

OCD Hobbs

ATS-14-512

Form 3160-3
(March 2012)

HOBBSOCD

MAY 05 2015

RECEIVED

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

FORM APPROVED
OMB No. 1004-0137
Expires October 31, 20145. Lease Serial No.
SHL: Fee; BHL: NMNM128835

6. If Indian, Allottee or Tribe Name

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

8. Lease Name and Well No.

Lea 7 Federal Com 2H

9. API Well No.

10. Field and Pool, or Exploratory

11. Sec. T. R. M. or Blk. and Survey and Area

7, 20s, 35e

12. County or Parish

13. State

Lea

NM

1a. Type of Work

☒ DRILL☐ REENTER

1b. Type of Well

☒ Oil Well☐ Gas Well☐ Other☒ Single Zone☐ Multiple Zone

2. Name of Operator

Cimarex Energy Co.

3a. Address

600 N. Marienfield St. Ste. 600 Midland Tx 79071

3b. Phone No. (include area code)

432-571-7800

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

At Surface 379 FSL & 1730 FWL

At proposed prod. Zone 330 FNL & 1980 FWL

Wolfcamp

14. Distance in miles and direction from nearest town or post office*

Hobbs, New Mexico is +/-22.8 miles northeasterly

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

379'

16. No of acres in lease

NMNM128835=319.67 acres
Fee=160.00 acres

17. Spacing Unit dedicated to this well

160.00

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

2890' to the
Lea Federal
Com 1H

19. Proposed Depth

Pilot Hole TD: N/A

15,425 MD

11,070 TVD

20. BLM/BIA Bond No. on File

NM2575 & NMB000835

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

3672 GR

22. Approximate date work will start*

3/4/14

23. Estimated duration

35 days

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 officer.

25. Signature

Title

Name (Printed/Typed)

Hope Knauls

Date

2/10/14

Regulatory Compliance

Approved By (Signature)

Title

FIELD MANAGER

Name (Printed/Typed)

CARLSBAD FIELD OFFICE

Date

APR 30 2015

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.

APPROVAL FOR TWO YEARS

Title 18 U.S.S. 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.

(Continued on page 2)

*(Instructions on page 2)

Capitan Controlled Water Basin

Approval Subject to General Requirements
& Special Stipulations Attached

SEE ATTACHED FOR

CONDITIONS OF APPROVAL

MAY 06 2015

Application to Drill
Lea 7 Federal Com 2H
 Cimarex Energy Co.
 UL: N, Sec. 7, 20s, 35e
 Lea Co., NM

HOBBS OCD

MAY 05 2015

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In response to questions asked under Section II B of Bulletin NTL-6, the following information is provided for your consideration:

1. **Location:** SHL 379 FSL & 1730 FWL
 BHL 330 FNL & 1980 FWL
2. **Elevation Above Sea Level:** 3,672' GR
3. **Geologic Name of Surface Formation:** Quaternary Alluvium Deposits
4. **Drilling Tools and Associated Equipment:** Conventional rotary drilling rig using fluid as a circulating medium for solids removal
5. **Proposed Drilling Depth:** 15,425 MD 11,070 TVD Pilot Hole TD: N/A
6. **Estimated Tops of Geological Markers:**

Formation	Est Top	Bearing
Rustler	1740	N/A
Top Salt	1830	N/A
Tansill	3513	N/A
Seven Rivers	4020	N/A
Queen	4700	N/A
Capitan	4900	N/A
Cherry Canyon	5820	N/A
Brushy Canyon	8030	N/A
Bone Spring	8225	Hydrocarbons
1st BSS	9620	Hydrocarbons
2nd BSS	10220	Hydrocarbons
3rd BSS	10840	Hydrocarbons
3rd BS "C" Sand	11030	Hydrocarbons
Wolfcamp	11120	N/A

7. **Possible Mineral Bearing Formation:** Shown above

7A. **OSE Ground Water Estimated Depth:** 125'

8. **Casing Program:**

Name	Casing Depth From (ft)	Casing Setting Depth (ft) MD	Casing Setting Depth (ft) TVD	Open Hole Size (inches)	Casing Size (inches)	Casing Weight (lb/ft)	Casing Grade	Thread	Condition	BHP (psig)	Anticipated Mud Weight (ppg)	Collapse SF at Full Evacuation (1.125)	Collapse SF at 1/3 Evacuation (1.125)	Burst SF (1.125)	Cumulative Air Weight	Cumulative Bouyed Weight (lbs)	Bouyant Tension SF (1.8)
Surface	0	1780	1780	17 1/2	13-3/8"	54.50	J-55	ST&C	New	768	8.3	1.47		3.57	97,010	84,717	6.07
Intermediate	0	5770	5770	12 1/4	9-5/8"	40.00	J-55	LT&C	New	3000	10.0		1.34	1.32	230,800	195,563	2.66
Production	0	10573	10573	8 3/4	5-1/2"	17.00	P-110	LT&C	New	4948	9.0	1.51		2.15	188,190	162,332	2.74
Production	10573	15425	11070	8 3/4	5-1/2"	17.00	P-110	BT&C	New	5180	9.0	1.44		2.05	8,449	7,288	74.92

Note: Operator may drill a 8-1/2" OH from end of curve to TD of the well. This is to reduce the need to ream the conventionally drilled curve to run a RSS assembly into the lateral.

Application to Drill
Lea 7 Federal Com 2H
 Cimarex Energy Co.
 UL: N, Sec. 7, 20s, 35e
 Lea Co., NM

8A. Casing Design and Casing Loading Assumptions:

Surface	Tension	A 1.8 design factor with effects of buoyancy: 8.30 ppg.
	Collapse	A 1.125 design factor with full internal evacuation and a collapse force equal to a 8.30 ppg mud gradient.
	Burst	A 1.125 design with a surface pressure equal to the fracture gradient at setting depth less gas gradient to surface.
Intermediate	Tension	A 1.8 design factor with effects of buoyancy: 10.00 ppg.
	Collapse	A 1.125 design factor evacuated 1/3 TVD of next casing string with a collapse force equal to a 10.00 ppg mud gradient.
	Burst	A 1.125 design with a surface pressure equal to the fracture gradient at setting depth less gas gradient to surface.
Production and/or Production Completion System	Tension	A 1.8 design factor with effects of buoyancy: 9.00 ppg.
	Collapse	A 1.125 design factor with full internal evacuation of next casing string with a collapse force equal to a 9.00 ppg mud gradient.
	Burst	A 1.125 design with a surface pressure equal to the fracture gradient at setting depth less gas gradient to surface.

9. Cementing Program:

Casing Type	Type	Sacks	Yield	Weight	Cubic Feet	Cement Blend
Surface	Lead	848	1.75	13.50	1483	Class C + Bentonite + Calcium Chloride + LCM, 8.829 gps water
	Tail	231	1.34	14.80	309	Class C + LCM, 6.32 gps water
	TOC: 0		45% Excess		Centralizers per Onshore Order 2.III.B.1f	
Intermediate	Lead	1045	1.88	12.90	1963	35:65 (poz/C) + Salt + Bentonite + LCM + retarder, 9.65 gps water
	Tail	292	1.34	14.80	391	Class C + retarder + LCM, 6.32 gps water
	TOC: 0		44% Excess			
Production	Lead	664	2.40	11.90	1592	35:65 (poz/H) + salt + Sodium Metasilicate + Bentonite + Fluid Loss + Dispersant + LCM + Retarder, 13.80 gps water
	Tail	1200	1.24	14.50	1488	50:50 (poz/H) + Bentonite + Salt + Fluid Loss + Dispersant + LCM + Retarder, 5.55 gps water
	TOC: 4850		17% Excess		No centralizers planned in the lateral section. 1 every jt from EOC to KOP. 1 every 4th joint from KOP to 500' inside previous casing.	

Cement volumes will be adjusted depending on hole size

9a. Proposed Drilling Plan:

Pilot Hole TD: No Pilot KOP: 10,573' EOC: 11,320'

Set Surface and Intermediate casing strings. Drill production hole to KOP. Continue drilling lateral through the curve to TD. Run prod casing & cement.

10. Pressure Control Equipment:

Exhibit "E-1". A BOP consisting of two rams with blind rams and pipe rams, and one annular preventer. Below the surface casing, a 2M system will be used. Below the intermediate casing, a 3M system will be used. See attachments for BOP and choke manifold diagrams. An accumulator that meets the requirements in Onshore Order #2 for the pressure rating of the BOP stack. A Rotating head may be installed as needed. A kelly cock will be installed and maintained in operable condition and a drill string safety valve in the open position will be available on the rig floor.

BOP and associated equipment will be installed, used, maintained, and tested in a manner necessary to assure well control and shall be in place and operational prior to drilling the surface casing shoe. The Annular Preventer shall be functioned at least weekly. The pipe and blind rams will be operated each trip. No abnormal pressure or temperature is expected while drilling.

BOPS will be tested by an independent service company. The ram preventers, choke manifold, and safety valves will be tested as follows: On the surface casing, pressure tests will be made to 250 psi low and 2000 psi high. On the intermediate casing, pressure tests will be made to 250 psi low and 3000 psi high.

