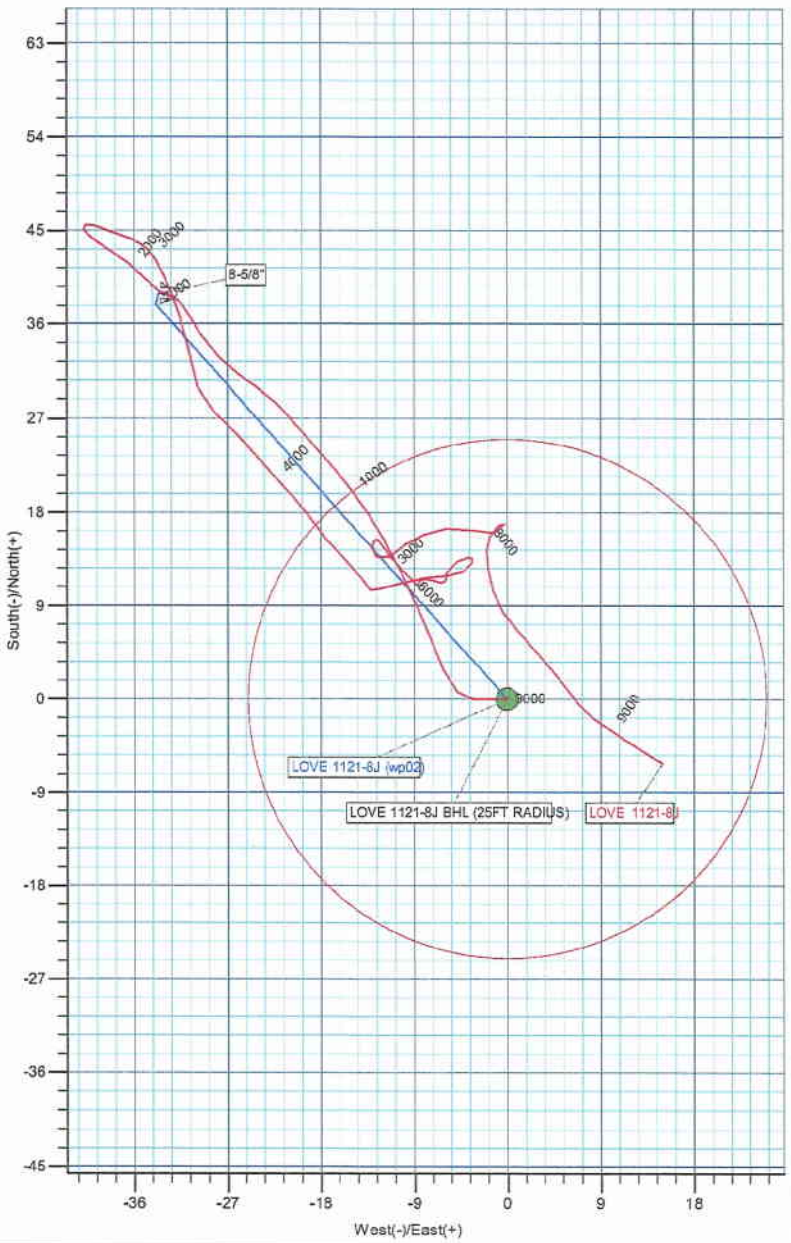
DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
LOVE 1121-8J BHL (25FT RADIUS)	9154.00	0.00	0.00	14482858.15	2036739.27	39.872797	-109.587500	Circle (Radius: 25.00)

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect
1867.00	1.60	278.78	1866.17	38.95	-32.91	0.00	0.00	33.52
2033.88	1.94	138.14	2033.02	37.20	-33.32	2.00	-158.33	33.91
3058.51	1.94	138.14	3057.06	11.33	-10.15	0.00	0.00	10.33
3955.62	0.00	0.00	3954.00	0.00	0.00	0.22	180.00	0.00
9155.62	0.00	0.00	9154.00	0.00	0.00	0.00	0.00	0.00





Anadarko Petroleum Corp

Survey Report

Company:	US ROCKIES REGION PLANNING	**Local Co-ordinate Reference:**	Well LOVE 1121-8J
Project:	UTAH - UTM (feet), NAD27, Zone 12N	**TVD Reference:**	18' RKB + 5591' GL @ 5609.00ft
Site:	UINTAH_LOVE 1121-8J	**MD Reference:**	18' RKB + 5591' GL @ 5609.00ft
Well:	LOVE 1121-8J	**North Reference:**	True
Wellbore:	LOVE 1121-8J	**Survey Calculation Method:**	Minimum Curvature
Design:	LOVE 1121-8J	**Database:**	edmp

Project UTAH - UTM (feet), NAD27, Zone 12N

Map System:	Universal Transverse Mercator (US Survey Feet)	**System Datum:**	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	Zone 12N (114 W to 108 W)		

