

2/07/2014 DATE IN	SUSPENSE	MAW ENGINEER	2/07/2014 LOGGED IN	NSL TYPE	PMAM1403855785 APP NO.
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ABOVE THIS LINE FOR DIVISION USE ONLY

NEW MEXICO OIL CONSERVATION DIVISION

- Engineering Bureau -

1220 South St. Francis Drive, Santa Fe, NM 87505



ADMINISTRATIVE APPLICATION CHECKLIST

THIS CHECKLIST IS MANDATORY FOR ALL ADMINISTRATIVE APPLICATIONS FOR EXCEPTIONS TO DIVISION RULES AND REGULATIONS WHICH REQUIRE PROCESSING AT THE DIVISION LEVEL IN SANTA FE

Application Acronyms:

[NSL-Non-Standard Location] [NSP-Non-Standard Proration Unit] [SD-Simultaneous Dedication]
 [DHC-Downhole Commingling] [CTB-Lease Commingling] [PLC-Pool/Lease Commingling]
 [PC-Pool Commingling] [OLS - Off-Lease Storage] [OLM-Off-Lease Measurement]
 [WFX-Waterflood Expansion] [PMX-Pressure Maintenance Expansion]
 [SWD-Salt Water Disposal] [IPI-Injection Pressure Increase]
 [EOR-Qualified Enhanced Oil Recovery Certification] [PPR-Positive Production Response]

[1] TYPE OF APPLICATION - Check Those Which Apply for [A]

[A] Location - Spacing Unit - Simultaneous Dedication
☒ NSL ☐ NSP ☐ SD

Check One Only for [B] or [C]

[B] Commingling - Storage - Measurement
☐ DHC ☐ CTB ☐ PLC ☐ PC ☐ OLS ☐ OLM

[C] Injection - Disposal - Pressure Increase - Enhanced Oil Recovery
☐ WFX ☐ PMX ☐ SWD ☐ IPI ☐ EOR ☐ PPR

[D] Other: Specify _____

~ NSL
Wpx Energy
120782

2014 FEB 10 PM 3:19
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[2] NOTIFICATION REQUIRED TO: - Check Those Which Apply, or X Does Not Apply

[A] ☐ Working, Royalty or Overriding Royalty Interest Owners

[B] ☐ Offset Operators, Leaseholders or Surface Owner

[C] ☐ Application is One Which Requires Published Legal Notice

[D] ☐ Notification and/or Concurrent Approval by BLM or SLO
 U.S. Bureau of Land Management - Commissioner of Public Lands, State Land Office

[E] ☐ For all of the above, Proof of Notification or Publication is Attached, and/or,

[F] ☐ Waivers are Attached

Well
Chaco 2306-06L
30-039-31200
Pool
Lybrook
Gallup
42289

[3] SUBMIT ACCURATE AND COMPLETE INFORMATION REQUIRED TO PROCESS THE TYPE OF APPLICATION INDICATED ABOVE.

[4] **CERTIFICATION:** I hereby certify that the information submitted with this application for administrative approval is **accurate** and **complete** to the best of my knowledge. I also understand that **no action** will be taken on this application until the required information and notifications are submitted to the Division.

Note: Statement must be completed by an individual with managerial and/or supervisory capacity.

Heather Riley
Print or Type Name

Signature

Heather Riley

Regulatory Team Lead
Title

2/7/2014
Date

Heather.riley@wpenergy.com
e-mail Address

Chaco 2306-06L #178H: 30-039-31200

RECEIVED

FORM APPROVED
OMB No. 1004-0136
Expires January 31, 2004

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

OCT 17 2013

APPLICATION FOR PERMIT TO DRILL OR REENTER

Farmington Field Office
Bureau of Land Management

1a. Type of Work: ☒ DRILL ☐ REENTER		5. Lease Serial No. NMSF-078362
1b. Type of Well: ☒ Oil Well ☐ Gas Well ☐ Other ☒ Single Zone ☐ Multiple Zone		6. If Indian, Allottee or Tribe Name Chaco 2306-06L #178H
2. Name of Operator WPX Energy Production, LLC		7. If Unit or CA Agreement, Name and No.
3a. Address P.O. Box 640 Aztec, NM 87410	3b. Phone No. (include area code) (505) 333-1808	8. Lease Name and Well No. Chaco 2306-06L #178H
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface 1691' FSL & 572' FWL, sec 6, T23N, R6W At proposed prod. zone 1482' FSL & 280' FWL, sec 1, T23N, R7W		9. API Well No. 30-039-31200
14. Distance in miles and direction from nearest town or post office* approximately 3 miles northeast of Lybrook, New Mexico		10. Field and Pool, or Exploratory Lybrook Gallup
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 572'	16. No. of Acres in lease 1277.08 2530.37	11. Sec., T., R., M., or Blk. and Survey or Area BHL: sec 1, T23N, R7W
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 20'	19. Proposed Depth 10,510' MD / 5,492' TVD	12. County or Parish Rio Arriba County
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 6933' GR	22. Approximate date work will start* July 1, 2013	13. State NM
24. Attachments		17. Spacing Unit dedicated to this well 0 OIL CONS. DIV DIST. 3
20. BLM/BIA Bond No. on file UTB000178		23. Estimated duration 1 month

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

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

25. Signature <i>Larry Higgins</i>	Name (Printed/Typed) Larry Higgins	Date 10/17/13
Permit Supervisor. Approved by (Signature) <i>[Signature]</i>	Name (Printed/Typed) AFM	Date 10/31/13
Title AFM	Office FFO	

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 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 fraudulent statements or representations as to any matter within its jurisdiction.