The Annular Preventer will be tested to 250 psi low and 1000 psi high on the surface casing; and 250 low and 1500 high on the intermediate casing.

Cimarex Energy Co. of Colorado requests a variance to drill this well using a co-flex line between the BOP and choke manifold. Certification for proposed co-flex hose is attached (please see Exhibit F; F-1, F-2, F-3). The hose is not required by the manufacturer to be anchored. In the event the specific hose is not available, one of equal or higher rating will be used.

Application to Drill
Lea 7 Federal Com 2H
Cimarex Energy Co.
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Lea Co., NM

11. Proposed Mud Circulating System:

Depth	Mud Weight	Visc	Fluid Loss	Type Mud
0' to 1780'	7.80 - 8.30	28	NC	FW Spud Mud
1780' to 5770'	9.50 - 10.00	30-32	NC	Brine Water
5770' to 15425'	8.50 - 9.00	30-32	NC	FW/Cut Brine

Sufficient mud materials will be kept on location at all times in order to combat lost circulation or unexpected kicks. In order to run DSTs, open hole logs, and casing, the viscosity and water loss may have to be adjusted in order to meet these needs.

The Mud Monitoring System is an electronic Pason System satisfying requirements of Onshore Order 1.

12. Testing, Logging and Coring Program:

- A. Mud logging program: 2 man unit from 5770 to TD
- B. Electric logging program: CNL / LDT / CAL / GR, DLL /GR -- Inter. Csg to TD
CNL /GR -- Surf to Inter. Csg
- C. No DSTs or cores are planned at this time
- D. CBL w/ CCL from as far as gravity will let it fall to TOC

13. Potential Hazards:

No abnormal pressures or temperatures are expected. In accordance with Onshore Order 6, Cimarex does not anticipate that there will be enough H₂S from the surface to the Bone Spring formations to meet the BLM's minimum requirements for the submission of an "H₂S Drilling Operation Plan" or "Public Protection Plan" for the drilling and completion of this well. Since we have an H₂S Safety package on all wells, attached is an "H₂S Drilling Operations Plan." Adequate flare lines will be installed off the mud / gas separator where gas may be flared safely. All personnel will be familiar with all aspects of safe operation of equipment being used.

Estimated BHP: 4982 psi

Estimated BHT: 168°

14. Construction and Drilling:

Road and location construction will begin after BLM approval of APD. Anticipated spud date as soon as approved.

Drilling expected to take: 35 days.

If production casing is run an additional 30 days will be required to complete and construct surface facilities.

15. Other Facets of Operations:

If production casing is run an additional 30 days will be required to complete and construct surface facilities.

Bone Spring pay will be perforated and stimulated.

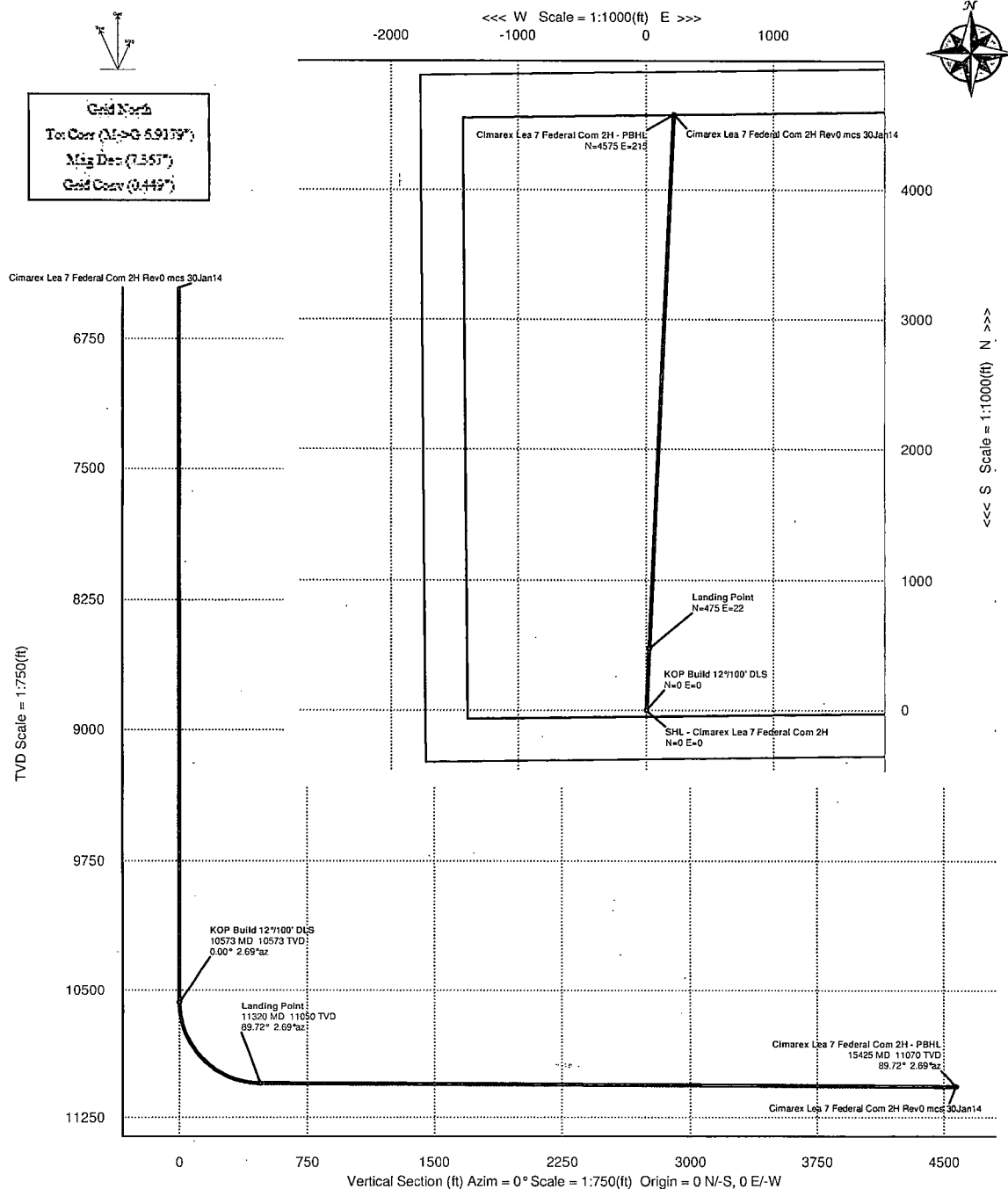
The proposed well will be tested and potentialized as **Oil**



Cimarex

PATHFINDER
A Schlumberger Company

WELL	Lea 7 Federal Com 2H	FIELD	NM Lea County (NAD 83)	STRUCTURE	TBD
Magnetic Parameters Model: 800M 2013	Dip: 60.43° Mag Dec: 7.301°	Date: January 30, 2014 P/E: 48203.007	Surface Location Lat: N 32 34 53.195 Lon: W 103 29 58.414	NAD83 New Mexico State Plane, Eastern Zone, US Feet Northing: 576255.94 NUS Easting: 798156.92 NUS Grid Cont: 0.449° Scale Fact: 0.99996403	Macro/Anno Sect: Cimarex Lea 7 Federal Com 2HVD Ref. Ground Elevation(3672ft above MSL) Plan: Rev0 mcs 30Jan14 Srvy Date: January 30, 2014



Critical Points

Critical Point	MD	INCL	AZIM	TVD	VSEC	N(+)/S(-)	E(+)/W(-)	DLS
SHL - Cimarex								
Lea 7 Federal	0.00	0.00	2.69	0.00	0.00	0.00	0.00	
Com 2H								
KOP Build								
12 1/100' DLS	10572.54	0.00	2.69	10572.54	0.00	0.00	0.00	0.00
Landing Point	11320.21	89.72	2.69	11050.00	474.61	474.61	22.32	12.00
Cimarex Lea 7								
Federal Com	15425.38	89.72	2.69	11070.00	4575.20	4575.20	215.16	0.00
2H - PBHL								



Cimarex Lea 7 Federal Com 2H Rev0 mcs 30Jan14 Proposal Report 100'

Interpolated

(Def Plan)



Report Date: February 01, 2014 - 12:09 PM
Client: Cimarex
Field: NM Lea County (NAD 83)
Structure / Slot: Cimarex Lea 7 Federal Com 2H / Cimarex Lea 7 Federal Com 2H
Well: Cimarex Lea 7 Federal Com 2H
Borehole: Original Borehole
UWI / API#: Unknown / Unknown
Survey Name: Cimarex Lea 7 Federal Com 2H Rev0 mcs 30Jan14
Survey Date: January 30, 2014
Tort / AHD / DDI / ERD Ratio: 89.721 ° / 4580.256 ft / 5.758 / 0.414
Coordinate Reference System: NAD83 New Mexico State Plane, Eastern Zone, US Feet
Location Lat / Long: N 32° 34' 53.19458", W 103° 29' 58.41437"
Location Grid N/E Y/X: N 576265.940 ftUS, E 798156.920 ftUS
CRS Grid Convergence Angle: 0.4490 °
Grid Scale Factor: 0.99998463

