



Summary Report

Completion
Complete

Job Start Date: 2/12/2013

Job End Date: 3/20/2013

30-015-40818

Well Name HERITAGE 2 15 2H		Lease Heritage 2 15-1	Field Name Culebra Bluff South	Business Unit Mid-Continent/Alaska	
Ground Elevation (ft) 3,034.00	Original RKB (ft) 3,059.00	Current RKB Elevation 3,059.00, 1/9/2013		Mud Line Elevation (ft)	Water Depth (ft)

Report Start Date: 2/12/2013

Com

PJSM with High Tech, Genco, and Lobo. Discuss TIF, SWA, JSA Tenet #2. Emergency Plan, use of spotters for backing equipment, pinch points, heavy lifting and communication.

Meet with Halliburton and discuss and mark off position for frac tanks and equipment. Rig Safety trailer and Company Rep. trailer. Set sign in shack and gate.

Report Start Date: 2/13/2013

Com

PJSM with Vetco and High tech personel. Discuss tenet # 3. Discussed TIF, SWA, JSA Communication Pressure Heavy lifting Pinch points. Crane operations and Emergency plan.

Nipple up two casing valves for double barrier.

PJSM with Oil state. Discuss Tenet # 3 JSA, TIF, Communication, Emergency Plan, and SWA.

Remove blind tree cap. Install lower master frac valve. Remove BPV then install middle frac valve and flow cross. Start building berm for flow back tanks.

Pressure and test 5 1/2 Production casing to 8000 psi for 10 minutes on chart while holding 800 psi on intermediate casing string.

Report Start Date: 2/14/2013

Com

Safety meeting with Petro, RWI, Hobbs and anchor Discussed TIF, SWA, JSA, Communication, Emergency plan Tenet # 4. Foot placement, working around heavy equipment, need for a spotter while backing equipment.

Complete building berms and installing liner for same. Set rig anchors

Report Start Date: 2/15/2013

Com

PJSM with Baker, High Tech, 3 river personal for operation. Discuss Tenet # 5, JSA, TIF, Communication, SWA, In JSA discuss rigging up operation, Testing porceedures for lubricator.

Rig up Baker E line unit to perform Ga. run with 4.72" od. gauge run and run RCBL log.

Test Lubricator to 2500 psi then .G.I.H. with 4.72" O.D. Gauge ring to a depth of 8250'. Then POOH

Rig up to go in hole with RCBL logging tool.

Test lubricator to 2500 psi. then run RCBL log down to 7500' and log up to 6500'. Then re log interval with 2500 psi on casing to 1000' above TOC @ 3500'

Safety meeting to rig down

Rig down Baker E-Line

Report Start Date: 2/16/2013

Com

PJSM with Basic truck driver. Discus TIF, SWA, JSA, Tenet # 6

Finish moving in acid and pump down tanks.

PJSM with High Tech. Discuss SWA, TIF, Communication, Pressure from testing. Tenet # 6. Maintain integrity of dedicated systems.

Pressure test intermediate string to 1500 psi of 10 minutes

Continue setting up pump down frac tanks

Report Start Date: 2/17/2013

Com

PJSM with High Tech, Basic 3 River and Oil State personal prior to rigging up and testing flow back manifold, spotting fresh water frac tanks, and filling pump down tanks.

Fill pump down tanks. R/U up flow back iron and manifold. Upon inspection of Iron some of the iron was out of inspection, had to get additional iron sent to location.

Complete testing flow back lines 250 psi low and 8000 psi high.

Report Start Date: 2/18/2013

Com

Have safety meeting with basic energy talked about TIF, SWA, JSA, Emergency Plans, Communication, Line of fire, pinch points and use of spotter.

Finish setting fresh water fac tanks.

Report Start Date: 2/20/2013

Com

PJSM. Discussed Tenet 10 (We Always involve the right people in decisions that affect procedures and equipment), location traffic, parking requirements, truck backing, spotters, forklift safety, coil tubing ops, crane safety, overhead work, dropped objects, 2-blocking, hoisting equipment, manlift ops, fall protection, striking & struck by hazards, walking w/ loads, pressure & spill control, tripping hazards, hazard ID, homemade devices, hand & body positioning, fatigue, complacency, 4 Pts, emergency response, communication, sign in / out requirements.

Lay containment mats f/ CTU, pump, acid truck. Spot & RU PWR 200T crane, HES CT crane, 2" CTU, pump & iron. Function tested BOP's. CT showed 58.71% fatigue @ 11,202'. Load CT w/ light brine water. Installed CT connector. Pull tested to 20K. Installed 2.875" Dual BPV, Fau Hydraulic Disconnect, Dual Circulating Sub, Hydro-Pull, Extreme Air Navi-Motor & 4.75" JZ Rotary Bit. Function tested motor to 2.5 bpm. NU on wellhead. Test equipment to 4000 psi.