*(Instructions on reverse)

WPX Energy Production, LLC, proposes to develop the Lybrook Gallup formation at the above described location in accordance with the attached drilling and surface use plans.

The well pad surface is under jurisdiction of the BLM.

This location has been archaeologically surveyed by La Plata Archaeological Consultants. Copies of their report have been submitted directly to the BLM.

808 feet of new access road is needed.

BLM'S APPROVAL OR ACCEPTANCE OF THIS ACTION DOES NOT RELIEVE THE LESSEE AND OPERATOR FROM OBTAINING ANY OTHER AUTHORIZATION REQUIRED FOR OPERATIONS ON FEDERAL AND INDIAN LANDS

This action is subject to technical and procedural review pursuant to 43 CFR 3165.3 and appeal pursuant to 43 CFR 3165.4

NMOCDA

DRLING OPERATIONS AUTHORIZED ARE SUBJECT TO COMPLIANCE WITH ATTACHED "GENERAL REQUIREMENTS".



Sent via Overnight Delivery

February 7, 2014

Jami Bailey
Division Director
NEW MEXICO OIL CONSERVATION DIVISION
1220 South Saint Francis Drive
Santa Fe, NM 87505

*Re: Request for Administrative Approval for Non-Standard Lybrook Gallup Lateral
Chaco 2306-06L #178H
API#: 30-039-31200
Sec. 1, T23N, R7W*

Dear Ms. Bailey:

WPX Energy Production, LLC ("WPX"), pursuant to the provisions of Division Rule 19.15.15.13, hereby seeks administrative approval of an unorthodox location for the Lybrook Gallup (42289) formation in the Chaco 2206-06L #178H. This is a horizontal well with a surface location of 1691' FSL and 572' FWL and an end of lateral location of 1496' FSL & 250' FWL, Section 1, T23N, R7W. See attached plat.

This location is governed by statewide Rule 15.9.A [19.15.15.9.A NMAC], which provides for 40-acre units, with wells located at least 330 feet from a unit outer boundary. Initially the Lybrook Gallup Pool was set up with Special Pool Rules under Order No. R-2267 but these rules were later abolished with Order No. R-2267-B. The new Special Rules for Horizontal Wells under Division Rule 19.15.16.15(B)(3) also apply and state no internal setbacks are required within a project area. Given these setback requirements, the producing interval in the lateral is encroaching the S2 of the S2 of Section 1, T23N R7W in that it is approximately 182' from the unit boundary.

The spacing for the subject well is the N2 of the S2 of section 1 consisting of 4 consecutive parcels containing 40 acres more or less and totaling 151.40 acres. The spacing unit being encroached upon is the S2 of the S/2 of Section 1 also consisting of 4 consecutive parcels containing 151.29 acres. All of Section 1 is operated by WPX and ownership is 100% WPX therefore no affected owner letters are required pursuant to NMOC rules.



Please note that the perforation range for the lateral is from 6060' MD to 10,456.5' MD which are legal as to the east and west lines.

EAST LINE EXPLANATION: Referring to the plat, the Point of Entry is at 364' from the east line of Section 1 which correlates with approximately 6043' MD. The top perforation is at 6060' which is 17' past the Point of Entry so the distance from the east line for the perforation is 381'.

WEST LINE EXPLANATION: Our end of lateral is shown at 250' from the west line, which correlates to 10,545 MD. The deepest perforation is at 10,456.5' which correlates to 337.5' from the west line.

Should you have any questions or concerns, please don't hesitate to contact me.

Sincerely,

Heather Riley
Regulatory Team Lead

Enc.: C-102

District I
1625 N. French Drive, Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720

District II
811 S. First Street, Artesia, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720

District III
1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170

District IV
1220 S. St. Francis Drive, Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico
Energy, Minerals & Natural Resources Department

Form C-102
Revised August 1, 2011

Submit one copy to
Appropriate District Office

OIL CONSERVATION DIVISION
1220 South St. Francis Drive
Santa Fe, NM 87505

☒ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

"As Drilled"

*API Number		*Pool Code 42289	*Pool Name LYBROOK GALLUP
*Property Code	*Property Name CHACO 2306-06L		*Well Number 178H
*OGRID No. 120782	*Operator Name WPX ENERGY PRODUCTION, LLC		*Elevation 6933'