Survey / DLS Computation: Minimum Curvature / Lubinski
Vertical Section Azimuth: 0.000 ° (Grid North)
Vertical Section Origin: 0.000 ft, 0.000 ft
TVD Reference Datum: Ground Elevation
TVD Reference Elevation: 3672.000 ft above MSL
Seabed / Ground Elevation: 3672.000 ft above MSL
Magnetic Declination: 7.367 °
Total Gravity Field Strength: 998.4914mgn (9.80665 Based)
Total Magnetic Field Strength: 48559.002 nT
Magnetic Dip Angle: 60.454 °
Declination Date: January 30, 2014
Magnetic Declination Model: BGGM 2013
North Reference: Grid North
Grid Convergence Used: 0.4490 °
Total Corr Mag North->Grid North: 6.9179 °

Local Coord Referenced To: Structure Reference Point

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")	Closure (ft)	Closure Azimuth (°)	DLS ("/100ft)
SHL - Cimarex Lea 7 Federal Com 2H	0.00	0.00	2.69	0.00	0.00	0.00	0.00	576265.94	798156.92	N 32 34 53.19	W 103 29 58.41	0.00	0.00	N/A
	100.00	0.00	2.69	100.00	0.00	0.00	0.00	576265.94	798156.92	N 32 34 53.19	W 103 29 58.41	0.00	0.00	0.00
	200.00	0.00	2.69	200.00	0.00	0.00	0.00	576265.94	798156.92	N 32 34 53.19	W 103 29 58.41	0.00	0.00	0.00
	300.00	0.00	2.69	300.00	0.00	0.00	0.00	576265.94	798156.92	N 32 34 53.19	W 103 29 58.41	0.00	0.00	0.00
	400.00	0.00	2.69	400.00	0.00	0.00	0.00	576265.94	798156.92	N 32 34 53.19	W 103 29 58.41	0.00	0.00	0.00
	500.00	0.00	2.69	500.00	0.00	0.00	0.00	576265.94	798156.92	N 32 34 53.19	W 103 29 58.41	0.00	0.00	0.00
	600.00	0.00	2.69	600.00	0.00	0.00	0.00	576265.94	798156.92	N 32 34 53.19	W 103 29 58.41	0.00	0.00	0.00
	700.00	0.00	2.69	700.00	0.00	0.00	0.00	576265.94	798156.92	N 32 34 53.19	W 103 29 58.41	0.00	0.00	0.00
	800.00	0.00	2.69	800.00	0.00	0.00	0.00	576265.94	798156.92	N 32 34 53.19	W 103 29 58.41	0.00	0.00	0.00
	900.00	0.00	2.69	900.00	0.00	0.00	0.00	576265.94	798156.92	N 32 34 53.19	W 103 29 58.41	0.00	0.00	0.00
	1000.00	0.00	2.69	1000.00	0.00	0.00	0.00	576265.94	798156.92	N 32 34 53.19	W 103 29 58.41	0.00	0.00	0.00
	1100.00	0.00	2.69	1100.00	0.00	0.00	0.00	576265.94	798156.92	N 32 34 53.19	W 103 29 58.41	0.00	0.00	0.00
	1200.00	0.00	2.69	1200.00	0.00	0.00	0.00	576265.94	798156.92	N 32 34 53.19	W 103 29 58.41	0.00	0.00	0.00
	1300.00	0.00	2.69	1300.00	0.00	0.00	0.00	576265.94	798156.92	N 32 34 53.19	W 103 29 58.41	0.00	0.00	0.00
	1400.00	0.00	2.69	1400.00	0.00	0.00	0.00	576265.94	798156.92	N 32 34 53.19	W 103 29 58.41	0.00	0.00	0.00
	1500.00	0.00	2.69	1500.00	0.00	0.00	0.00	576265.94	798156.92	N 32 34 53.19	W 103 29 58.41	0.00	0.00	0.00
	1600.00	0.00	2.69	1600.00	0.00	0.00	0.00	576265.94	798156.92	N 32 34 53.19	W 103 29 58.41	0.00	0.00	0.00
	1700.00	0.00	2.69	1700.00	0.00	0.00	0.00	576265.94	798156.92	N 32 34 53.19	W 103 29 58.41	0.00	0.00	0.00
	1800.00	0.00	2.69	1800.00	0.00	0.00	0.00	576265.94	798156.92	N 32 34 53.19	W 103 29 58.41	0.00	0.00	0.00
	1900.00	0.00	2.69	1900.00	0.00	0.00	0.00	576265.94	798156.92	N 32 34 53.19	W 103 29 58.41	0.00	0.00	0.00
	2000.00	0.00	2.69	2000.00	0.00	0.00	0.00	576265.94	798156.92	N 32 34 53.19	W 103 29 58.41	0.00	0.00	0.00
	2100.00	0.00	2.69	2100.00	0.00	0.00	0.00	576265.94	798156.92	N 32 34 53.19	W 103 29 58.41	0.00	0.00	0.00
	2200.00	0.00	2.69	2200.00	0.00	0.00	0.00	576265.94	798156.92	N 32 34 53.19	W 103 29 58.41	0.00	0.00	0.00
	2300.00	0.00	2.69	2300.00	0.00	0.00	0.00	576265.94	798156.92	N 32 34 53.19	W 103 29 58.41	0.00	0.00	0.00
	2400.00	0.00	2.69	2400.00	0.00	0.00	0.00	576265.94	798156.92	N 32 34 53.19	W 103 29 58.41	0.00	0.00	0.00
	2500.00	0.00	2.69	2500.00	0.00	0.00	0.00	576265.94	798156.92	N 32 34 53.19	W 103 29 58.41	0.00	0.00	0.00
	2600.00	0.00	2.69	2600.00	0.00	0.00	0.00	576265.94	798156.92	N 32 34 53.19	W 103 29 58.41	0.00	0.00	0.00
	2700.00	0.00	2.69	2700.00	0.00	0.00	0.00	576265.94	798156.92	N 32 34 53.19	W 103 29 58.41	0.00	0.00	0.00
	2800.00	0.00	2.69	2800.00	-0.00	0.00	0.00	576265.94	798156.92	N 32 34 53.19	W 103 29 58.41	0.00	0.00	0.00
	2900.00	0.00	2.69	2900.00	0.00	0.00	0.00	576265.94	798156.92	N 32 34 53.19	W 103 29 58.41	0.00	0.00	0.00