Secured well for night

Report Start Date: 2/21/2013



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PJSM. Discussed Tenet 1, (We Always operate within design and environmental limits), cool weather, high winds, coil tubing ops, crane safety, overhead work, manlift ops, fall protection, striking & struck by hazards, pressure & spill control, tripping hazards, hazard ID, hand & body positioning, fatigue, complacency, 4 Pts, emergency response, communication.

OSHA Regional Safety Stand Down on Load Line Failure. Performed Hazard Hunt at end of Stand Down. Found 1 defective sling on location (not in use). Destroyed & took out of service.

CTU would not start. Waited on Halliburton mechanic to arrive and repair equipment.

Start in hole w/ CT & BHA circulating 0.5 bpm fresh water treated w/ 0.5 gal / 1000 Clay Web. Increased rate to 2.5 bpm @ 8000'. Continued in hole. Pumped 10 bbls gel sweep every 1000' while in lateral. Began getting excess downhole friction drag @ ~11,780'. Begin adding Pipe On Pipe in treated water. Continue in hole pumping 3.0 bpm. Tagged solid @ 12,412 CTM. Appeared to be tagging FC @ 12,424'.

POOH pumping 3.0 bpm until reaching vertical section. Lowered pump rate & finish out of hole.

Bumped surface w/ tools. Shut in and secured well for night.

Report Start Date: 2/22/2013

Com

PJSM. Discussed Tenet 2 (We Always operate in a safe and controlled condition), cool weather, coil tubing ops, acid pumping, handling perf guns, crane safety, overhead work, manlift ops, fall protection, striking & struck by hazards, pressure & spill control, tripping hazards, SWA, hazard ID, hand & body positioning, fatigue, complacency, 4 Pts, emergency response, communication.

OSHA Regional Safety Stand Down on Sling Failure (struck-by). Performed Hazard Hunt at end of Stand Down. No issues.

PU lubricator & BOP's. Layed down milling BHA. Installed circulating sub. PU (5) 3-1/8" TCP guns, loaded 6 spf, 60 deg phase w/ HMX (Maxforce) charges.

RIH w/ CT & perf guns. Tagged FC @ 12,424'.

Picked up off bottom. Positioned guns. Pressured up on well bore to 2300 psi. Fired gun #1 & perforated 11 shots from 12,399 - 12,400.68'. Pulled up hole. Fired gun #2 & perforated 10 shots from 12,284 - 12,285.51'. Pulled up hole. Fired gun #3 & perforated 8 shots from 12,169 - 12,170.18'. Pulled up hole. Fired gun #4 & perforated 8 shots from 12,054 - 12,055.18'. Pulled up hole. Fired gun #5 & perforate 7 shots from 11,939 - 11,940'. RBLH to FC.

Load CT w/ 45 bbls, Z-1/2%, HEFE acid. Pull up hole 43' / min while pumping 1.0 bpm to 11,872'. Begin pumping acid into formation @ 2200 psi. Increased rate to 3 bpm @ 2100 psi. Pumped 3000 gal into perfs. Shut down pumps.

POOH w/ CT & guns. Maintained 1500 - 1700 psi while POOH. All guns fired.

Layed down perf guns. Cut off CT connector. Blew CT dry w/ N2. Rigged down CTU. Spotted float & CTU near crane. Prepared to lift CT reel off of unit to send in for maintenance. Rigging inspection found spreader bar and sling assy to be deficient. Opted not to change out reel on location. Parked unit off site.

Well shut in and secured for night.

Report Start Date: 2/23/2013

Com

PJSM w/ Tetra Tech. Discussed Tenet 3 (We Always ensure safety devices are in place and functioning), location traffic, striking & struck by hazards, tripping hazards, SWA, hazard ID, hand & body positioning, forklift & manlift ops, fall protection, 4 Pts, emergency response, communication.

Begin RU Tetra water transfer lines.

PJSM w/ Target OFS & 3 Rivers Trucking. Discussed Tenet 3 (We Always ensure safety devices are in place and functioning), location traffic, slipping & tripping hazards, pressure washing, aiming wash wands, forklift ops, blind spots, spotters, SWA, hazard ID, hand & body positioning, 4 Pts, emergency response, communication.

Clean & pick up CT containment mats.