¹⁰ Surface Location

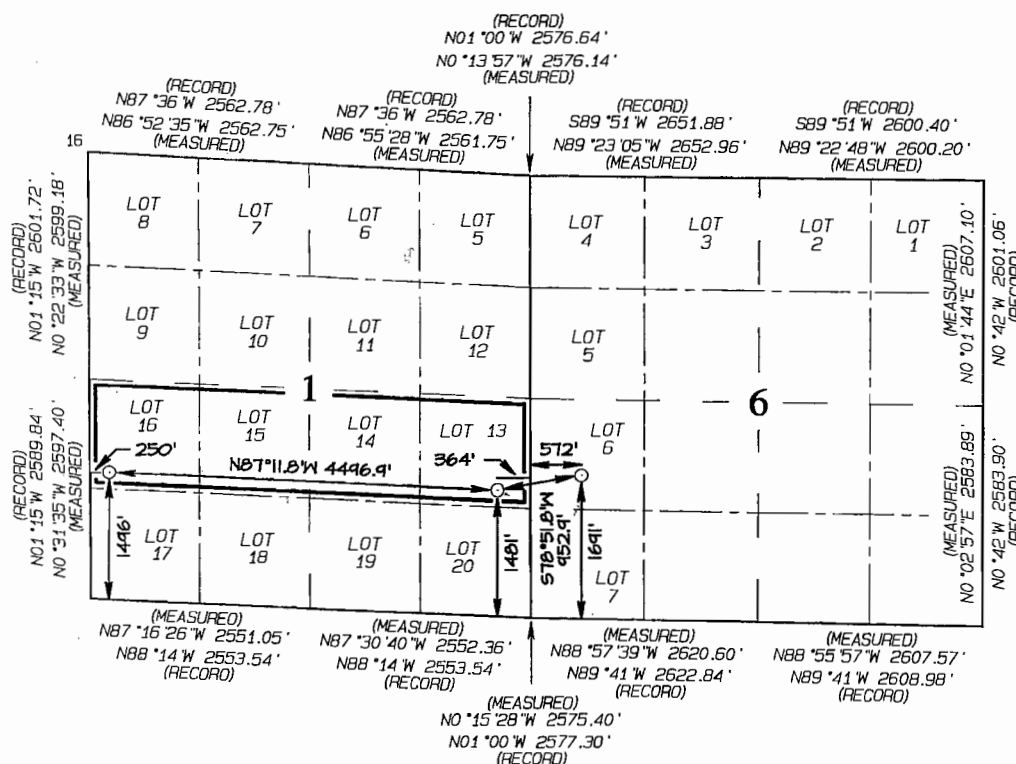
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
L	6	23N	6W	6	1691	SOUTH	572	WEST	RIO ARriba

¹¹ Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	280	East/West line	County
L	1	23N	7W	16	1496	SOUTH	250	WEST	RIO ARriba

¹² Dedicated Acres 151.40 Acres N/2 S/2 - Section 1	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.
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NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE
BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION



END-OF-LATERAL
1496' FSL 250' FWL
SECTION 1, T23N, R7W
LAT: 36.25103°N
LONG: 107.53504°W
DATUM: NAD1927

LAT: 36.25104°N
LONG: 107.53564°W
DATUM: NAD1983

POINT-OF-ENTRY
1481' FSL 364' FEL
SECTION 1, T23N, R7W
LAT: 36.25059°N
LONG: 107.51980°W
DATUM: NAD1927

LAT: 36.25060°N
LONG: 107.52040°W
DATUM: NAD1983

SURFACE LOCATION
1691' FSL 572' FWL
SECTION 6, T23N, R6W
LAT: 36.25112°N
LONG: 107.51663°W
DATUM: NAD1927

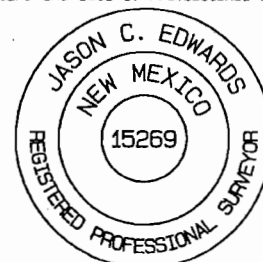
LAT: 36.25114°N
LONG: 107.51724°W
DATUM: NAD1983

¹⁷ OPERATOR CERTIFICATION
I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom-hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Signature _____ Date _____
Printed Name _____
E-mail Address _____

¹⁸ SURVEYOR CERTIFICATION
I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.
Date Revised: JANUARY 14, 2014
Survey Date: OCTOBER 1, 2012