Site UINTAH_LOVE 1121-8J

Site Position:		**Northing:**	14,482,858.16 usft	**Latitude:**	39.872797
From:	Lat/Long	**Easting:**	2,036,739.27 usft	**Longitude:**	-109.587500
Position Uncertainty:	0.00 ft	**Slot Radius:**	13-3/16 "	**Grid Convergence:**	0.91 °

Well LOVE 1121-8J

Well Position	**+N/-S**	0.00 ft	**Northing:**	14,482,858.16 usft	**Latitude:**	39.872797
	+E/-W	0.00 ft	**Easting:**	2,036,739.27 usft	**Longitude:**	-109.587500
Position Uncertainty		0.00 ft	**Wellhead Elevation:**	ft	**Ground Level:**	5,591.00 ft

Wellbore LOVE 1121-8J

Magnetics	**Model Name**	**Sample Date**	**Declination (°)**	**Dip Angle (°)**	**Field Strength (nT)**
	IGRF2010	1/30/2012	11.01	65.73	52,180

Design LOVE 1121-8J

Audit Notes:

Version:	1.0	**Phase:**	ACTUAL	**Tie On Depth:**	14.00

Vertical Section:	**Depth From (TVD) (ft)**	**+N/-S (ft)**	**+E/-W (ft)**	**Direction (°)**
	14.00	0.00	0.00	270.91

Survey Program **Date** 3/19/2012

From (ft)	**To (ft)**	**Survey (Wellbore)**	**Tool Name**	**Description**
184.00	1,867.00	Survey #1 (LOVE 1121-8J)	NS-GYRO-MS	NORTH SENSING GYROCOMPASSING M/S
1,918.00	9,154.00	Survey #2 (LOVE 1121-8J)	MWD	MWD - STANDARD

Survey

Measured Depth (ft)	**Inclination (°)**	**Azimuth (°)**	**Vertical Depth (ft)**	**+N/-S (ft)**	**+E/-W (ft)**	**Vertical Section (ft)**	**Dogleg Rate (°/100usft)**	**Build Rate (°/100usft)**	**Turn Rate (°/100usft)**
14.00	0.00	0.00	14.00	0.00	0.00	0.00	0.00	0.00	0.00
184.00	1.14	269.58	183.99	-0.01	-1.69	1.69	0.67	0.67	0.00
269.00	1.11	271.18	268.97	0.00	-3.36	3.36	0.05	-0.04	1.88
354.00	1.31	316.65	353.96	0.72	-4.85	4.86	1.12	0.24	53.49
444.00	2.00	335.80	443.92	2.90	-6.20	6.25	0.97	0.77	21.28
534.00	2.19	338.05	533.86	5.93	-7.49	7.58	0.23	0.21	2.50
624.00	2.38	337.05	623.79	9.25	-8.86	9.00	0.22	0.21	-1.11
714.00	2.19	332.68	713.71	12.49	-10.38	10.57	0.29	-0.21	-4.86
804.00	1.88	330.68	803.66	15.31	-11.89	12.13	0.35	-0.34	-2.22
894.00	1.69	327.18	893.61	17.71	-13.33	13.61	0.24	-0.21	-3.89

Anadarko Petroleum Corp

Survey Report

Company:	US ROCKIES REGION PLANNING	**Local Co-ordinate Reference:**	Well LOVE 1121-8J
Project:	UTAH - UTM (feet), NAD27, Zone 12N	**TVD Reference:**	18' RKB + 5591' GL @ 5609.00ft
Site:	UINTAH_LOVE 1121-8J	**MD Reference:**	18' RKB + 5591' GL @ 5609.00ft
Well:	LOVE 1121-8J	**North Reference:**	True
Wellbore:	LOVE 1121-8J	**Survey Calculation Method:**	Minimum Curvature
Design:	LOVE 1121-8J	**Database:**	edmp