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")	Closure (ft)	Closure Azimuth (°)	DLS (°/100ft)
	3000.00	0.00	2.69	3000.00	0.00	0.00	0.00	576265.94	798156.92	N 32 34 53.19	W 103 29 58.41	0.00	0.00	0.00
	3100.00	0.00	2.69	3100.00	0.00	0.00	0.00	576265.94	798156.92	N 32 34 53.19	W 103 29 58.41	0.00	0.00	0.00
	3200.00	0.00	2.69	3200.00	0.00	0.00	0.00	576265.94	798156.92	N 32 34 53.19	W 103 29 58.41	0.00	0.00	0.00
	3300.00	0.00	2.69	3300.00	0.00	0.00	0.00	576265.94	798156.92	N 32 34 53.19	W 103 29 58.41	0.00	0.00	0.00
	3400.00	0.00	2.69	3400.00	0.00	0.00	0.00	576265.94	798156.92	N 32 34 53.19	W 103 29 58.41	0.00	0.00	0.00
	3500.00	0.00	2.69	3500.00	0.00	0.00	0.00	576265.94	798156.92	N 32 34 53.19	W 103 29 58.41	0.00	0.00	0.00
	3600.00	0.00	2.69	3600.00	0.00	0.00	0.00	576265.94	798156.92	N 32 34 53.19	W 103 29 58.41	0.00	0.00	0.00
	3700.00	0.00	2.69	3700.00	0.00	0.00	0.00	576265.94	798156.92	N 32 34 53.19	W 103 29 58.41	0.00	0.00	0.00
	3800.00	0.00	2.69	3800.00	0.00	0.00	0.00	576265.94	798156.92	N 32 34 53.19	W 103 29 58.41	0.00	0.00	0.00
	3900.00	0.00	2.69	3900.00	0.00	0.00	0.00	576265.94	798156.92	N 32 34 53.19	W 103 29 58.41	0.00	0.00	0.00
	4000.00	0.00	2.69	4000.00	0.00	0.00	0.00	576265.94	798156.92	N 32 34 53.19	W 103 29 58.41	0.00	0.00	0.00
	4100.00	0.00	2.69	4100.00	0.00	0.00	0.00	576265.94	798156.92	N 32 34 53.19	W 103 29 58.41	0.00	0.00	0.00
	4200.00	0.00	2.69	4200.00	0.00	0.00	0.00	576265.94	798156.92	N 32 34 53.19	W 103 29 58.41	0.00	0.00	0.00
	4300.00	0.00	2.69	4300.00	0.00	0.00	0.00	576265.94	798156.92	N 32 34 53.19	W 103 29 58.41	0.00	0.00	0.00
	4400.00	0.00	2.69	4400.00	0.00	0.00	0.00	576265.94	798156.92	N 32 34 53.19	W 103 29 58.41	0.00	0.00	0.00
	4500.00	0.00	2.69	4500.00	0.00	0.00	0.00	576265.94	798156.92	N 32 34 53.19	W 103 29 58.41	0.00	0.00	0.00
	4600.00	0.00	2.69	4600.00	0.00	0.00	0.00	576265.94	798156.92	N 32 34 53.19	W 103 29 58.41	0.00	0.00	0.00
	4700.00	0.00	2.69	4700.00	0.00	0.00	0.00	576265.94	798156.92	N 32 34 53.19	W 103 29 58.41	0.00	0.00	0.00
	4800.00	0.00	2.69	4800.00	0.00	0.00	0.00	576265.94	798156.92	N 32 34 53.19	W 103 29 58.41	0.00	0.00	0.00
	4900.00	0.00	2.69	4900.00	0.00	0.00	0.00	576265.94	798156.92	N 32 34 53.19	W 103 29 58.41	0.00	0.00	0.00
	5000.00	0.00	2.69	5000.00	0.00	0.00	0.00	576265.94	798156.92	N 32 34 53.19	W 103 29 58.41	0.00	0.00	0.00
	5100.00	0.00	2.69	5100.00	0.00	0.00	0.00	576265.94	798156.92	N 32 34 53.19	W 103 29 58.41	0.00	0.00	0.00
	5200.00	0.00	2.69	5200.00	0.00	0.00	0.00	576265.94	798156.92	N 32 34 53.19	W 103 29 58.41	0.00	0.00	0.00
	5300.00	0.00	2.69	5300.00	0.00	0.00	0.00	576265.94	798156.92	N 32 34 53.19	W 103 29 58.41	0.00	0.00	0.00
	5400.00	0.00	2.69	5400.00	0.00	0.00	0.00	576265.94	798156.92	N 32 34 53.19	W 103 29 58.41	0.00	0.00	0.00
	5500.00	0.00	2.69	5500.00	0.00	0.00	0.00	576265.94	798156.92	N 32 34 53.19	W 103 29 58.41	0.00	0.00	0.00
	5600.00	0.00	2.69	5600.00	0.00	0.00	0.00	576265.94	798156.92	N 32 34 53.19	W 103 29 58.41	0.00	0.00	0.00
	5700.00	0.00	2.69	5700.00	0.00	0.00	0.00	576265.94	798156.92	N 32 34 53.19	W 103 29 58.41	0.00	0.00	0.00
	5800.00	0.00	2.69	5800.00	0.00	0.00	0.00	576265.94	798156.92	N 32 34 53.19	W 103 29 58.41	0.00	0.00	0.00
	5900.00	0.00	2.69	5900.00	0.00	0.00	0.00	576265.94	798156.92	N 32 34 53.19	W 103 29 58.41	0.00	0.00	0.00
	6000.00	0.00	2.69	6000.00	0.00	0.00	0.00	576265.94	798156.92	N 32 34 53.19	W 103 29 58.41	0.00	0.00	0.00
	6100.00	0.00	2.69	6100.00	0.00	0.00	0.00	576265.94	798156.92	N 32 34 53.19	W 103 29 58.41	0.00	0.00	0.00
	6200.00	0.00	2.69	6200.00	0.00	0.00	0.00	576265.94	798156.92	N 32 34 53.19	W 103 29 58.41	0.00	0.00	0.00
	6300.00	0.00	2.69	6300.00	0.00	0.00	0.00	576265.94	798156.92	N 32 34 53.19	W 103 29 58.41	0.00	0.00	0.00
	6400.00	0.00	2.69	6400.00	0.00	0.00	0.00	576265.94	798156.92	N 32 34 53.19	W 103 29 58.41	0.00	0.00	0.00
	6500.00	0.00	2.69	6500.00	0.00	0.00	0.00	576265.94	798156.92	N 32 34 53.19	W 103 29 58.41	0.00	0.00	0.00
	6600.00	0.00	2.69	6600.00	0.00	0.00	0.00	576265.94	798156.92	N 32 34 53.19	W 103 29 58.41	0.00	0.00	0.00
	6700.00	0.00	2.69	6700.00	0.00	0.00	0.00	576265.94	798156.92	N 32 34 53.19	W 103 29 58.41	0.00	0.00	0.00
	6800.00	0.00	2.69	6800.00	0.00	0.00	0.00	576265.94	798156.92	N 32 34 53.19	W 103 29 58.41	0.00	0.00	0.00
	6900.00	0.00	2.69	6900.00	0.00	0.00	0.00	576265.94	798156.92	N 32 34 53.19	W 103 29 58.41	0.00	0.00	0.00
	7000.00	0.00	2.69	7000.00	0.00	0.00	0.00	576265.94	798156.92	N 32 34 53.19	W 103 29 58.41	0.00	0.00	0.00
	7100.00	0.00	2.69	7100.00	0.00	0.00	0.00	576265.94	798156.92	N 32 34 53.19	W 103 29 58.41	0.00	0.00	0.00
	7200.00	0.00	2.69	7200.00	0.00	0.00	0.00	576265.94	798156.92	N 32 34 53.19	W 103 29 58.41	0.00	0.00	0.00
	7300.00	0.00	2.69	7300.00	0.00	0.00	0.00	576265.94	798156.92	N 32 34 53.19	W 103 29 58.41	0.00	0.00	0.00
	7400.00	0.00	2.69	7400.00	0.00	0.00	0.00	576265.94	798156.92	N 32 34 53.19	W 103 29 58.41	0.00	0.00	0.00
	7500.00	0.00	2.69	7500.00	0.00	0.00	0.00	576265.94	798156.92	N 32 34 53.19	W 103 29 58.41	0.00	0.00	0.00
	7600.00	0.00	2.69	7600.00	0.00	0.00	0.00	576265.94	798156.92	N 32 34 53.19	W 103 29 58.41	0.00	0.00	0.00
	7700.00	0.00	2.69	7700.00	0.00	0.00	0.00	576265.94	798156.92	N 32 34 53.19	W 103 29 58.41	0.00	0.00	0.00
	7800.00	0.00	2.69	7800.00	0.00	0.00	0.00	576265.94	798156.92	N 32 34 53.19	W 103 29 58.41	0.00	0.00	0.00
	7900.00	0.00	2.69	7900.00	0.00	0.00	0.00	576265.94	798156.92	N 32 34 53.19	W 103 29 58.41	0.00	0.00	0.00
	8000.00	0.00	2.69	8000.00	0.00	0.00	0.00	576265.94	798156.92	N 32 34 53.19	W 103 29 58.41	0.00	0.00	0.00
	8100.00	0.00	2.69	8100.00	0.00	0.00	0.00	576265.94	798156.92	N 32 34 53.19	W 103 29 58.41	0.00	0.00	0.00
	8200.00	0.00	2.69	8200.00	0.00	0.00	0.00	576265.94	798156.92	N 32 34 53.19	W 103 29 58.41	0.00	0.00	0.00
	8300.00	0.00	2.69	8300.00	0.00	0.00	0.00	576265.94	798156.92	N 32 34 53.19	W 103 29 58.41	0.00	0.00	0.00
	8400.00	0.00	2.69	8400.00	0.00	0.00	0.00	576265.94	798156.92	N 32 34 53.19	W 103 29 58.41	0.00	0.00	0.00