Signature and Seal of Professional Surveyor



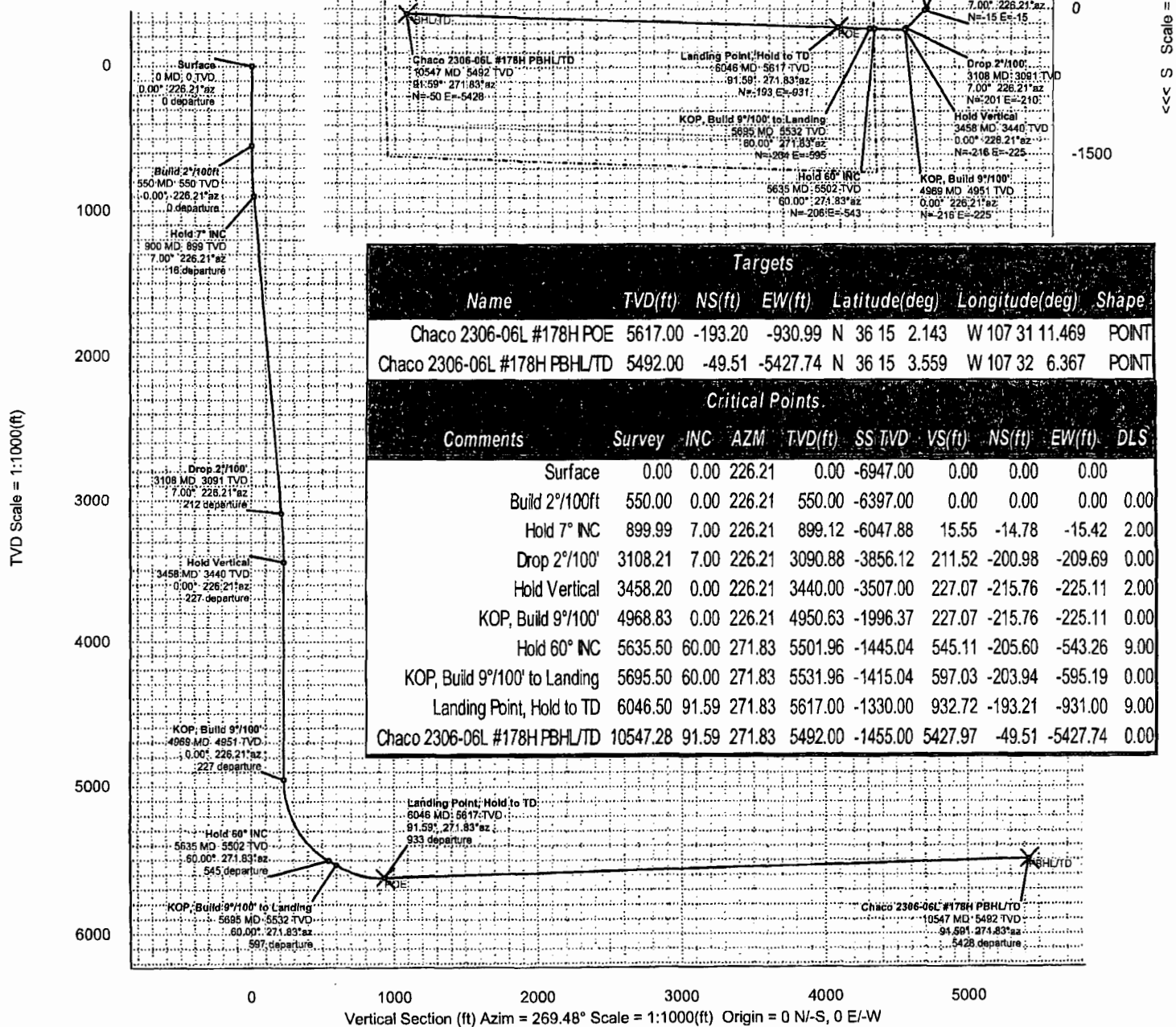
JASON C. EDWARDS
Certificate Number 15269



A Schlumberger Company

Magnetic Parameters		Surface Location		NAD27 New Mexico State Plane, Central Zone, US Foot		Miscellaneous	
Model: GQGM 2013							
Dir: 63.042°	Date: September 25, 2013	Lat: N 30 15 4.354	Nothing: 181°00'51.51" NUS	Grid Conv: -0.749"		Slct: Chaco 2306-08, 117184	TVD Ref: RWR156471 above MSL
Mag Dec: 9.484°	PS: 50201.7mT	Long: W 107 31 0.103	Grating: 126507.03 NUB	Scale Fact: 1.00005983		Plant: R2 mdr 18Nov13	Srv Date: September 25, 2013

True North
Tot Corr (M->T 9.4941°)
Mag Dec (9.494°)
Grid Conv (-0.749°)





Chaco 2306-06L #178H R2 mdv 19Nov13 Proposal Geodetic Report



(Def Plan)

Report Date: November 19, 2013 - 01:16 PM
Client: WPX Energy
Field: NM, Rio Arriba (NAD 27 CZ)
Structure / Slot: WPX Energy Sec 6-23N-6W (Chaco 2306-06L #178H) / Chaco 2306-06L #178H
Well: Chaco 2306-06L #178H
Borehole: Original Hole
UWI / API#: Unknown / Unknown
Survey Name: Chaco 2306-06L #178H R2 mdv 19Nov13
Survey Date: September 25, 2013
Tort / AHD / DDI / ERD Ratio: 105.593 * / 5517.102 ft / 8.039 / 0.982
Coordinate Reference System: NAD27 New Mexico State Plane, Central Zone, US Feet
Location Lat / Long: N 36° 15' 4.05360", W 107° 31' 0.10344"
Location Grid N/E Y/X: N 1913061.511 NUS, E 126507.029 NUS
CRS Grid Convergence Angle: -0.7491 *
Grid Scale Factor: 1.00005963
Survey / DLS Computation: Minimum Curvature / Lubinski
Vertical Section Azimuth: 259.477 * (True North)
Vertical Section Origin: 0.000 ft, 0.000 ft
TVD Reference Datum: RKB
TVD Reference Elevation: 6947.000 ft above MSL
Seabed / Ground Elevation: 6933.000 ft above MSL
Magnetic Declination: 9.494 *
Total Gravity Field Strength: 998.4933mg (9.80665 Based)
Total Magnetic Field Strength: 50201.660 nT
Magnetic Dip Angle: 83.042 *
Declination Date: September 25, 2013
Magnetic Declination Model: BGGM 2013
North Reference: True North
Grid Convergence Used: 0.0000 *
Total Corr Mag North -> True North: 9.4941 *
Local Coord Referenced To: Well Head