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
984.00	1.75	324.18	983.57	19.94	-14.85	15.17	0.12	0.07	-3.33
1,074.00	1.63	318.18	1,073.53	22.01	-16.51	16.86	0.24	-0.13	-6.67
1,164.00	1.63	316.18	1,163.50	23.89	-18.25	18.63	0.06	0.00	-2.22
1,254.00	1.94	321.43	1,253.45	26.00	-20.09	20.50	0.39	0.34	5.83
1,344.00	1.75	314.93	1,343.41	28.16	-22.01	22.45	0.31	-0.21	-7.22
1,434.00	1.50	302.80	1,433.37	29.77	-23.97	24.44	0.47	-0.28	-13.48
1,524.00	1.50	307.55	1,523.34	31.13	-25.90	26.39	0.14	0.00	5.28
1,614.00	1.88	313.55	1,613.30	32.86	-27.90	28.42	0.47	0.42	6.67
1,704.00	1.94	330.05	1,703.25	35.20	-29.73	30.28	0.61	0.07	18.33
1,794.00	1.88	328.18	1,793.20	37.77	-31.27	31.86	0.10	-0.07	-2.08
1,867.00	1.60	278.78	1,866.17	38.95	-32.91	33.52	2.02	-0.38	-67.67
1,918.00	2.03	321.22	1,917.15	39.76	-34.18	34.80	2.69	0.84	83.22
2,013.00	2.10	302.88	2,012.09	42.02	-36.69	37.35	0.70	0.07	-19.31
2,108.00	1.87	304.84	2,107.03	43.85	-39.43	40.12	0.25	-0.24	2.06
2,203.00	0.56	339.91	2,202.01	45.17	-40.86	41.57	1.52	-1.38	36.92
2,299.00	0.44	97.91	2,298.01	45.56	-40.66	41.37	0.90	-0.13	122.92
2,394.00	0.44	90.28	2,393.00	45.51	-39.93	40.64	0.06	0.00	-8.03
2,490.00	0.50	120.03	2,489.00	45.30	-39.20	39.91	0.26	0.06	30.99
2,585.00	0.56	107.28	2,584.00	44.95	-38.40	39.10	0.14	0.06	-13.42
2,681.00	0.69	108.78	2,679.99	44.62	-37.40	38.10	0.14	0.14	1.56
2,776.00	0.69	108.41	2,774.98	44.26	-36.32	37.01	0.00	0.00	-0.39
2,871.00	0.56	132.16	2,869.98	43.77	-35.43	36.12	0.30	-0.14	25.00
2,967.00	0.50	115.53	2,965.97	43.27	-34.70	35.38	0.17	-0.06	-17.32
3,062.00	1.06	155.03	3,060.97	42.30	-33.96	34.62	0.78	0.59	41.58
3,157.00	1.31	151.53	3,155.95	40.55	-33.07	33.71	0.27	0.26	-3.68
3,253.00	1.19	162.03	3,251.92	38.63	-32.24	32.85	0.27	-0.13	10.94
3,348.00	1.38	160.28	3,346.90	36.62	-31.55	32.12	0.20	0.20	-1.84
3,443.00	1.38	171.28	3,441.87	34.41	-30.99	31.53	0.28	0.00	11.58
3,538.00	1.44	162.78	3,536.84	32.14	-30.46	30.97	0.23	0.06	-8.95
3,634.00	1.13	169.16	3,632.82	30.06	-29.93	30.40	0.36	-0.32	6.65
3,729.00	2.06	134.91	3,727.78	27.93	-28.54	28.98	1.36	0.98	-36.05
3,824.00	1.88	136.03	3,822.73	25.60	-26.25	26.65	0.19	-0.19	1.18
3,920.00	1.81	139.16	3,918.68	23.32	-24.17	24.53	0.13	-0.07	3.26
4,015.00	1.56	135.28	4,013.64	21.27	-22.28	22.61	0.29	-0.26	-4.08
4,110.00	1.50	139.16	4,108.60	19.41	-20.55	20.86	0.13	-0.06	4.08
4,205.00	1.50	144.78	4,203.57	17.45	-19.02	19.30	0.15	0.00	5.92
4,300.00	1.44	142.03	4,298.54	15.50	-17.57	17.81	0.10	-0.06	-2.89
4,394.00	1.56	132.28	4,392.51	13.71	-15.90	16.11	0.30	0.13	-10.37
4,490.00	1.63	143.53	4,488.47	11.73	-14.12	14.30	0.33	0.07	11.72
4,585.00	0.13	141.03	4,583.46	10.56	-13.25	13.41	1.58	-1.58	-2.63
4,680.00	1.31	76.41	4,678.45	10.73	-12.13	12.29	1.33	1.24	-68.02
4,776.00	1.31	74.66	4,774.42	11.28	-10.00	10.18	0.04	0.00	-1.82
4,871.00	1.19	82.28	4,869.40	11.70	-7.98	8.16	0.22	-0.13	8.02

Anadarko Petroleum Corp

Survey Report

Company:	US ROCKIES REGION PLANNING	**Local Co-ordinate Reference:**	Well LOVE 1121-8J
Project:	UTAH - UTM (feet), NAD27, Zone 12N	**TVD Reference:**	18' RKB + 5591' GL @ 5609.00ft
Site:	UINTAH_LOVE 1121-8J	**MD Reference:**	18' RKB + 5591' GL @ 5609.00ft
Well:	LOVE 1121-8J	**North Reference:**	True
Wellbore:	LOVE 1121-8J	**Survey Calculation Method:**	Minimum Curvature
Design:	LOVE 1121-8J	**Database:**	edmp