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")	Closure (ft)	Closure Azimuth (°)	DLS (°/100ft)
	8500.00	0.00	2.69	8500.00	0.00	0.00	0.00	576265.94	798156.92	N 32 34 53.19	W 103 29 58.41	0.00	0.00	0.00
	8600.00	0.00	2.69	8600.00	0.00	0.00	0.00	576265.94	798156.92	N 32 34 53.19	W 103 29 58.41	0.00	0.00	0.00
	8700.00	0.00	2.69	8700.00	0.00	0.00	0.00	576265.94	798156.92	N 32 34 53.19	W 103 29 58.41	0.00	0.00	0.00
	8800.00	0.00	2.69	8800.00	0.00	0.00	0.00	576265.94	798156.92	N 32 34 53.19	W 103 29 58.41	0.00	0.00	0.00
	8900.00	0.00	2.69	8900.00	0.00	0.00	0.00	576265.94	798156.92	N 32 34 53.19	W 103 29 58.41	0.00	0.00	0.00
	9000.00	0.00	2.69	9000.00	0.00	0.00	0.00	576265.94	798156.92	N 32 34 53.19	W 103 29 58.41	0.00	0.00	0.00
	9100.00	0.00	2.69	9100.00	0.00	0.00	0.00	576265.94	798156.92	N 32 34 53.19	W 103 29 58.41	0.00	0.00	0.00
	9200.00	0.00	2.69	9200.00	0.00	0.00	0.00	576265.94	798156.92	N 32 34 53.19	W 103 29 58.41	0.00	0.00	0.00
	9300.00	0.00	2.69	9300.00	0.00	0.00	0.00	576265.94	798156.92	N 32 34 53.19	W 103 29 58.41	0.00	0.00	0.00
	9400.00	0.00	2.69	9400.00	0.00	0.00	0.00	576265.94	798156.92	N 32 34 53.19	W 103 29 58.41	0.00	0.00	0.00
	9500.00	0.00	2.69	9500.00	0.00	0.00	0.00	576265.94	798156.92	N 32 34 53.19	W 103 29 58.41	0.00	0.00	0.00
	9600.00	0.00	2.69	9600.00	0.00	0.00	0.00	576265.94	798156.92	N 32 34 53.19	W 103 29 58.41	0.00	0.00	0.00
	9700.00	0.00	2.69	9700.00	0.00	0.00	0.00	576265.94	798156.92	N 32 34 53.19	W 103 29 58.41	0.00	0.00	0.00
	9800.00	0.00	2.69	9800.00	0.00	0.00	0.00	576265.94	798156.92	N 32 34 53.19	W 103 29 58.41	0.00	0.00	0.00
	9900.00	0.00	2.69	9900.00	0.00	0.00	0.00	576265.94	798156.92	N 32 34 53.19	W 103 29 58.41	0.00	0.00	0.00
	10000.00	0.00	2.69	10000.00	0.00	0.00	0.00	576265.94	798156.92	N 32 34 53.19	W 103 29 58.41	0.00	0.00	0.00
	10100.00	0.00	2.69	10100.00	0.00	0.00	0.00	576265.94	798156.92	N 32 34 53.19	W 103 29 58.41	0.00	0.00	0.00
	10200.00	0.00	2.69	10200.00	0.00	0.00	0.00	576265.94	798156.92	N 32 34 53.19	W 103 29 58.41	0.00	0.00	0.00
	10300.00	0.00	2.69	10300.00	0.00	0.00	0.00	576265.94	798156.92	N 32 34 53.19	W 103 29 58.41	0.00	0.00	0.00
	10400.00	0.00	2.69	10400.00	0.00	0.00	0.00	576265.94	798156.92	N 32 34 53.19	W 103 29 58.41	0.00	0.00	0.00
KOP Buil'd 12"/100' DLS	10500.00	0.00	2.69	10500.00	0.00	0.00	0.00	576265.94	798156.92	N 32 34 53.19	W 103 29 58.41	0.00	0.00	0.00
	10572.54	0.00	2.69	10572.54	0.00	0.00	0.00	576265.94	798156.92	N 32 34 53.19	W 103 29 58.41	0.00	0.00	0.00
	10600.00	3.30	2.69	10599.98	0.79	0.79	0.04	576266.73	798156.96	N 32 34 53.20	W 103 29 58.41	0.79	2.69	12.00
	10700.00	15.30	2.69	10698.49	16.89	16.89	0.79	576282.83	798157.71	N 32 34 53.36	W 103 29 58.40	16.91	2.69	12.00
	10800.00	27.30	2.69	10791.49	53.10	53.10	2.50	576319.04	798159.42	N 32 34 53.72	W 103 29 58.38	53.16	2.69	12.00
	10900.00	39.30	2.69	10874.93	107.84	107.84	5.07	576373.78	798161.99	N 32 34 54.26	W 103 29 58.35	107.96	2.69	12.00
	11000.00	51.30	2.69	10945.14	178.70	178.70	8.40	576444.64	798165.32	N 32 34 54.96	W 103 29 58.30	178.90	2.69	12.00
	11100.00	63.30	2.69	10999.08	262.60	262.60	12.35	576528.54	798169.27	N 32 34 55.79	W 103 29 58.25	262.90	2.69	12.00
	11200.00	75.30	2.69	11034.37	355.87	355.87	16.74	576621.81	798173.66	N 32 34 56.71	W 103 29 58.19	356.27	2.69	12.00
	11300.00	87.30	2.69	11049.47	454.43	454.43	21.37	576720.36	798178.29	N 32 34 57.69	W 103 29 58.12	454.93	2.69	12.00
Landing Point	11320.21	89.72	2.69	11050.00	474.61	474.61	22.32	576740.55	798179.24	N 32 34 57.89	W 103 29 58.11	475.14	2.69	12.00
	11400.00	89.72	2.69	11050.39	554.31	554.31	26.07	576820.24	798182.99	N 32 34 58.68	W 103 29 58.06	554.92	2.69	0.00
	11500.00	89.72	2.69	11050.88	654.20	654.20	30.77	576920.13	798187.69	N 32 34 59.67	W 103 29 57.99	654.92	2.69	0.00
	11600.00	89.72	2.69	11051.36	754.09	754.09	35.46	577020.01	798192.38	N 32 35 0.65	W 103 29 57.93	754.92	2.69	0.00
	11700.00	89.72	2.69	11051.85	853.98	853.98	40.16	577119.90	798197.08	N 32 35 1.64	W 103 29 57.87	854.92	2.69	0.00
	11800.00	89.72	2.69	11052.34	953.86	953.86	44.86	577219.79	798201.78	N 32 35 2.63	W 103 29 57.80	954.92	2.69	0.00
	11900.00	89.72	2.69	11052.82	1053.75	1053.75	49.56	577319.68	798206.48	N 32 35 3.62	W 103 29 57.74	1054.92	2.69	0.00
	12000.00	89.72	2.69	11053.31	1153.64	1153.64	54.25	577419.56	798211.17	N 32 35 4.60	W 103 29 57.67	1154.92	2.69	0.00
	12100.00	89.72	2.69	11053.80	1253.53	1253.53	58.95	577519.45	798215.87	N 32 35 5.59	W 103 29 57.61	1254.92	2.69	0.00
	12200.00	89.72	2.69	11054.29	1353.42	1353.42	63.65	577619.34	798220.57	N 32 35 6.58	W 103 29 57.55	1354.91	2.69	0.00
	12300.00	89.72	2.69	11054.77	1453.31	1453.31	68.35	577719.22	798225.27	N 32 35 7.57	W 103 29 57.48	1454.91	2.69	0.00
	12400.00	89.72	2.69	11055.26	1553.20	1553.20	73.04	577819.11	798229.96	N 32 35 8.56	W 103 29 57.42	1554.91	2.69	0.00
	12500.00	89.72	2.69	11055.75	1653.08	1653.08	77.74	577919.00	798234.66	N 32 35 9.54	W 103 29 57.35	1654.91	2.69	0.00
	12600.00	89.72	2.69	11056.23	1752.97	1752.97	82.44	578018.88	798239.36	N 32 35 10.53	W 103 29 57.29	1754.91	2.69	0.00
	12700.00	89.72	2.69	11056.72	1852.86	1852.86	87.14	578118.77	798244.06	N 32 35 11.52	W 103 29 57.23	1854.91	2.69	0.00
	12800.00	89.72	2.69	11057.21	1952.75	1952.75	91.83	578218.66	798248.75	N 32 35 12.51	W 103 29 57.16	1954.91	2.69	0.00
	12900.00	89.72	2.69	11057.70	2052.64	2052.64	96.53	578318.54	798253.45	N 32 35 13.50	W 103 29 57.10	2054.91	2.69	0.00
	13000.00	89.72	2.69	11058.18	2152.53	2152.53	101.23	578418.43	798258.15	N 32 35 14.48	W 103 29 57.03	2154.90	2.69	0.00
	13100.00	89.72	2.69	11058.67	2252.41	2252.41	105.93	578518.32	798262.85	N 32 35 15.47	W 103 29 56.97	2254.90	2.69	0.00
	13200.00	89.72	2.69	11059.16	2352.30	2352.30	110.62	578618.20	798267.54	N 32 35 16.46	W 103 29 56.91	2354.90	2.69	0.00
	13300.00	89.72	2.69	11059.64	2452.19	2452.19	115.32	578718.09	798272.24	N 32 35 17.45	W 103 29 56.84	2454.90	2.69	0.00
	13400.00	89.72	2.69	11060.13	2552.08	2552.08	120.02	578817.98	798276.94	N 32 35 18.44	W 103 29 56.78	2554.90	2.69	0.00
	13500.00	89.72	2.69	11060.62	2651.97	2651.97	124.72	578917.86	798281.64	N 32 35 19.42	W 103 29 56.71	2654.90	2.69	0.00
	13600.00	89.72	2.69	11061.11	2751.86	2751.86	129.42	579017.75	798286.33	N 32 35 20.41	W 103 29 56.65	2754.90	2.69	0.00