Comments	MD (ft)	incl (°)	Azim True (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
Surface	0.00	0.00	226.21	0.00	0.00	0.00	0.00	N/A	1913061.51	126507.03	N 36 15 4.05	W 107 31 0.10
	100.00	0.00	226.21	100.00	0.00	0.00	0.00	0.00	1913061.51	126507.03	N 36 15 4.05	W 107 31 0.10
	200.00	0.00	226.21	200.00	0.00	0.00	0.00	0.00	1913061.51	126507.03	N 36 15 4.05	W 107 31 0.10
	300.00	0.00	226.21	300.00	0.00	0.00	0.00	0.00	1913061.51	126507.03	N 36 15 4.05	W 107 31 0.10
	400.00	0.00	226.21	400.00	0.00	0.00	0.00	0.00	1913061.51	126507.03	N 36 15 4.05	W 107 31 0.10
	500.00	0.00	226.21	500.00	0.00	0.00	0.00	0.00	1913061.51	126507.03	N 36 15 4.05	W 107 31 0.10
Build 2"/100ft	550.00	0.00	226.21	550.00	0.00	0.00	0.00	0.00	1913061.51	126507.03	N 36 15 4.05	W 107 31 0.10
	600.00	1.00	226.21	600.00	0.32	-0.30	-0.31	2.00	1913061.21	126506.71	N 36 15 4.05	W 107 31 0.11
	700.00	3.00	226.21	699.93	2.88	-2.72	-2.83	2.00	1913058.83	126504.16	N 36 15 4.03	W 107 31 0.14
	800.00	5.00	226.21	799.68	7.94	-7.54	-7.87	2.00	1913054.07	126499.06	N 36 15 3.98	W 107 31 0.20
Hold 7" INC	900.00	7.00	226.21	899.13	15.55	-14.78	-15.42	0.00	1913046.94	126491.42	N 36 15 3.91	W 107 31 0.29
	1000.00	7.00	226.21	998.38	24.42	-23.21	-24.21	0.00	1913038.82	126482.51	N 36 15 3.82	W 107 31 0.40
	1100.00	7.00	226.21	1097.64	33.30	-31.64	-33.01	0.00	1913030.30	126473.60	N 36 15 3.74	W 107 31 0.51
	1200.00	7.00	226.21	1196.89	42.17	-40.07	-41.81	0.00	1913021.99	126464.70	N 36 15 3.68	W 107 31 0.61
	1300.00	7.00	226.21	1296.15	51.05	-48.51	-50.61	0.00	1913013.87	126455.79	N 36 15 3.57	W 107 31 0.72
	1400.00	7.00	226.21	1395.40	59.92	-56.94	-59.41	0.00	1913005.35	126446.88	N 36 15 3.49	W 107 31 0.83
	1500.00	7.00	226.21	1494.68	68.80	-65.37	-68.20	0.00	1912997.03	126437.97	N 36 15 3.41	W 107 31 0.94
	1600.00	7.00	226.21	1593.91	77.67	-73.80	-77.00	0.00	1912988.72	126429.06	N 36 15 3.32	W 107 31 1.04
	1700.00	7.00	226.21	1693.17	86.55	-82.24	-85.80	0.00	1912980.40	126420.16	N 36 15 3.24	W 107 31 1.15
	1800.00	7.00	226.21	1792.42	95.42	-90.67	-94.60	0.00	1912972.08	126411.25	N 36 15 3.18	W 107 31 1.28
	1900.00	7.00	226.21	1891.68	104.30	-99.10	-103.40	0.00	1912963.76	126402.34	N 36 15 3.07	W 107 31 1.37
	2000.00	7.00	226.21	1990.93	113.17	-107.53	-112.19	0.00	1912955.45	126393.43	N 36 15 2.99	W 107 31 1.47
	2100.00	7.00	226.21	2090.19	122.04	-115.97	-120.99	0.00	1912947.13	126384.52	N 36 15 2.91	W 107 31 1.58
	2200.00	7.00	226.21	2189.44	130.92	-124.40	-129.79	0.00	1912938.81	126375.62	N 36 15 2.82	W 107 31 1.69
	2300.00	7.00	226.21	2288.70	139.79	-132.83	-138.59	0.00	1912930.49	126366.71	N 36 15 2.74	W 107 31 1.80
	2400.00	7.00	226.21	2387.95	148.67	-141.26	-147.39	0.00	1912922.18	126357.80	N 36 15 2.68	W 107 31 1.90
	2500.00	7.00	226.21	2487.20	157.54	-149.70	-156.18	0.00	1912913.86	126348.89	N 36 15 2.57	W 107 31 2.01
	2600.00	7.00	226.21	2586.46	166.42	-158.13	-164.98	0.00	1912905.54	126339.98	N 36 15 2.49	W 107 31 2.12
	2700.00	7.00	226.21	2685.71	175.29	-166.56	-173.78	0.00	1912897.23	126331.08	N 36 15 2.41	W 107 31 2.23
	2800.00	7.00	226.21	2784.97	184.17	-175.00	-182.58	0.00	1912888.91	126322.17	N 36 15 2.32	W 107 31 2.33
	2900.00	7.00	226.21	2884.22	193.04	-183.43	-191.38	0.00	1912880.59	126313.26	N 36 15 2.24	W 107 31 2.44
	3000.00	7.00	226.21	2983.48	201.92	-191.88	-200.17	0.00	1912872.27	126304.35	N 36 15 2.16	W 107 31 2.55
Drop 2"/100'	3100.00	7.00	226.21	3082.73	210.79	-200.29	-208.97	0.00	1912863.96	126295.44	N 36 15 2.07	W 107 31 2.65
	3108.21	7.00	226.21	3090.88	211.52	-200.98	-209.69	0.00	1912863.27	126294.71	N 36 15 2.07	W 107 31 2.66
	3200.00	5.18	226.21	3182.15	218.80	-207.71	-216.72	2.00	1912856.84	126287.60	N 36 15 2.00	W 107 31 2.75
	3300.00	3.18	226.21	3281.88	223.89	-212.74	-221.96	2.00	1912851.68	126282.30	N 36 15 1.95	W 107 31 2.81