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
4,967.00	1.25	87.28	4,965.38	11.88	-5.94	6.13	0.13	0.06	5.21
5,062.00	0.88	60.53	5,060.36	12.29	-4.27	4.47	0.64	-0.39	-28.16
5,156.00	0.75	20.41	5,154.35	13.22	-3.43	3.64	0.61	-0.14	-42.68
5,251.00	0.69	260.03	5,249.35	13.70	-3.78	3.99	1.32	-0.06	-126.72
5,346.00	0.63	237.66	5,344.34	13.33	-4.78	4.99	0.28	-0.06	-23.55
5,440.00	0.56	220.66	5,438.34	12.70	-5.52	5.72	0.20	-0.07	-18.09
5,536.00	0.38	202.66	5,534.33	12.05	-5.94	6.13	0.24	-0.19	-18.75
5,631.00	0.38	170.16	5,629.33	11.45	-6.01	6.19	0.22	0.00	-34.21
5,727.00	0.56	284.03	5,725.33	11.25	-6.41	6.59	0.83	0.19	118.61
5,822.00	0.56	282.53	5,820.33	11.46	-7.32	7.50	0.02	0.00	-1.58
5,917.00	0.31	283.90	5,915.32	11.63	-8.02	8.20	0.26	-0.26	1.44
6,013.00	0.38	219.16	6,011.32	11.44	-8.47	8.65	0.39	0.07	-67.44
6,108.00	0.25	175.41	6,106.32	10.99	-8.65	8.83	0.28	-0.14	-46.05
6,204.00	1.06	320.28	6,202.32	11.47	-9.20	9.38	1.33	0.84	150.91
6,299.00	0.94	314.03	6,297.30	12.68	-10.33	10.53	0.17	-0.13	-6.58
6,395.00	0.63	324.16	6,393.29	13.66	-11.20	11.42	0.35	-0.32	10.55
6,490.00	0.38	323.78	6,488.29	14.34	-11.69	11.92	0.26	-0.26	-0.40
6,584.00	0.38	321.53	6,582.29	14.83	-12.07	12.30	0.02	0.00	-2.39
6,679.00	0.25	326.78	6,677.28	15.25	-12.38	12.62	0.14	-0.14	5.53
6,774.00	0.14	272.97	6,772.28	15.43	-12.61	12.85	0.21	-0.12	-56.64
6,869.00	0.19	224.03	6,867.28	15.32	-12.84	13.08	0.15	0.05	-51.52
6,964.00	0.50	188.53	6,962.28	14.80	-13.01	13.24	0.38	0.33	-37.37
7,060.00	0.94	145.66	7,058.28	13.74	-12.63	12.84	0.69	0.46	-44.66
7,155.00	1.19	46.78	7,153.26	13.77	-11.47	11.68	1.71	0.26	-104.08
7,251.00	1.31	59.03	7,249.24	15.02	-9.80	10.04	0.30	0.13	12.76
7,346.00	1.19	69.78	7,344.22	15.91	-7.94	8.19	0.28	-0.13	11.32
7,442.00	1.38	79.41	7,440.20	16.47	-5.87	6.13	0.30	0.20	10.03
7,537.00	1.88	103.91	7,535.16	16.31	-3.23	3.49	0.89	0.53	25.79
7,632.00	0.56	78.28	7,630.13	16.03	-1.27	1.52	1.47	-1.39	-26.98
7,727.00	0.44	5.15	7,725.13	16.48	-0.78	1.04	0.64	-0.13	-76.98
7,823.00	0.50	81.78	7,821.13	16.91	-0.33	0.60	0.61	0.06	79.82
7,918.00	0.38	272.03	7,916.13	16.98	-0.24	0.50	0.92	-0.13	-178.68
8,014.00	0.69	229.16	8,012.12	16.62	-0.99	1.25	0.51	0.32	-44.66
8,109.00	0.75	208.79	8,107.12	15.70	-1.72	1.97	0.28	0.06	-21.44
8,204.00	0.94	180.03	8,202.11	14.37	-2.02	2.25	0.48	0.20	-30.27
8,300.00	1.25	173.03	8,298.09	12.55	-1.90	2.09	0.35	0.32	-7.29
8,395.00	1.31	159.91	8,393.07	10.50	-1.40	1.56	0.31	0.06	-13.81
8,490.00	1.50	151.03	8,488.04	8.39	-0.42	0.56	0.30	0.20	-9.35
8,586.00	1.69	134.03	8,584.00	6.31	1.20	-1.10	0.53	0.20	-17.71
8,681.00	1.75	140.91	8,678.96	4.21	3.13	-3.06	0.23	0.06	7.24
8,776.00	1.69	139.66	8,773.92	2.01	4.95	-4.91	0.07	-0.06	-1.32
8,872.00	1.63	144.41	8,869.88	-0.18	6.66	-6.66	0.16	-0.06	4.95
8,947.00	1.88	127.91	8,944.84	-1.80	8.25	-8.28	0.75	0.33	-22.00