PJSM w/ Stinger & High Tech. Discussed Tenet 3 (We Always ensure safety devices are in place and functioning), location traffic, crane safety, rigging equipment, pressure control, striking & struck by hazards, tag lines, SWA, hazard ID, hand & body positioning, 4 Pts, emergency response, communication.

OSHA Regional Safety Stand Down on Flash Fires. Emphasized bleeding off pressure before breaking connections.

SIWHP 300 psi. Removed night cap. RU Stinger WH isolation tool. Bled off back side of tool.

PJSM w/ Halliburton. Discussed Tenet 3 (We Always ensure safety devices are in place and functioning), location traffic, spotters, truck backing, acid mixing, PPE, safety showers, SWA, hazard ID, hand & body positioning, tripping hazards, 4 Pts, emergency response, communication.

Spot acid blender on containment mats. Mixed 44,000 gal HEFE acid in tanks. Spotted 1 sand king. Begin filling w/ frac sand

Report Start Date: 2/24/2013

Com

PJSM w/ Tetra Tech. Discussed Tenet 4 (We Always ensure follow safe work practices and procedures), location traffic, walking surfaces, SWA, hazard ID, hand & body positioning, forklift & manlift ops, fall protection, 4 Pts, emergency response, communication.

Replaced 1 frac tank. Finish RU transfer lines & installing floats. Tested & repaired leak. Partially filled all frac tanks.

PJSM w/ Target OFS & Halliburton. Discussed forklift ops, blind spots, spotters, SWA, high winds, location traffic, hazard ID, hand & body positioning, 4 Pts, emergency response, communication.

Begin laying containment mats for frac equipment. Continue bringing in sand castles & loading w/ frac sand.

PJSM w/ Halliburton Wireline, PWR Crane & PWR Pressure Control. Discussed Tenet 4, location traffic, crane safety, communication, emergency response.

Re-string crane to 4 part line. Move & spot crane. RU wireline lubricator package. Rehead wireline.

PJSM w/ Halliburton Frac Group. Discussed Tenet 4 (We Always ensure follow safe work practices and procedures), location traffic, truck backing, spotters, lifting, crane safety, hoisting equipment, walking w/ loads, striking hazards, equipment inspection, SWA, hazard ID, hand & body positioning, forklift & manlift ops, 4 Pts, emergency response, communication.



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Com

Continue offloading sand. Spot & begin rigging up frac equipment

Report Start Date: 2/25/2013

Com

Finish rigging up Halliburton frac equipment.

TIF safety meeting w/ Halliburton Frac Group, Wireline, Baker Oil Tools, PWR, OSES. Discussed Tenet 5 (We Always meet or exceed customers' requirements), location traffic, truck backing, spotters, lifting, crane safety, hoisting equipment, forklift & manlift safety, wireline ops, explosives handling, rotating equipment, pressure & spill control, striking hazards, SWA, hazard ID, hand & body positioning, 4 Pts, emergency response, communication.

RU crane & wireline unit. Install additional flowback plumbing. Set up OSES WH Isolation crane. Installed back side pop offs. Set @ 1500 psi. Prime up frac pumps. Test to 9000 psi. Set pop off @ 8500 psi. Set 1/2 kickouts @ 7750 psi. Set remaining kickouts @ 7900 psi.

Pressure up on 5-1/2" x 9-5/8" annulus to 700 psi. SICP= 2117 psi. Bring pumps on at 5 bpm. Increased rate to 60 bpm. Worked up to 80 bpm. Pumped Stage 1 frac per Halliburton design. Flushed w/ 25 bbls x-link gel, 25 bbls linear gel. Displaced to top perf with treated water.

Max rate	81.1	bpm
Avg rate	77.2	bpm
Max pressure	6911	psi
Avg pressure	5227	psi
Max prop conc	4.0	ppg
Prop Pumped	325500	lb
Pr White 20/40	290500	lb
CRC 20/40	35000	lb
Gel Pumped	7277	lb
Treated Water	4148	gal
AquaStimUR	99632	gal
Water Fr GR(20)	76679	gal
SilvrStimR(20)	113658	gal
7.5% HEFE	3000	gal
ISIP	2379	psi
5 min	2218	psi
10 min	2158	psi
15 min	2111	psi

Had 2 pumps go down during stage. Finished frac @ ~74 bpm.