Hold Vertical	3400.00	1.18	226.21	3381.81	226.84	-215.35	-224.68	2.00	1912849.10	126279.54	N 36 15 1.92	W 107 31 2.85
	3458.20	0.00	226.21	3440.00	227.07	-215.78	-225.11	2.00	1912848.70	126279.10	N 36 15 1.92	W 107 31 2.85
	3500.00	0.00	226.21	3481.80	227.07	-215.78	-225.11	0.00	1912848.70	126279.10	N 36 15 1.92	W 107 31 2.85
	3600.00	0.00	226.21	3581.80	227.07	-215.78	-225.11	0.00	1912848.70	126279.10	N 36 15 1.92	W 107 31 2.85
	3700.00	0.00	226.21	3681.80	227.07	-215.78	-225.11	0.00	1912848.70	126279.10	N 36 15 1.92	W 107 31 2.85
	3800.00	0.00	226.21	3781.80	227.07	-215.78	-225.11	0.00	1912848.70	126279.10	N 36 15 1.92	W 107 31 2.85
	3900.00	0.00	226.21	3881.80	227.07	-215.78	-225.11	0.00	1912848.70	126279.10	N 36 15 1.92	W 107 31 2.85
	4000.00	0.00	226.21	3981.80	227.07	-215.78	-225.11	0.00	1912848.70	126279.10	N 36 15 1.92	W 107 31 2.85
	4100.00	0.00	226.21	4081.80	227.07	-215.78	-225.11	0.00	1912848.70	126279.10	N 36 15 1.92	W 107 31 2.85
	4200.00	0.00	226.21	4181.80	227.07	-215.78	-225.11	0.00	1912848.70	126279.10	N 36 15 1.92	W 107 31 2.85
	4300.00	0.00	226.21	4281.80	227.07	-215.78	-225.11	0.00	1912848.70	126279.10	N 36 15 1.92	W 107 31 2.85
	4400.00	0.00	226.21	4381.80	227.07	-215.78	-225.11	0.00	1912848.70	126279.10	N 36 15 1.92	W 107 31 2.85
	4500.00	0.00	226.21	4481.80	227.07	-215.78	-225.11	0.00	1912848.70	126279.10	N 36 15 1.92	W 107 31 2.85
	4600.00	0.00	226.21	4581.80	227.07	-215.78	-225.11	0.00	1912848.70	126279.10	N 36 15 1.92	W 107 31 2.85
	4700.00	0.00	226.21	4681.80	227.07	-215.78	-225.11	0.00	1912848.70	126279.10	N 36 15 1.92	W 107 31 2.85
	4800.00	0.00	226.21	4781.80	227.07	-215.78	-225.11	0.00	1912848.70	126279.10	N 36 15 1.92	W 107 31 2.85
	4900.00	0.00	226.21	4881.80	227.07	-215.78	-225.11	0.00	1912848.70	126279.10	N 36 15 1.92	W 107 31 2.85
KOP, Build 9"/100'	4989.83	0.00	226.21	4950.63	227.07	-215.78	-225.11	0.00	1912848.70	126279.10	N 36 15 1.92	W 107 31 2.85
	5000.00	2.81	271.83	4981.79	227.83	-215.74	-225.87	9.00	1912848.73	126278.34	N 36 15 1.92	W 107 31 2.86
	5100.00	11.81	271.83	5080.88	240.52	-215.33	-238.57	9.00	1912849.31	126265.85	N 36 15 1.92	W 107 31 3.02
	5200.00	20.81	271.83	5178.75	266.55	-214.43	-268.60	9.00	1912850.57	126237.83	N 36 15 1.93	W 107 31 3.36
	5300.00	29.81	271.83	5267.07	311.21	-213.07	-308.28	9.00	1912852.49	126194.97	N 36 15 1.95	W 107 31 3.88
	5400.00	38.81	271.83	5349.59	367.47	-211.27	-365.55	9.00	1912855.02	126138.72	N 36 15 1.98	W 107 31 4.57
	5500.00	47.81	271.83	5422.28	435.93	-209.08	-434.04	9.00	1912858.11	126070.27	N 36 15 1.99	W 107 31 5.40
	5600.00	56.81	271.83	5483.36	514.91	-206.56	-513.04	9.00	1912861.66	125991.30	N 36 15 2.01	W 107 31 6.37
Hold 60" INC KOP, Build 9"/100' to Landing	5635.50	80.00	271.83	5501.96	545.11	-205.60	-543.28	9.00	1912863.02	125961.10	N 36 15 2.02	W 107 31 6.74
	5695.50	60.00	271.83	5531.98	597.03	-203.94	-595.19	0.00	1912865.36	125909.19	N 36 15 2.04	W 107 31 7.37
	5700.00	80.41	271.83	5534.20	600.93	-203.81	-599.10	9.00	1912865.54	125905.28	N 36 15 2.04	W 107 31 7.42
	5800.00	89.41	271.83	5576.57	691.33	-200.92	-689.52	9.00	1912869.81	125814.90	N 36 15 2.07	W 107 31 8.52
	5900.00	78.41	271.83	5604.26	787.23	-197.86	-785.45	9.00	1912873.93	125719.01	N 36 15 2.10	W 107 31 9.69
	8000.00	87.41	271.83	5816.60	886.27	-194.89	-884.54	9.00	1912878.39	125619.97	N 36 15 2.13	W 107 31 10.90
Landing Point, Hold to TD	8046.50	91.58	271.83	5817.00	932.72	-193.21	-931.00	9.00	1912880.46	125573.53	N 36 15 2.14	W 107 31 11.47
	8100.00	91.59	271.83	5815.52	988.18	-191.50	-984.45	0.00	1912882.99	125520.10	N 36 15 2.18	W 107 31 12.12
	8200.00	91.59	271.83	5812.75	1086.03	-188.31	-1084.36	0.00	1912887.39	125420.23	N 36 15 2.19	W 107 31 13.34
	8300.00	91.59	271.83	5809.97	1185.91	-185.11	-1184.27	0.00	191281			