Anadarko Petroleum Corp

Survey Report

Company:	US ROCKIES REGION PLANNING	**Local Co-ordinate Reference:**	Well LOVE 1121-8J
Project:	UTAH - UTM (feet), NAD27, Zone 12N	**TVD Reference:**	18' RKB + 5591' GL @ 5609.00ft
Site:	UINTAH_LOVE 1121-8J	**MD Reference:**	18' RKB + 5591' GL @ 5609.00ft
Well:	LOVE 1121-8J	**North Reference:**	True
Wellbore:	LOVE 1121-8J	**Survey Calculation Method:**	Minimum Curvature
Design:	LOVE 1121-8J	**Database:**	edmp

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
9,043.00	2.25	121.28	9,040.78	-3.75	11.10	-11.16	0.46	0.39	-6.91
9,094.00	2.39	123.52	9,091.74	-4.85	12.84	-12.92	0.33	0.27	4.39
LAST SVY									
9,154.00	2.39	123.52	9,151.68	-6.23	14.93	-15.03	0.00	0.00	0.00
PROJECTION - LOVE 1121-8J BHL (25FT RADIUS)									

Design Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates +N/-S (ft)	Local Coordinates +E/-W (ft)	Comment
9,094.00	9,091.74	-4.85	12.84	LAST SVY
9,154.00	9,151.68	-6.23	14.93	PROJECTION

Checked By: _____ Approved By: _____ Date: _____

US ROCKIES REGION PLANNING

UTAH - UTM (feet), NAD27, Zone 12N
UINTAH_LOVE 1121-8J
LOVE 1121-8J

LOVE 1121-8J

Design: LOVE 1121-8J

Survey Report - Geographic

19 March, 2012

Anadarko Petroleum Corp

Survey Report - Geographic

Company:	US ROCKIES REGION PLANNING	**Local Co-ordinate Reference:**	Well LOVE 1121-8J
Project:	UTAH - UTM (feet), NAD27, Zone 12N	**TVD Reference:**	18' RKB + 5591' GL @ 5609.00ft
Site:	UINTAH_LOVE 1121-8J	**MD Reference:**	18' RKB + 5591' GL @ 5609.00ft
Well:	LOVE 1121-8J	**North Reference:**	True
Wellbore:	LOVE 1121-8J	**Survey Calculation Method:**	Minimum Curvature
Design:	LOVE 1121-8J	**Database:**	edmp

Project	UTAH - UTM (feet), NAD27, Zone 12N		
Map System:	Universal Transverse Mercator (US Survey Feet)	**System Datum:**	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	Zone 12N (114 W to 108 W)		

Site	UINTAH_LOVE 1121-8J				
Site Position:		**Northing:**	14,482,858.16 usft	**Latitude:**	39.872797
From:	Lat/Long	**Easting:**	2,036,739.27 usft	**Longitude:**	-109.587500
Position Uncertainty:	0.00 ft	**Slot Radius:**	13-3/16 "	**Grid Convergence:**	0.91 °

Well	LOVE 1121-8J					
Well Position	**+N/-S**	0.00 ft	**Northing:**	14,482,858.16 usft	**Latitude:**	39.872797
	+E/-W	0.00 ft	**Easting:**	2,036,739.27 usft	**Longitude:**	-109.587500
Position Uncertainty		0.00 ft	**Wellhead Elevation:**	ft	**Ground Level:**	5,591.00 ft

Wellbore	LOVE 1121-8J				
Magnetics	**Model Name**	**Sample Date**	**Declination (°)**	**Dip Angle (°)**	**Field Strength (nT)**
	IGRF2010	1/30/2012	11.01	65.73	52,180

Design	LOVE 1121-8J				
Audit Notes:					
Version:	1.0	**Phase:**	ACTUAL	**Tie On Depth:**	14.00
Vertical Section:	**Depth From (TVD) (ft)**	**+N/-S (ft)**	**+E/-W (ft)**	**Direction (°)**	
	14.00	0.00	0.00	270.91	

Survey Program **Date** 3/19/2012

From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
184.00	1,867.00	Survey #1 (LOVE 1121-8J)	NS-GYRO-MS	NORTH SENSING GYROCOMPASSING M/S
1,918.00	9,154.00	Survey #2 (LOVE 1121-8J)	MWD	MWD - STANDARD

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
14.00	0.00	0.00	14.00	0.00	0.00	14,482,858.16	2,036,739.27	39.872797	-109.587500
184.00	1.14	269.58	183.99	-0.01	-1.69	14,482,858.12	2,036,737.58	39.872797	-109.587506
269.00	1.11	271.18	268.97	0.00	-3.36	14,482,858.10	2,036,735.91	39.872797	-109.587512
354.00	1.31	316.65	353.96	0.72	-4.85	14,482,858.80	2,036,734.41	39.872799	-109.587518
444.00	2.00	335.80	443.92	2.90	-6.20	14,482,860.96	2,036,733.02	39.872805	-109.587522
534.00	2.19	338.05	533.86	5.93	-7.49	14,482,863.97	2,036,731.69	39.872813	-109.587527
624.00	2.38	337.05	623.79	9.25	-8.86	14,482,867.26	2,036,730.26	39.872822	-109.587532
714.00	2.19	332.68	713.71	12.49	-10.38	14,482,870.49	2,036,728.70	39.872831	-109.587537
804.00	1.88	330.68	803.66	15.31	-11.89	14,482,873.28	2,036,727.14	39.872839	-109.587543
894.00	1.69	327.18	893.61	17.71	-13.33	14,482,875.66	2,036,725.66	39.872846	-109.587548
984.00	1.75	324.18	983.57	19.94	-14.85	14,482,877.86	2,036,724.10	39.872852	-109.587553