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")	Closure (ft)	Closure Azimuth (°)	DLS (°/100ft)
	13700.00	89.72	2.69	11061.59	2851.74	2851.74	134.11	579117.64	798291.03	N 32 35 21.40	W 103 29 56.59	2854.90	2.69	0.00
	13800.00	89.72	2.69	11062.08	2951.63	2951.63	138.81	579217.52	798295.73	N 32 35 22.39	W 103 29 56.52	2954.90	2.69	0.00
	13900.00	89.72	2.69	11062.57	3051.52	3051.52	143.51	579317.41	798300.43	N 32 35 23.38	W 103 29 56.46	3054.89	2.69	0.00
	14000.00	89.72	2.69	11063.06	3151.41	3151.41	148.21	579417.30	798305.12	N 32 35 24.36	W 103 29 56.39	3154.89	2.69	0.00
	14100.00	89.72	2.69	11063.54	3251.30	3251.30	152.90	579517.18	798309.82	N 32 35 25.35	W 103 29 56.33	3254.89	2.69	0.00
	14200.00	89.72	2.69	11064.03	3351.19	3351.19	157.60	579617.07	798314.52	N 32 35 26.34	W 103 29 56.27	3354.89	2.69	0.00
	14300.00	89.72	2.69	11064.52	3451.08	3451.08	162.30	579716.96	798319.22	N 32 35 27.33	W 103 29 56.20	3454.89	2.69	0.00
	14400.00	89.72	2.69	11065.00	3550.96	3550.96	167.00	579816.84	798323.91	N 32 35 28.32	W 103 29 56.14	3554.89	2.69	0.00
	14500.00	89.72	2.69	11065.49	3650.85	3650.85	171.69	579916.73	798328.61	N 32 35 29.30	W 103 29 56.07	3654.89	2.69	0.00
	14600.00	89.72	2.69	11065.98	3750.74	3750.74	176.39	580016.62	798333.31	N 32 35 30.29	W 103 29 56.01	3754.89	2.69	0.00
	14700.00	89.72	2.69	11066.47	3850.63	3850.63	181.09	580116.50	798338.01	N 32 35 31.28	W 103 29 55.95	3854.88	2.69	0.00
	14800.00	89.72	2.69	11066.95	3950.52	3950.52	185.79	580216.39	798342.70	N 32 35 32.27	W 103 29 55.88	3954.88	2.69	0.00
	14900.00	89.72	2.69	11067.44	4050.41	4050.41	190.48	580316.28	798347.40	N 32 35 33.26	W 103 29 55.82	4054.88	2.69	0.00
	15000.00	89.72	2.69	11067.93	4150.29	4150.29	195.18	580416.16	798352.10	N 32 35 34.24	W 103 29 55.75	4154.88	2.69	0.00
	15100.00	89.72	2.69	11068.41	4250.18	4250.18	199.88	580516.05	798356.80	N 32 35 35.23	W 103 29 55.69	4254.88	2.69	0.00
	15200.00	89.72	2.69	11068.90	4350.07	4350.07	204.58	580615.94	798361.49	N 32 35 36.22	W 103 29 55.62	4354.88	2.69	0.00
	15300.00	89.72	2.69	11069.39	4449.96	4449.96	209.27	580715.82	798366.19	N 32 35 37.21	W 103 29 55.56	4454.88	2.69	0.00
	15400.00	89.72	2.69	11069.88	4549.85	4549.85	213.97	580815.71	798370.89	N 32 35 38.20	W 103 29 55.50	4554.88	2.69	0.00
Cimarex Lea 7 Federal Com 2H - PBHL	15425.38	89.72	2.69	11070.00	4575.20	4575.20	215.16	580841.06	798372.08	N 32 35 38.45	W 103 29 55.48	4560.26	2.69	0.00

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	15425.380	1/100.000	30.000	30.000	SLB_MWD-STD	Original Borehole / Cimarex Lea 7 Federal Com 2H Rev0 mcs

Drilling 12-1/4" hole
below 13 3/8" Casing

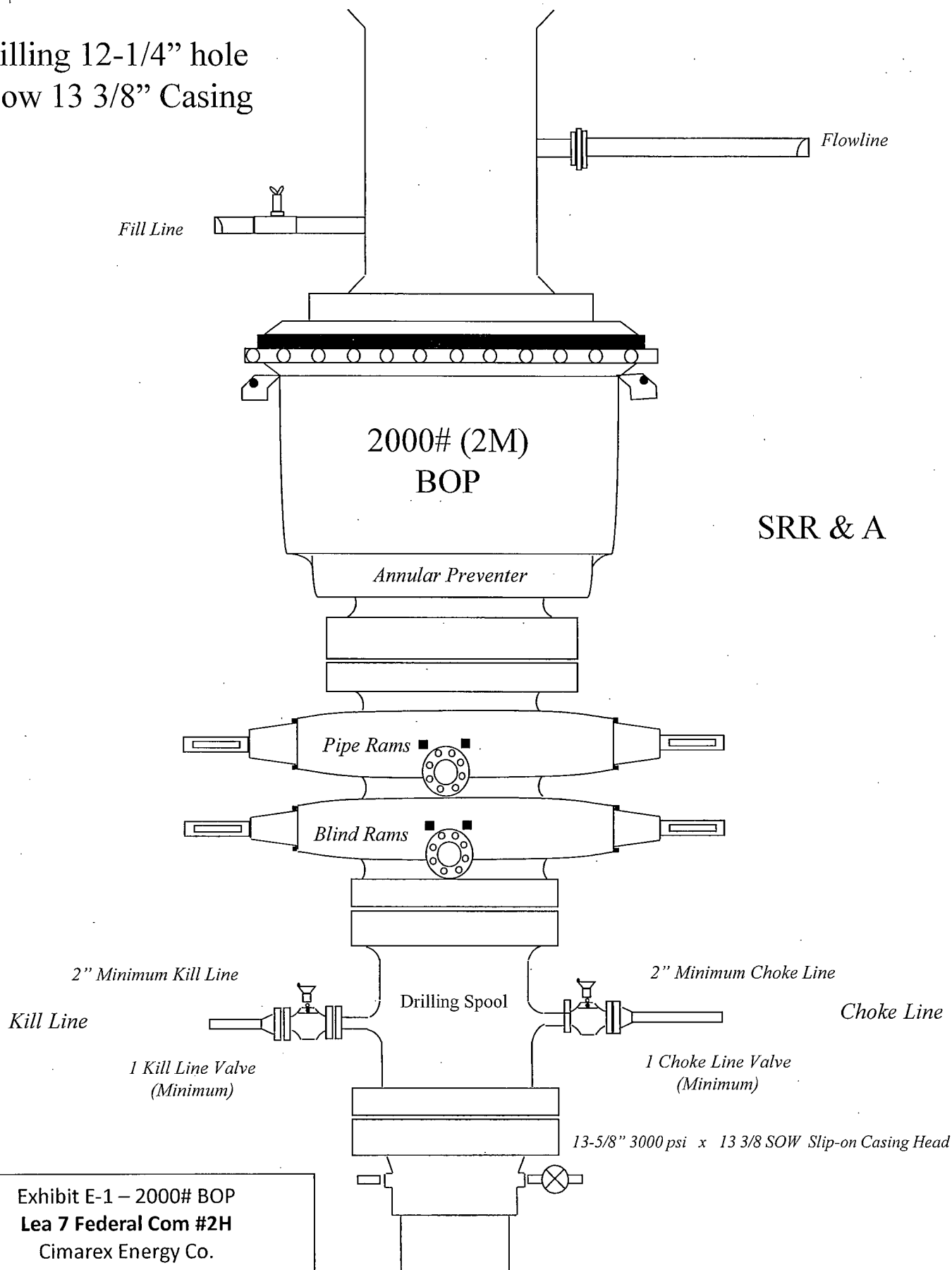


Exhibit E-1 – 2000# BOP

Lea 7 Federal Com #2H

Cimarex Energy Co.