Comments	MD (ft)	Incl (°)	Azim True (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS ("/100ft)	Northing (ft/US)	Easting (ft/US)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
	7000.00	01.59	271.83	5590.54	1885.05	-162.77	-1683.65	0.00	1912923.36	124621.31	N 36 15 2.44	W 107 31 23.10
	7100.00	01.59	271.83	5587.77	1984.93	-158.58	-1983.56	0.00	1912927.87	124521.44	N 36 15 2.47	W 107 31 24.32
	7200.00	01.59	271.83	5584.99	2084.81	-156.38	-2083.47	0.00	1912932.37	124421.57	N 36 15 2.51	W 107 31 25.54
	7300.00	01.59	271.83	5582.21	2184.68	-153.19	-2183.38	0.00	1912936.87	124321.71	N 36 15 2.54	W 107 31 26.76
	7400.00	01.59	271.83	5579.44	2284.56	-150.00	-2283.29	0.00	1912941.37	124221.84	N 36 15 2.57	W 107 31 27.98
	7500.00	01.59	271.83	5576.66	2384.44	-146.81	-2383.20	0.00	1912945.87	124121.98	N 36 15 2.60	W 107 31 29.20
	7600.00	01.59	271.83	5573.88	2484.32	-143.61	-2483.11	0.00	1912950.37	124022.11	N 36 15 2.63	W 107 31 30.42
	7700.00	01.59	271.83	5571.11	2584.19	-140.42	-2583.02	0.00	1912954.87	123922.25	N 36 15 2.66	W 107 31 31.64
	7800.00	01.59	271.83	5568.33	2684.07	-137.23	-2682.93	0.00	1912959.37	123822.38	N 36 15 2.70	W 107 31 32.86
	7900.00	01.59	271.83	5565.55	2783.95	-134.03	-2782.84	0.00	1912963.87	123722.51	N 36 15 2.73	W 107 31 34.08
	8000.00	01.59	271.83	5562.78	2883.82	-130.84	-2882.75	0.00	1912968.38	123622.65	N 36 15 2.76	W 107 31 35.30
	8100.00	01.59	271.83	5560.00	2983.70	-127.65	-2982.66	0.00	1912972.88	123522.78	N 36 15 2.79	W 107 31 36.52
	8200.00	01.59	271.83	5557.22	3083.58	-124.46	-3082.57	0.00	1912977.38	123422.92	N 36 15 2.82	W 107 31 37.74
	8300.00	01.59	271.83	5554.45	3183.46	-121.26	-3182.48	0.00	1912981.88	123323.05	N 36 15 2.85	W 107 31 38.96
	8400.00	01.59	271.83	5551.67	3283.33	-118.07	-3282.39	0.00	1912986.38	123223.18	N 36 15 2.88	W 107 31 40.18
	8500.00	01.59	271.83	5548.89	3383.21	-114.88	-3382.30	0.00	1912990.88	123123.32	N 36 15 2.92	W 107 31 41.40
	8600.00	01.59	271.83	5546.11	3483.09	-111.69	-3482.21	0.00	1912995.38	123023.45	N 36 15 2.95	W 107 31 42.62
	8700.00	01.59	271.83	5543.34	3582.96	-108.49	-3582.12	0.00	1912999.88	122923.59	N 36 15 2.98	W 107 31 43.84
	8800.00	01.59	271.83	5540.56	3682.84	-105.30	-3682.03	0.00	1913004.38	122823.72	N 36 15 3.01	W 107 31 45.06
	8900.00	01.59	271.83	5537.78	3782.72	-102.11	-3781.94	0.00	1913008.88	122723.85	N 36 15 3.04	W 107 31 46.27