Anadarko Petroleum Corp

Survey Report - Geographic

Company:	US ROCKIES REGION PLANNING	**Local Co-ordinate Reference:**	Well LOVE 1121-8J
Project:	UTAH - UTM (feet), NAD27, Zone 12N	**TVD Reference:**	18' RKB + 5591' GL @ 5609.00ft
Site:	UINTAH_LOVE 1121-8J	**MD Reference:**	18' RKB + 5591' GL @ 5609.00ft
Well:	LOVE 1121-8J	**North Reference:**	True
Wellbore:	LOVE 1121-8J	**Survey Calculation Method:**	Minimum Curvature
Design:	LOVE 1121-8J	**Database:**	edmp

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
1,074.00	1.63	318.18	1,073.53	22.01	-16.51	14,482,879.90	2,036,722.41	39.872858	-109.587559
1,164.00	1.63	316.18	1,163.50	23.89	-18.25	14,482,881.75	2,036,720.64	39.872863	-109.587565
1,254.00	1.94	321.43	1,253.45	26.00	-20.09	14,482,883.84	2,036,718.77	39.872868	-109.587572
1,344.00	1.75	314.93	1,343.41	28.16	-22.01	14,482,885.97	2,036,716.82	39.872874	-109.587579
1,434.00	1.50	302.80	1,433.37	29.77	-23.97	14,482,887.55	2,036,714.83	39.872879	-109.587586
1,524.00	1.50	307.55	1,523.34	31.13	-25.90	14,482,888.87	2,036,712.88	39.872883	-109.587593
1,614.00	1.88	313.55	1,613.30	32.86	-27.90	14,482,890.58	2,036,710.85	39.872887	-109.587600
1,704.00	1.94	330.05	1,703.25	35.20	-29.73	14,482,892.88	2,036,708.98	39.872894	-109.587606
1,794.00	1.88	328.18	1,793.20	37.77	-31.27	14,482,895.43	2,036,707.40	39.872901	-109.587612
1,867.00	1.60	278.78	1,866.17	38.95	-32.91	14,482,896.58	2,036,705.75	39.872904	-109.587618
1,918.00	2.03	321.22	1,917.15	39.76	-34.18	14,482,897.37	2,036,704.46	39.872906	-109.587622
2,013.00	2.10	302.88	2,012.09	42.02	-36.69	14,482,899.59	2,036,701.91	39.872912	-109.587631
2,108.00	1.87	304.84	2,107.03	43.85	-39.43	14,482,901.38	2,036,699.15	39.872917	-109.587641
2,203.00	0.56	339.91	2,202.01	45.17	-40.86	14,482,902.67	2,036,697.70	39.872921	-109.587646
2,299.00	0.44	97.91	2,298.01	45.56	-40.66	14,482,903.07	2,036,697.90	39.872922	-109.587645
2,394.00	0.44	90.28	2,393.00	45.51	-39.93	14,482,903.03	2,036,698.62	39.872922	-109.587643
2,490.00	0.50	120.03	2,489.00	45.30	-39.20	14,482,902.83	2,036,699.36	39.872921	-109.587640
2,585.00	0.56	107.28	2,584.00	44.95	-38.40	14,482,902.49	2,036,700.17	39.872921	-109.587637
2,681.00	0.69	108.78	2,679.99	44.62	-37.40	14,482,902.19	2,036,701.17	39.872920	-109.587634
2,776.00	0.69	108.41	2,774.98	44.26	-36.32	14,482,901.84	2,036,702.26	39.872919	-109.587630
2,871.00	0.56	132.16	2,869.98	43.77	-35.43	14,482,901.36	2,036,703.15	39.872917	-109.587627
2,967.00	0.50	115.53	2,965.97	43.27	-34.70	14,482,900.88	2,036,703.88	39.872916	-109.587624
3,062.00	1.06	155.03	3,060.97	42.30	-33.96	14,482,899.91	2,036,704.64	39.872913	-109.587621
3,157.00	1.31	151.53	3,155.95	40.55	-33.07	14,482,898.18	2,036,705.56	39.872908	-109.587618
3,253.00	1.19	162.03	3,251.92	38.63	-32.24	14,482,896.28	2,036,706.42	39.872903	-109.587615
3,348.00	1.38	160.28	3,346.90	36.62	-31.55	14,482,894.27	2,036,707.14	39.872898	-109.587613
3,443.00	1.38	171.28	3,441.87	34.41	-30.99	14,482,892.07	2,036,707.74	39.872892	-109.587611