RU Halliburton wireline. Test equipment to 6000 psi. Had leak on grease head. Layed down tools and lubricator. Repaired leak. PU lubricator and tools. Tested equipment to 9500 psi. Test good. RIH w/ 4.38" Baker Poppet Style High Value Frac Plug w/ (5) 3-1/8" Max Force Guns loaded 6 spf, 60 deg phase. Gun #5 - 7 shots, Gun #4 - 8 shots, Gun #3 - shots, Gun #2 - 10 shots, Gun #1 - 11 shots. Pumped tools on depth w/ treated water, 3000 gal 7-1/2% NEFE acid, 20 bbl water spacer, 3000 gal 7-1/2% NEFE acid and treated water. Tools on depth @ 11,882'. Continue pumping @ 4 bpm until acid on spot. Set frac plug @ 11,882'. Pressured up and tested plug to 4000 psi. Test good. PU & perf'd Stage 2, gun #1 (11 shots) @ 11,824. Pressure broke. Brought pumps up to 3 bpm. Continue pumping 3 bpm. Pulled up hole. Perf'd gun #2 (10 shots) @ 11,709. Pulled up hole. Perf'd gun #3 (8 shots) @ 11,594. Pulled up hole. Perf'd gun #4 (8 shots) @ 11,479. Pulled up hole. Perf'd gun #5 (7 shots) @ 11,364. POOH running CCL log to above KOP. Layed down tools and installed cap. Max pump down rate 12 bpm @ 130 fpm.

Pressure up on 5-1/2" x 9-5/8" annulus to 700 psi. SICP= 1825 psi. Bring pumps on at 5 bpm. Increased rate to 60 bpm. Worked up to 80 bpm. Pumped Stage 1 frac per Halliburton design. Flushed w/ 25 bbls x-link gel, 25 bbls linear gel. Displaced to top perf with treated water.

Max rate	81	bpm
Avg rate	79.5	bpm
Max pressure	6003	psi
Avg pressure	4964	psi
Max prop conc	4.0	ppg
Prop Pumped	368563	lb
Pr White 20/40	338781	lb
CRC 20/40	29762	lb
Gel Pumped	7277	lb
Treated Water	16287	gal
AquaStimUR	86273	gal
Water Fr GR(20)	81425	gal
SilvrStimR(20)	110755	gal
7.5% HEFE	6000	gal
ISIP	2311	psi
5 min	2155	psi
10 min	0	psi
15 min	0	psi

Report Start Date: 2/26/2013

Com

RU Halliburton Wireline, RIH w/ Baker CFP & (5) 3 1/8 guns, Set plug @ 11,295', Pressure tested plug to 4000 psi, Good Test, Perf Stage 3 (10,789' - 11,249'), 5 clusters 6 spf 60 deg phasing 44 holes, POOH



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Com

SICP= 1825 psi. Bring pumps on at 5 bpm. Increased rate to 60 bpm. Worked up to 80 bpm. Pumped Stage 3 frac per Halliburton design. Flushed w/ 25 bbls x-link gel, 25 bbls linear gel. Displaced to top perf with treated water.

Max rate	81	bpm
Avg rate	79.9	bpm
Max pressure	5244	psi
Avg pressure	4425	psi
Max prop conc	4.0	ppg
Prop Pumped	378404	lb
Pr White 20/40	341737	lb
CRC 20/40	36667	lb
Gel Pumped	3842	lb
Treated Water	9881	gal
AquaStimUR	89758	gal
Water Fr GR(20)	72140	gal
SilvrStimR(20)	69957	gal
7.5% HEFE	6000	gal
ISIP	2336	psi
5 min	2090	psi
10 min	0	psi
15 min	0	psi

RU Halliburton wireline. Test equipment to 6000 psi. Return line frozen on grease head. Layed down tools and lubricator. Replaced hose. PU lubricator and tools. Tested equipment to 6000 psi. Test good. RIH w/ 4.38" Baker Poppet Style High Value Frac Plug w/ (5) 3-1/8" Max Force Guns loaded 6 spf, 60 deg phase. Gun #5 - 7 shots, Gun #4 - 8 shots, Gun #3 - shots, Gun #2 - 10 shots, Gun #1 - 11 shots. Pumped tools on depth w/ treated water, 3000 gal 7-1/2% NEFE acid, 20 bbl water spacer, 3000 gal 7-1/2% NEFE acid and treated water. Tools on depth @ 10,720'. Continue pumping @ 4 bpm until acid on spot. Set frac plug @ 10,720'. Pulled tools uphole. Began pumping @ 3.0 bpm. Appeared to be pumping through plug @ 3.0 bpm. Shut down pump. Brought pumps on @ 6.0 bpm. Pressured up to 4000 psi. Pressure dropped off rapidly. Plugs appeared to be leaking. Brought rate up quickly to 10 bpm. Pressure rose to 6000 psi. Plug still leaking. Picked up line tension. Fired Gun #1. Perforated @ 10,671'. Pressure broke. Established 10 bpm injection rate. Shut down pumps. POOH. Replaced Baker Frac Plug & Gun #1. RBIH. Pumped tools on depth w/ treated water, 3000 gal 7-1/2% NEFE acid, 20 bbls treated water, 3000 gal 7-1/2% NEFE acid. Continued pumping @ 4.0 bpm until acid on spot. Set frac plug @ 10,645'. Pressured up and tested plug to 4000 psi. Test good. PU & perf'd Stage 4, gun #1 (11 shots) @ 10,620'. Pressure broke. Brought pumps up to 3 bpm. Continue pumping 3 bpm. Pulled up hole. Perf'd gun #2 (10 shots) @ 10,519'. Pulled up hole. Perf'd gun #3 (8 shots) @ 10,404'. Pulled up hole. Perf'd gun #4 (8 shots) @ 10,289'. Pulled up hole. Perf'd gun #5 (7 shots) @ 10,174'. POOH. Layed down tools and installed cap. Max pump down rate 12 bpm @ 130 fpm.