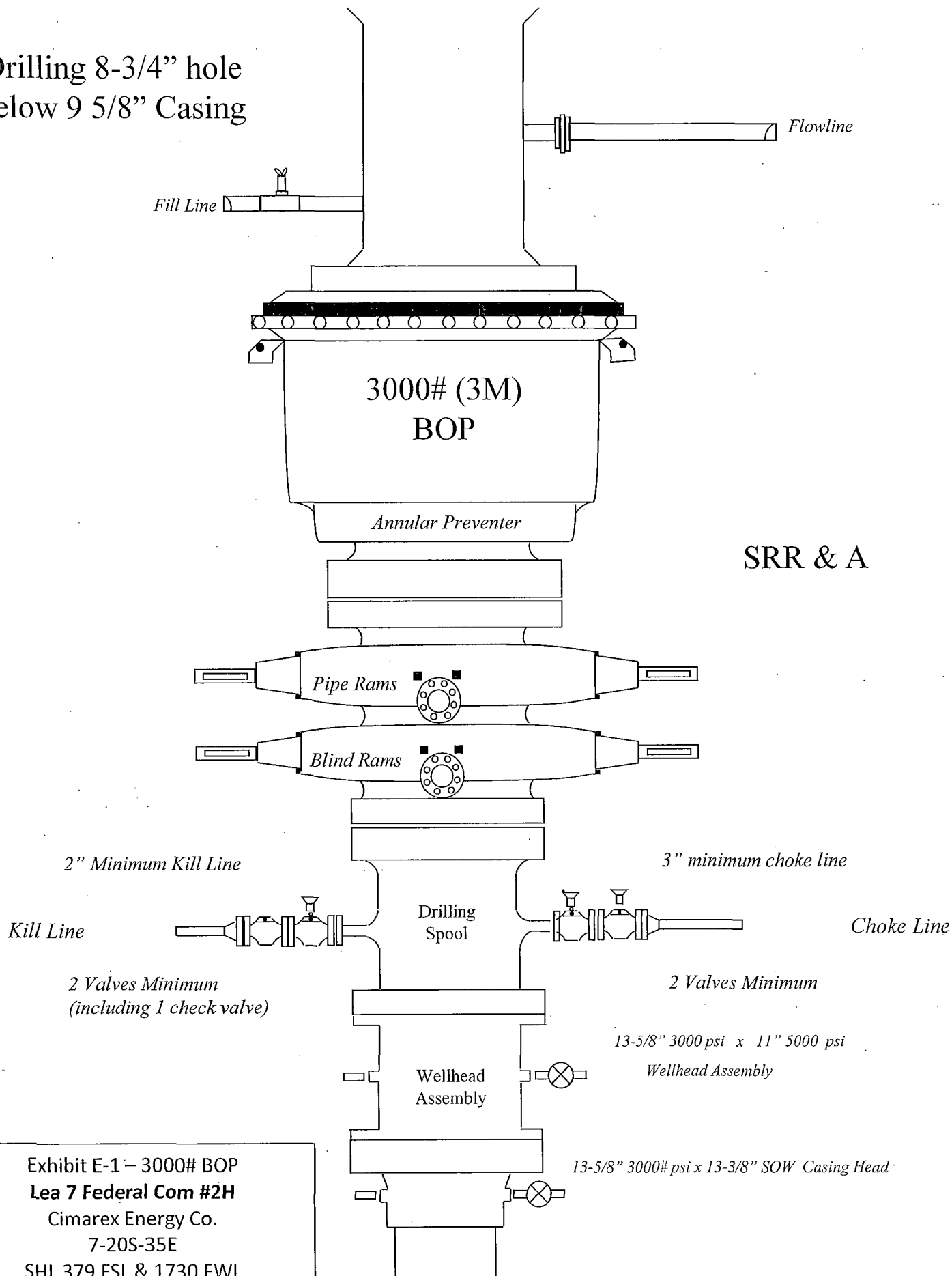
7-20S-35E

SHL 379 FSL & 1730 FWL

BHL 330 FNL & 1980 FWL

Lea County, NM

Drilling 8-3/4" hole
below 9 5/8" Casing



SRR & A

Exhibit E-1 – 3000# BOP
Lea 7 Federal Com #2H
Cimarex Energy Co.
7-20S-35E
SHL 379 FSL & 1730 FWL
BHL 330 FNL & 1980 FWL
Lea County, NM

Choke Line:
 2M System: 2" Minimum
 3M System: 3" Minimum
 OPTIONAL: 4" Flex Hose may be
 used if approved in APD

BOP Outlet

HCR
 (Optional)

2M: 1 Valve Minimum
 3M: 2 Valves Minimum
 HCR Valve is optional

Adjustable
 Choke

Choke
 Isolation
 Valve

Mud Tanks
 40'-50' from
 wellbore

Buffer Tank

Mud Tanks

Shaker

8" Nominal

To Flare 150'

Mud-Gas
 Separator

(Bleed line)

Bleed line to burn area (150')

3" Minimum
 (Not connected to buffer tank)

To mud gas separator
 2" Nominal

To mud gas separator
 2" Nominal

REMOTELY
 OPERATED
 Adjustable
 Choke

Choke
 Isolation
 Valve

Drilling Operations Choke Manifold 2M/3M Service

Exhibit E-1 – Choke Manifold Diagram
Lea 7 Federal Com #2H
 Cimarex Energy Co.
 7-20S-35E
 SHL 379 FSL & 1730 FWL
 BHL 330 FNL & 1980 FWL
 Lea County, NM

Exhibit F-1 -- Co-Flex Hose Hydrostatic Test.

Lea 7 Federal Com #2H

Cimarex Energy Co.

7-20S-35E

SHL 379 FSL & 1730 FWL

BHL 330 FNL & 1980 FWL

Lea County, NM



Midwest Hose & Specialty, Inc.

INTERNAL HYDROSTATIC TEST REPORT

Customer:

Oderco Inc

P.O. Number:

odyd-271

HOSE SPECIFICATIONS

Type: Stainless Steel Armor
Choke & Kill Hose

Hose Length: 45'ft.

I.D. 4 INCHES

O.D. 9 INCHES

WORKING PRESSURE

10,000 PSI

TEST PRESSURE

15,000 PSI

BURST PRESSURE

0 PSI

COUPLINGS

Stem Part No.

OKC
OKC

Ferrule No.

OKC
OKC

Type of Coupling:

Swage-It

PROCEDURE

Hose assembly pressure tested with water at ambient temperature.

TIME HELD AT TEST PRESSURE

15 MIN.

ACTUAL BURST PRESSURE:

0 PSI

Hose Assembly Serial Number:

79793

Hose Serial Number:

OKC

Comments:

Date:

3/8/2011

Tested:

A. James Jones

Approved:

Kevin Hest

March 3, 2011

Internal Hydrostatic Test Graph



Midwest Hose
& Specialty, Inc.

Customer: Houston

Pick Ticket #: 94260

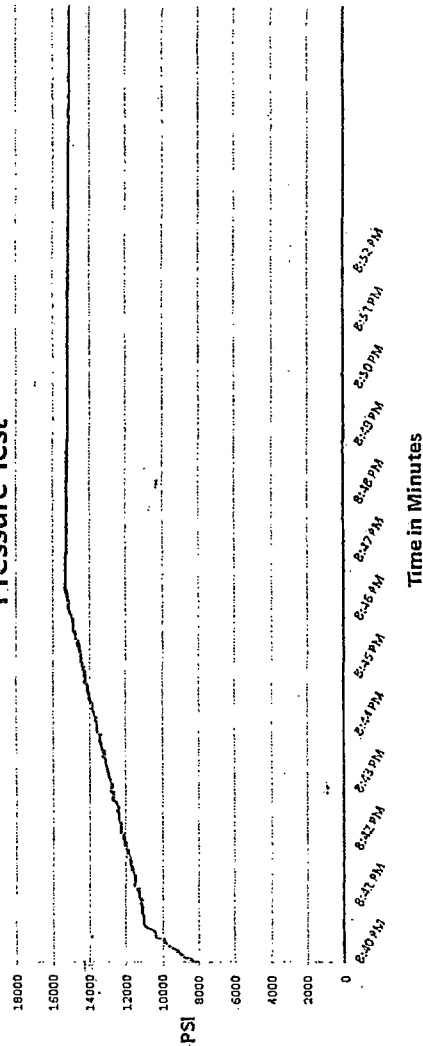
Hose Specifications

Hose Type: C&K
L.D. 4"
Working Pressure: 10000 PSI
Length: 45'
O.D. 6.09"
Burst Pressure: Standard Safety Multiplier Applies

Verification

Time of Fitting: 4/1/16 10K
Die Size: 6.38"
Hose Serial #: 5544
Coupling Method: Swage
Final O.D.: 6.25"
Hose Assembly Serial #: 79793

Pressure Test



Test Pressure: 15000 PSI
Time Held at Test Pressure: 11 Minutes
Actual Burst Pressure: 15463 PSI
Peak Pressure: 15463 PSI

Comments: Hose assembly pressure tested with water at ambient temperature.

Tested By: Zac McConnell

Approved By: Kim Thomas

[Signature]

[Signature]



Midwest Hose
& Specialty, Inc.

Exhibit F -3- Co-Flex Hose
Lea 7 Federal Com #2H
Cimarex Energy Co.
7-20S-35E
SHL 379 FSL & 1730 FWL
BHL 330 FNL & 1980 FWL
Lea County, NM

Specification Sheet Choke & Kill Hose

The Midwest Hose & Specialty Choke & Kill hose is manufactured with only premium components. The reinforcement cables, inner liner and cover are made of the highest quality material to handle the tough drilling applications of today's industry. The end connections are available with API flanges, API male threads, hubs, hammer unions or other special fittings upon request. Hose assembly is manufactured to API 7K. This assembly is wrapped with fire resistant vermiculite coated fiberglass insulation, rated at 2000 degrees with stainless steel armor cover.

Working Pressure:	5,000 or 10,000 psi working pressure
Test Pressure:	10,000 or 15,000 psi test pressure
Reinforcement:	Multiple steel cables
Cover:	Stainless Steel Armor
Inner Tube:	Petroleum resistant, Abrasion resistant
End Fitting:	API flanges, API male threads, threaded or butt weld hammer unions, unbolt and other special connections
Maximum Length:	110 Feet
ID:	2-1/2", 3", 3-1/2", 4"
Operating Temperature:	-22 deg F to +180 deg F (-30 deg C to +82 deg C)

Exhibit F-2 - Co-Flex Hose
Lea 7 Federal Com #2H
Cimarex Energy Co.
7-20S-35E
SHL 379 FSL & 1730 FWL
BHL 330 FNL & 1980 FWL
Lea County, NM



Midwest Hose & Specialty, Inc.