3,538.00	1.44	162.78	3,536.84	32.14	-30.46	14,482,889.81	2,036,708.30	39.872885	-109.587609
3,634.00	1.13	169.16	3,632.82	30.06	-29.93	14,482,887.74	2,036,708.87	39.872880	-109.587607
3,729.00	2.06	134.91	3,727.78	27.93	-28.54	14,482,885.63	2,036,710.29	39.872874	-109.587602
3,824.00	1.88	136.03	3,822.73	25.60	-26.25	14,482,883.34	2,036,712.61	39.872867	-109.587594
3,920.00	1.81	139.16	3,918.68	23.32	-24.17	14,482,881.10	2,036,714.73	39.872861	-109.587586
4,015.00	1.56	135.28	4,013.64	21.27	-22.28	14,482,879.07	2,036,716.66	39.872856	-109.587580
4,110.00	1.50	139.16	4,108.60	19.41	-20.55	14,482,877.24	2,036,718.41	39.872850	-109.587574
4,205.00	1.50	144.78	4,203.57	17.45	-19.02	14,482,875.31	2,036,719.97	39.872845	-109.587568
4,300.00	1.44	142.03	4,298.54	15.50	-17.57	14,482,873.38	2,036,721.45	39.872840	-109.587563
4,394.00	1.56	132.28	4,392.51	13.71	-15.90	14,482,871.61	2,036,723.16	39.872835	-109.587557
4,490.00	1.63	143.53	4,488.47	11.73	-14.12	14,482,869.66	2,036,724.96	39.872829	-109.587551
4,585.00	0.13	141.03	4,583.46	10.56	-13.25	14,482,868.51	2,036,725.85	39.872826	-109.587547
4,680.00	1.31	76.41	4,678.45	10.73	-12.13	14,482,868.69	2,036,726.97	39.872827	-109.587543
4,776.00	1.31	74.66	4,774.42	11.28	-10.00	14,482,869.28	2,036,729.09	39.872828	-109.587536
4,871.00	1.19	82.28	4,869.40	11.70	-7.98	14,482,869.73	2,036,731.11	39.872829	-109.587529
4,967.00	1.25	87.28	4,965.38	11.88	-5.94	14,482,869.94	2,036,733.14	39.872830	-109.587521
5,062.00	0.88	60.53	5,060.36	12.29	-4.27	14,482,870.38	2,036,734.80	39.872831	-109.587515
5,156.00	0.75	20.41	5,154.35	13.22	-3.43	14,482,871.32	2,036,735.63	39.872833	-109.587512
5,251.00	0.69	260.03	5,249.35	13.70	-3.78	14,482,871.80	2,036,735.28	39.872835	-109.587514
5,346.00	0.63	237.66	5,344.34	13.33	-4.78	14,482,871.41	2,036,734.28	39.872834	-109.587517
5,440.00	0.56	220.66	5,438.34	12.70	-5.52	14,482,870.77	2,036,733.55	39.872832	-109.587520
5,536.00	0.38	202.66	5,534.33	12.05	-5.94	14,482,870.11	2,036,733.13	39.872830	-109.587521
5,631.00	0.38	170.16	5,629.33	11.45	-6.01	14,482,869.51	2,036,733.08	39.872829	-109.587522
5,727.00	0.56	284.03	5,725.33	11.25	-6.41	14,482,869.31	2,036,732.68	39.872828	-109.587523
5,822.00	0.56	282.53	5,820.33	11.46	-7.32	14,482,869.50	2,036,731.77	39.872829	-109.587526
5,917.00	0.31	283.90	5,915.32	11.63	-8.02	14,482,869.66	2,036,731.07	39.872829	-109.587529
6,013.00	0.38	219.16	6,011.32	11.44	-8.47	14,482,869.46	2,036,730.62	39.872829	-109.587530
6,108.00	0.25	175.41	6,106.32	10.99	-8.65	14,482,869.01	2,036,730.44	39.872827	-109.587531

Anadarko Petroleum Corp

Survey Report - Geographic

Company:	US ROCKIES REGION PLANNING	**Local Co-ordinate Reference:**	Well LOVE 1121-8J
Project:	UTAH - UTM (feet), NAD27, Zone 12N	**TVD Reference:**	18' RKB + 5591' GL @ 5609.00ft
Site:	UINTAH_LOVE 1121-8J	**MD Reference:**	18' RKB + 5591' GL @ 5609.00ft
Well:	LOVE 1121-8J	**North Reference:**	True
Wellbore:	LOVE 1121-8J	**Survey Calculation Method:**	Minimum Curvature
Design:	LOVE 1121-8J	**Database:**	edmp