SICP= 1680 psi. Bring pumps on at 5 bpm. Increased rate to 60 bpm. Worked up to 80 bpm. Pumped Stage 4 frac per Halliburton design. Flushed w/ 25 bbls x-link gel, 25 bbls linear gel. Displaced to top perf with treated water.

Max rate	81.2	bpm
Avg rate	79.1	bpm
Max pressure	n/a	psi
Avg pressure	4745	psi
Max prop conc	4.0	ppg
Prop Pumped	375374	lb
Pr White 20/40	342187	lb
CRC 20/40	33185	lb
Gel Pumped	4013	lb
Treated Water	26157	gal
AquaStimUR	80287	gal
Water Fr GR(11)	71557	gal
SilvrStimR(11)	117686	gal
7.5% HEFE	10000	gal
ISIP	2211	psi
5 min	2076	psi
10 min	0	psi
15 min	0	psi



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SICP= 1725 psi. Bring pumps on at 5 bpm. Increased rate to 60 bpm. Worked up to 80 bpm. Pumped Stage 5 frac per Halliburton design. Flushed w/ 25 bbls x-link gel, 25 bbls linear gel. Displaced to top perf with treated water.

Max rate 80.5 bpm
Avg rate 79.5 bpm
Max pressure 5431 psi
Avg pressure 4743 psi
Max prop conc 4.0 ppg
Prop Pumped 401835 lb
Pr White 20/40 364332 lb
CRC 20/40 37502 lb
Gel Pumped 4061 lb
Treated Water 16942 gal
AquaStimUR 65602 gal
Water Fr GR(11) 71214 gal
SilvrStimR(11) 115909 gal
7.5% HEFE 4000 gal
ISIP 2353 psi
5 min 2193 psi
10 min 0 psi
15 min 0 psi

Greased WH isolation valves. RU Halliburton wireline. Test equipment to 6000 psi. RIH w/ 4.38" Baker Poppet Style High Value Frac Plug w/ (5) 3-1/8" Max Force Guns loaded 6 spf, 60 deg phase. Gun #5 - 7 shots, Gun #4 - 8 shots, Gun #3 - shots, Gun #2 - 10 shots, Gun #1 - 11 shots. Pumped tools on depth w/ treated water, 2000 gal 7-1/2% NEFE acid, 20 bbl water spacer, 3000 gal 7-1/2% NEFE acid and treated water. Tools on depth @ 10,140'. Continue pumping @ 4 bpm until acid on spot. Set frac plug @ 10,140'. Pressured up and tested plug to 4000 psi. Test good. PU & perf'd Stage 5, gun #1 (11 shots) @ 10,099'. Pressure broke. Brought pumps up to 3 bpm. Continue pumping 3 bpm. Pulled up hole. Perf'd gun #2 (10 shots) @ 9,984'. Pulled up hole. Perf'd gun #3 (8 shots) @ 9,869'. Pulled up hole. Perf'd gun #4 (8 shots) @ 9,754'. Pulled up hole. Perf'd gun #5 (7 shots) @ 9,639'. POOH. Layed down tools and installed cap. Max pump down rate 13 bpm @ 130 fpm.

RU Halliburton Wireline , RIH w/ Baker CFP & (5) 3 1/8 guns , Set plug @ 9,582' , Pressure tested plug to 4000 psi , Good Test , Perf Stage 6 (9,064' - 9,524')
5 clusters 6 spf 60 deg phasing 44 holes , POOH

Report Start Date: 2/27/2013

Com

SICP= 1720 psi. Bring pumps on at 5 bpm. Increased rate to 60 bpm. Worked up to 80 bpm. Pumped Stage 6 frac per Halliburton design. Flushed w/ 25 bbls x-link gel, 25 bbls linear gel. Displaced to top perf with treated water.