Certificate of Conformity

Customer:		PO	
DEM		ODYD-271	
SPECIFICATIONS			
Sales Order		Dated:	
79793		3/8/2011	
We hereby certify that the material supplied for the referenced purchase order to be true according to the requirements of the purchase order and current industry standards. Supplier: Midwest Hose & Specialty, Inc. 10640 Tanner Road Houston, Texas 77041			
Comments:			
Approved:		Date:	
<i>David Straker</i>		3/8/2011	

Exhibit F – Co-Flex Hose

Lea 7 Federal Com #2H

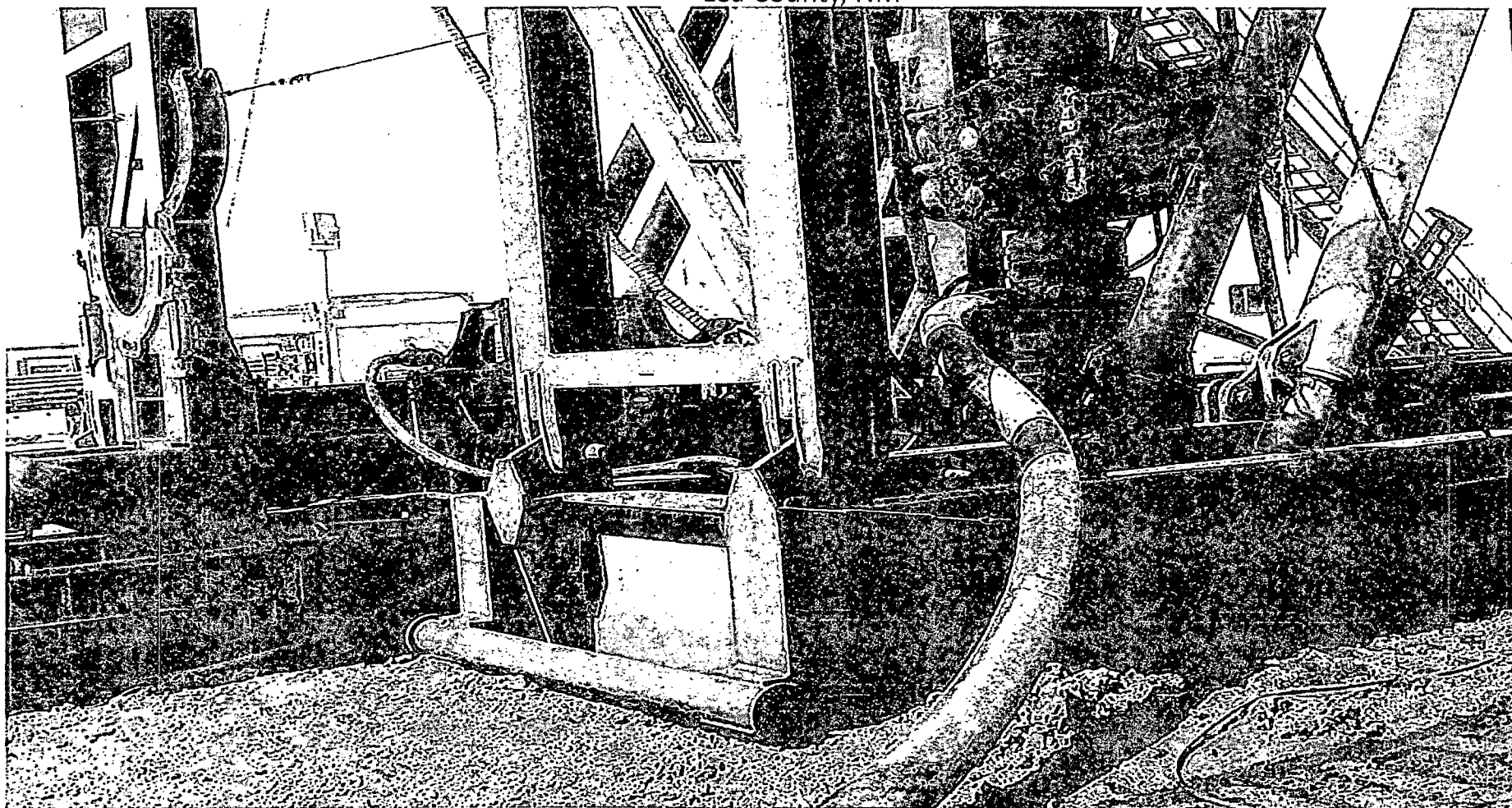
Cimarex Energy Co.

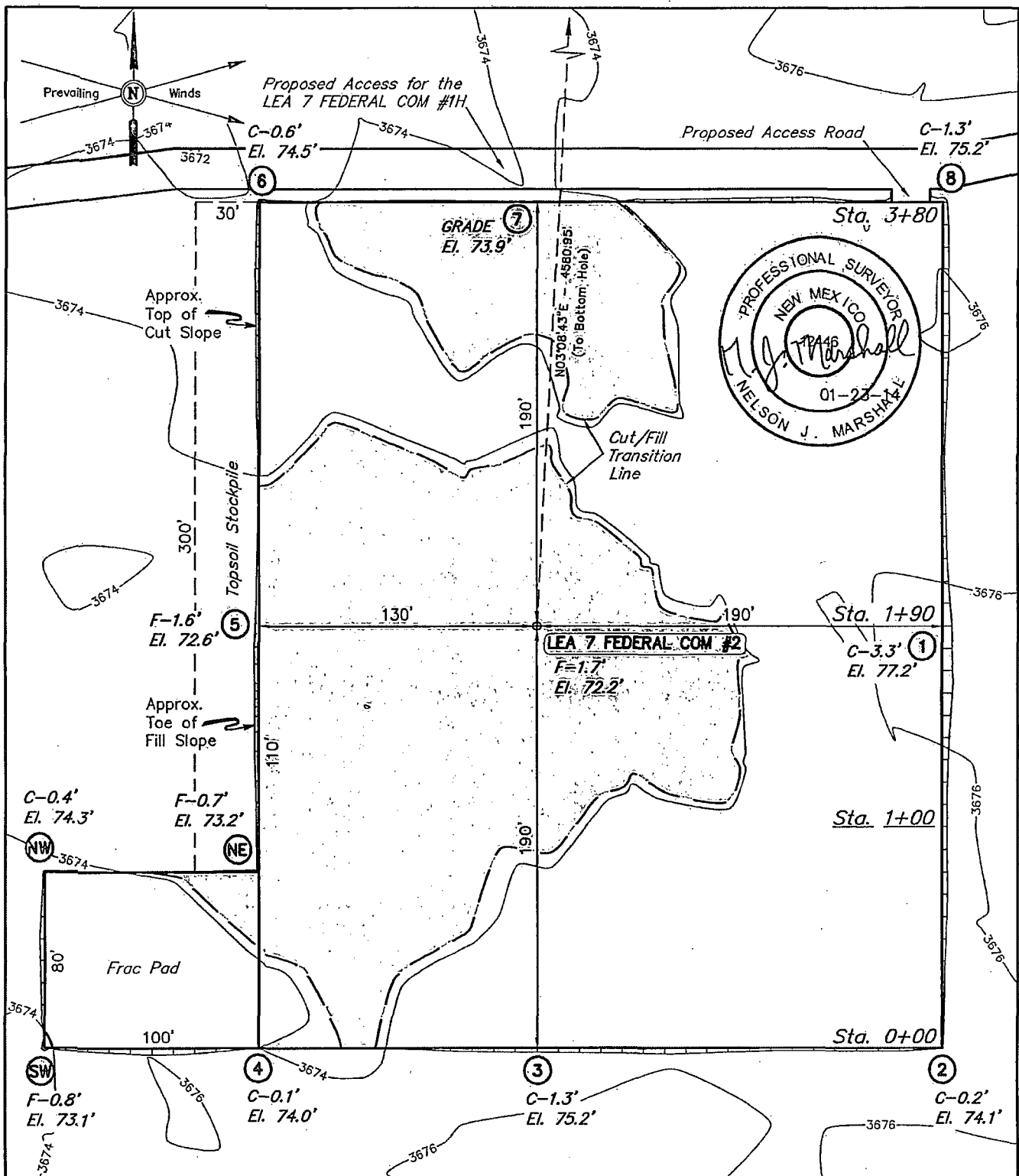
7-20S-35E

SHL 379 FSL & 1730 FWL

BHL 330 FNL & 1980 FWL

Lea County, NM





ELEV. UNGRADED GROUND AT LOC. STAKE = 3672.2' FINISHED GRADE ELEV. AT LOC. STAKE = 3673.9'

NOTES:

- Flare pit is to be located a min. of 100' from the well head.
- Underground utilities shown on this sheet are for visualization purposes only, actual locations to be determined prior to construction.
- Earthwork calculations require a fill of 1.7' @ the location stake. All fill is to be compacted to a minimum of 95% of the maximum dry density obtained by AASHTO method t-99.



CIMAREX ENERGY CO.

LEA 7 FEDERAL COM #2H
SECTION 7, T20S, R35E, N.M.P.M.
379' FSL 1730' FWL

DRAWN BY: C.A.G.

SCALE: 1" = 60'

DATE: 01-21-14

REVISED:

LOCATION LAYOUT

EXHIBIT D



Corporate Office * 85 South 200 East
Vernal, UT 84078 * (435) 789-1017