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
6,204.00	1.06	320.28	6,202.32	11.47	-9.20	14,482,869.48	2,036,729.88	39.872829	-109.587533
6,299.00	0.94	314.03	6,297.30	12.68	-10.33	14,482,870.68	2,036,728.74	39.872832	-109.587537
6,395.00	0.63	324.16	6,393.29	13.66	-11.20	14,482,871.64	2,036,727.85	39.872835	-109.587540
6,490.00	0.38	323.78	6,488.29	14.34	-11.69	14,482,872.31	2,036,727.35	39.872836	-109.587542
6,584.00	0.38	321.53	6,582.29	14.83	-12.07	14,482,872.80	2,036,726.96	39.872838	-109.587543
6,679.00	0.25	326.78	6,677.28	15.25	-12.38	14,482,873.21	2,036,726.65	39.872839	-109.587544
6,774.00	0.14	272.97	6,772.28	15.43	-12.61	14,482,873.39	2,036,726.41	39.872839	-109.587545
6,869.00	0.19	224.03	6,867.28	15.32	-12.84	14,482,873.28	2,036,726.19	39.872839	-109.587546
6,964.00	0.50	188.53	6,962.28	14.80	-13.01	14,482,872.75	2,036,726.03	39.872838	-109.587547
7,060.00	0.94	145.66	7,058.28	13.74	-12.63	14,482,871.69	2,036,726.43	39.872835	-109.587545
7,155.00	1.19	46.78	7,153.26	13.77	-11.47	14,482,871.74	2,036,727.58	39.872835	-109.587541
7,251.00	1.31	59.03	7,249.24	15.02	-9.80	14,482,873.02	2,036,729.23	39.872838	-109.587535
7,346.00	1.19	69.78	7,344.22	15.91	-7.94	14,482,873.94	2,036,731.07	39.872841	-109.587529
7,442.00	1.38	79.41	7,440.20	16.47	-5.87	14,482,874.53	2,036,733.14	39.872842	-109.587521
7,537.00	1.88	103.91	7,535.16	16.31	-3.23	14,482,874.41	2,036,735.78	39.872842	-109.587512
7,632.00	0.56	78.28	7,630.13	16.03	-1.27	14,482,874.16	2,036,737.75	39.872841	-109.587505
7,727.00	0.44	5.15	7,725.13	16.48	-0.78	14,482,874.63	2,036,738.23	39.872842	-109.587503
7,823.00	0.50	81.78	7,821.13	16.91	-0.33	14,482,875.06	2,036,738.67	39.872844	-109.587501
7,918.00	0.38	272.03	7,916.13	16.98	-0.24	14,482,875.13	2,036,738.76	39.872844	-109.587501
8,014.00	0.69	229.16	8,012.12	16.62	-0.99	14,482,874.76	2,036,738.01	39.872843	-109.587504
8,109.00	0.75	208.79	8,107.12	15.70	-1.72	14,482,873.82	2,036,737.30	39.872840	-109.587506
8,204.00	0.94	180.03	8,202.11	14.37	-2.02	14,482,872.50	2,036,737.02	39.872837	-109.587507
8,300.00	1.25	173.03	8,298.09	12.55	-1.90	14,482,870.67	2,036,737.17	39.872832	-109.587507
8,395.00	1.31	159.91	8,393.07	10.50	-1.40	14,482,868.63	2,036,737.70	39.872826	-109.587505
8,490.00	1.50	151.03	8,488.04	8.39	-0.42	14,482,866.54	2,036,738.71	39.872820	-109.587502
8,586.00	1.69	134.03	8,584.00	6.31	1.20	14,482,864.48	2,036,740.37	39.872814	-109.587496
8,681.00	1.75	140.91	8,678.96	4.21	3.13	14,482,862.41	2,036,742.33	39.872809	-109.587489
8,776.00	1.69	139.66	8,773.92	2.01	4.95	14,482,860.25	2,036,744.18	39.872803	-109.587483
8,872.00	1.63	144.41	8,869.88	-0.18	6.66	14,482,858.09	2,036,745.93	39.872797	-109.587477
8,947.00	1.88	127.91	8,944.84	-1.80	8.25	14,482,856.49	2,036,747.54	39.872792	-109.587471
9,043.00	2.25	121.28	9,040.78	-3.75	11.10	14,482,854.59	2,036,750.43	39.872787	-109.587461
9,094.00	2.39	123.52	9,091.74	-4.85	12.84	14,482,853.51	2,036,752.19	39.872784	-109.587455
LAST SVY									
9,154.00	2.39	123.52	9,151.68	-6.23	14.93	14,482,852.16	2,036,754.29	39.872780	-109.587447
PROJECTION - LOVE 1121-8J BHL (25FT RADIUS)									

Design Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates +N/-S (ft)	Local Coordinates +E/-W (ft)	Comment
9,094.00	9,091.74	-4.85	12.84	LAST SVY
9,154.00	9,151.68	-6.23	14.93	PROJECTION

Checked By: _____ Approved By: _____ Date: _____