Max rate 80.7 bpm
Avg rate 79.5 bpm
Max pressure 4973 psi
Avg pressure 4325 psi
Max prop conc 4.0 ppg
Prop Pumped 387043 lb
Pr White 20/40 351092 lb
CRC 20/40 35950 lb
Gel Pumped 4518 lb
Treated Water 13767 gal
AquaStimUR 54567 gal
Water Fr GR(11) 71459 gal
SilvrStimR(11) 116580 gal
7.5% HEFE 4000 gal
ISIP 2416 psi
5 min 2169 psi
10 min 0 psi
15 min 0 psi

TOP Perf

RU Halliburton Wireline , RIH w/ Baker CFP & (5) 3 1/8 guns , Set plug @ 9,015' , Pressure tested plug to 4000 psi , Good Test , Perf Stage 7 (8,489' - 8,949')
5 clusters 6 spf 60 deg phasing 44 holes , POOH



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Bring pumps on at 5 bpm. Increased rate to 60 bpm. Worked up to 80 bpm. Pumped Stage 7 frac per Halliburton design. Flushed w/ treated water to top perf with treated water. Crew lost hopper at end of 2 ppg stage. Shut off chemicals. Flushed to perms. Regained sand flow. Brought pumps on w/ treated water. Ramped up to 3.0 ppg & finished w/ 4.0 ppg CRC w/ poor 11 vis, poor x-link gel. All sand pumped.

Max rate	81.3	bpm
Avg rate	80.1	bpm
Max pressure	4534	psi
Avg pressure	3839	psi
Max prop conc	4.0	ppg
Prop Pumped	390740	lb
Pr White 20/40	354129	lb
CRC 20/40	36611	lb
Gel Pumped	4404	lb
Treated Water	7138	gal
AquaStimUR	N/A	gal
Water Fr GR(11)	86073	gal
SilvrStimR(11)	N/A	gal
7.5% HEFE	5000	gal
ISIP	2264	psi

Total fluid to recover 48,257 bbls

Rigged down Halliburton wireline & frac equipment & begin transport to Porter Brown 1H. Rigged down PWR crane. Rigged down PWR pressure gear & transport to Porter Brown. Rigged down OSES WH isolation tool and installed cap. Cleaned & PU containment mats. Set mats for CT operations. Begin pumping water out of working tanks back to pond.

Well shut in and secured for night

Report Start Date: 2/28/2013

Com

PJSM. Discussed Tenet 8 (We Always address abnormal conditions), location traffic, parking requirements, multi-company ops, CT RU, crane safety, overhead work, working underneath suspended loads, manlift ops, forklift use, walking w/ loads, tag lines, equipment loading, fall protection, striking & struck by hazards, pressure & spill control, tripping hazards, hazard ID, hand & body positioning, complacency, 4 Pts, emergency response, communication.

Spot & RU Halliburton 2" CTU, crane & pump. RU PWR 200T crane. RU OSES plug catcher & sand trap. RU Tetra water transfer pump. Install 2-7/8" CT connector. Install 2-7/8" dual BPV's, Fau Hydraulic Disconnect, Dual Circ Sub, HydroPull, X Treme Air Navi Motor, Rotary Sub & 4-3/4" JZ Bit. Pull tested connector to 20K. Pressure tested to 3000 psi. Function tested motor @ 2.0 bpm, 1400 psi. NU on wellhead. Tested CT & equipment to 5000 psi. Set out guylines.

Secured well for night.

Report Start Date: 3/1/2013

Com

PJSM. Discussed Tenet 1 (We Always operate within design and environmental limits), parking requirements, CT ops, rotating equipment, pressure & spill control, crane safety, overhead work, working underneath suspended loads, manlift ops, fall protection, striking & struck by hazards, tripping hazards, hazard ID, complacency, 4 Pts, emergency response, communication.

Removed ice plugs from CT pump & flowback manifold. WHSIP 1800 psi. RIH w/ BHA while circulating ~0.50 bpm. Increased rate to 3.0 bpm near heel.

Tagged and drilled 1st plug @ 9015' circulating 3.0 bpm. Adjusted choke and increased flow rate to 3.5 bpm. Continued down hole drilling plugs 2, 3 & 4. Tagged plug #5 @ 10,720'. Pumped 10 bbl sweep after each plug. Made short trip to vertical. Pumped sweeps each CT volume. RBIH. Drilled through plugs 5, 6 & 7. Continued down hole to PBTD @ 12,424'. Pumped 10 bbl sweep after each plug. Pumped additional sweep at PBTD.