	9000.00	01.59	271.83	5535.00	3882.60	-98.91	-3881.86	0.00	1913013.35	122623.99	N 36 15 3.07	W 107 31 47.49
	9100.00	01.59	271.83	5532.22	3982.47	-95.72	-3981.77	0.00	1913017.85	122524.12	N 36 15 3.10	W 107 31 48.71
	9200.00	01.59	271.83	5529.44	4082.35	-92.53	-4081.68	0.00	1913022.35	122424.26	N 36 15 3.14	W 107 31 49.93
	9300.00	01.59	271.83	5526.67	4182.23	-89.33	-4181.59	0.00	1913026.85	122324.39	N 36 15 3.17	W 107 31 51.15
	9400.00	01.59	271.83	5523.89	4282.10	-86.14	-4281.50	0.00	1913031.35	122224.53	N 36 15 3.20	W 107 31 52.37
	9500.00	01.59	271.83	5521.11	4381.98	-82.95	-4381.41	0.00	1913035.85	122124.66	N 36 15 3.23	W 107 31 53.59
	9600.00	01.59	271.83	5518.33	4481.86	-79.76	-4481.32	0.00	1913040.35	122024.79	N 36 15 3.26	W 107 31 54.81
	9700.00	01.59	271.83	5515.55	4581.74	-76.58	-4581.23	0.00	1913044.85	121924.93	N 36 15 3.29	W 107 31 56.03
	9800.00	01.59	271.83	5512.77	4681.61	-73.37	-4681.14	0.00	1913049.35	121825.06	N 36 15 3.32	W 107 31 57.25
	9900.00	01.59	271.83	5509.99	4781.49	-70.18	-4781.05	0.00	1913053.85	121725.20	N 36 15 3.36	W 107 31 58.47
	10000.00	01.59	271.83	5507.21	4881.37	-66.98	-4880.96	0.00	1913058.35	121625.33	N 36 15 3.39	W 107 31 59.69
	10100.00	01.59	271.83	5504.43	4981.24	-63.79	-4980.87	0.00	1913062.85	121525.46	N 36 15 3.42	W 107 32 0.91
	10200.00	01.59	271.83	5501.65	5081.12	-60.60	-5080.78	0.00	1913067.35	121425.60	N 36 15 3.45	W 107 32 2.13
	10300.00	01.59	271.83	5498.87	5181.00	-57.40	-5180.69	0.00	1913071.85	121325.73	N 36 15 3.48	W 107 32 3.35
	10400.00	01.59	271.83	5496.09	5280.88	-54.21	-5280.60	0.00	1913076.35	121225.87	N 36 15 3.51	W 107 32 4.57
	10500.00	01.59	271.83	5493.31	5380.75	-51.02	-5380.51	0.00	1913080.85	121126.00	N 36 15 3.54	W 107 32 5.79
Chaco 2306-06L #178H PBH/LTD	10547.28	01.59	271.83	5492.00	5427.97	-49.51	-5427.74	0.00	1913082.97	121076.79	N 36 15 3.56	W 107 32 6.37

Survey Type: Def Plan

Survey Error Model: ISCWSA Rev 0 *** 3-D 95.000% Confidence 2.7955 sigma

Survey Program:

Description	MD From (ft)	MD To (ft)	EOU Freq (ft)	Hole Size (in)	Casing Diameter (in)	Survey Tool Type	Borehole / Survey
	0.000	14.000	1/100.000	30.000	30.000	SLB_MWD-STD-Depth Only	Original Hole / Chaco 2306-06L #178H R2 mdv 19Nov13
	14.000	10547.278	1/100.000	30.000	30.000	SLB_MWD-STD	Original Hole / Chaco 2306-06L #178H R2 mdv 19Nov13