POOH w/ CT & BHA pumping periodic sweeps. Maintained 3.0 bpm circulation throughout job. Adjusted flow rate from 3.0 bpm while drilling plugs to 3.5 - 4.0 bpm while RIH & POOH. Had no significantly large pieces of plug in catcher. Had moderate sand returns. Maintained 800 - 1400 psi on well throughout job. Loaded CT & flowback equipment w/ brine at surface.

Well shut in w/ tools at surface.

Report Start Date: 3/2/2013

Com

PJSM. Discussed Tenet 2 (We always operate in a safe and controlled condition), location traffic, truck backing, spotters, hoisting equipment, tag lines, forklift & manlift operations, striking hazards, walking with loads, load securement, slick surfaces, communication, 4 pts, hazard ID, emergency response.

Begin rigging down OSES plug catcher, sand trap and additional flow iron. Re-rig test equipment.

PJSM. Discussed Tenet 2, location traffic, parking requirements, crane safety, overhead work, working underneath suspended loads, manlift ops, forklift use, walking w/ loads, tag lines, equipment loading, fall protection, striking & struck by hazards, pressure & spill control, tripping hazards, hazard ID, hand & body placement, working w/ N2, complacency, 4 Pts, emergency response, communication.

ND CT riser. Break down BHA. NU riser. Jet water out of CT w/ N2. ND riser. Rigged down CTU and stacked on location. Rigged down PWR crane and stacked on location. Washed & picked up containment mats. Begin hauling off cleanout water. Released noise wall (to be rigged down next week).

SIWHP 1250 psi. Opened well to tank on 22/64" choke. Made 58 bwph first hour. Worked choke open to 26/64" flowing ~60 bwph. Continue flowing well to tank w/ 24 hour supervision.

Report Start Date: 3/3/2013



Summary Report

Completion**Complete****Job Start Date: 2/12/2013****Job End Date: 3/20/2013**

Well Name HERITAGE 2 15 2H		Lease Heritage 2 15-1	Field Name Culebra Bluff South	Business Unit Mid-Continent/Alaska	
Ground Elevation (ft) 3,034.00	Original RKB (ft) 3,059.00	Current RKB Elevation 3,059.00, 1/9/2013		Mud Line Elevation (ft)	Water Depth (ft)

Com					
Time	Choke	FWHP	MCFD	BWPH	BOPD
0:00	27/64"	1180	0	66	0
4:00	27/64"	1120	0	64	0
8:00	28/64"	1100	0	77	0
12:00	28/64"	1080	0	58	0
16:00	28/64"	1080	0	61	0
20:00	28/64"	1050	0	64	0

Continue flow test with 24 hr supervision

Total Water to Recover 48,257 bbls
Water Left to Recover 46,285 bbls
Chlorides 72,807 ppm
WH Temp 90 deg F
No Trace of Sand
No Trace of Oil

Report Start Date: 3/4/2013

Com					
Time	Choke	FWHP	MCFD	BWPH	BOPD
0:00	30/64"	1000	0	73	0
4:00	30/64"	950	0	73	0
8:00	30/64"	950	0	67	0
12:00	30/64"	940	0	66	0
14:00	30/64"	930	0	65	0

End Flow Test

Total Water to Recover 48,257 bbls
Water Left to Recover 45,148 bbls
No Trace of Sand
No Trace of Oil

Shut in and secured well.

Report Start Date: 3/4/2013

Com					
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Report Start Date: 3/14/2013

Com					
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Spot EL equipment.

PJSM. Discuss operation, JSA, TIF, SWA, Hazards associated with job, Emergency plan,

R/U Baker Lubricator and test same to 3000 psi bleed pressure off to 600 psi

Open well 900 psi on csg. RIH w/ 4.75" o.d. gauge ring holding pressure to KOP

Get down to 7490' with 4.75" od then POOH

RIH with E line Pkr. Tie into short csg. jt. at 7369' tp 7389' then pull up and set Baker Hornet pkr. 4.72" o.d. and 2.37" id. Pkr. plug pinned for 1800 psi. at 7350'

Pull out of hole with Baker Mod. 20 setting tool and start bleeding off casing starting from 750 psi

Rig down Baker E Line unit continue blowing down well.

Report Start Date: 3/15/2013

Com					
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RIG CREW TRAVEL TO MARK #1

PJSM & TGSM TO ROAD RIG TO HERITAGE 2 15 #2.

PJSM. Discuss job to remove Frac stack from well. JSA, TIF, SWA, Hazards associated with the job.

R/D Frac stack. install test hanger and 2 way check then remove lower frac valve.

N/U BOP & TEST 250# LOW, 2500# HIGH. TESTED OK.

MIRU WORKOVER PACKAGE.

OFFLOAD 2 7/8" L-80 PROD STRING TO RACKS AND STRAP. PREP TO PICK UP PROD STRING MON.AM.

CREW TRAVEL

Report Start Date: 3/18/2013

Com					
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CREW TRAVEL TO LOC.

PJSM & TGSM

R/U HYDROTESTERS. VERIFY & SIGN-OFF ON TBG ELEVATORS. PICK UP ON/OFF TOOL, 2 7/8" 6.5 L-80 PROD TBG OFF RACKS TESTING TO 6K.
RIH W/ JY 228 TO CHECK FOR SPACING. LAY DOWN JT. RIH W/ 6" SUBLATCH ONTO ON/OFF TOOL. LEFT 10 POINTS ON PKR.. LAND TBG IN
HANGER. TEST CSG TO 500#. TESTED OK. R/D TBG TOOLS & FLOOR.



Summary Report

Completion
Complete

Job Start Date: 2/12/2013

Job End Date: 3/20/2013

Well Name HERITAGE 2 15 2H		Lease Heritage 2 15-1	Field Name Culebra Bluff South	Business Unit Mid-Continent/Alaska	
Ground Elevation (ft) 3,034.00	Original RKB (ft) 3,059.00	Current RKB Elevation 3,059.00, 1/9/2013		Mud Line Elevation (ft)	Water Depth (ft)

Com

N/D BOP, N/U FLOW TREE & TEST TO 4,500#.

PUMP OUT PLUG W/ FRESH WTR. PLUG BLEW OUT AT 2,500#. SITP 900#. SICP 0#. I ORDERED AN ESP TUBING HANGER & A CLOSE PROXIMITY ADAPTER FROM QCI

CREW TRAVEL

Report Start Date: 3/19/2013

Com

CREW TRAVEL

TGSM, LOTO, JSA REVIEW

HAD 900 PSI ON TBG, ZERO ON THE CASING. OPEN TBG TO SWAB TANK AND FLOWED BACK TBG VOLUME (43 BBLS) WELL WAS FLOWING @ 120 PSI WITH VALVE FULLY OPEN THROUGHT THE RU HEADER. WHILE WE WERE FLOWING THE TBG BACK WE NOTICED THAT THE CSG PRESSURE HAD COME UP TO 1000 PSI. BLEED CSG PRESSURE BACK TO ZERO AND SI. CONTINUE FLOWING TBG WHILE MONITORING THE CSG PRESSURE. IT CAME BACK UP TO 450 PSI WITHIN 15 MINUTES. SI THE TBG VALVE PRESSURE CAME UP TO 950 PSI AS SOON AS VALVE WAS SHUT. BLEED CSG PRESSURE BACK TO ZERO AND MONITOR FOR 30 MIN. CSG PRESSURE WAS COMING UP BUT NOT AS QUICKLY AS IT HAD BEEN WHIL FLOWING UP THE TBG. CONSULT MIDLAND. SET UP TO SET A PROFILE PLUG IN THE 2.313" PROFILE IN THE AM. COULD NOT GET A TRUCK ANY QUICKER. SI WELL SDON.

Report Start Date: 3/20/2013

Com

CREW TRAVEL

TGSM, JSA REVIEW

HAD 900 PSI ON TBG, ZERO ON CSG. OPEN TBG TO TANK AND FLOW TBG FOR 1 HR. CSG PRESSURE CAME UP 10 PSI. CONSULT W/ MIDLAND.

PRESSURE UP TO 2500 PSI ON CSG. LOST 200 PSI IN 15 MIN. CONSULT W/ MIDLAND. FLUSH TBG W/ 70 BBLS 8.6 CUT BRINE.

SLICKLINE HELD PRE JOB SAFETY MEETING W/ CREW, MIRU. RIH W/ 2.313 PROFILE PLUG. SET PLUG IN XN NIPPLE. POOH W/ SETTING TOOL. RD LUBRICATOR.

LOAD TBG TO 1000 PSI. PRESSURE HELD. BLEED TBG TO 200 PSI. LOAD CSG TO 2000 PSI. TBG PRESSURE CAME UP TO 600 PSI WHILE WE WERE PRESSURING UP ON THE CSG. MONITOR BOTH PRESSURES FOR 20 MINUTES. BOTH PRESSURES HELD. BLEED TBG PRESSURE TO 200 PSI. CONTINUE TO MONITOR BOTH PRESSURES FOR 30 MIN. BOTH HELD SOLID AT 200 AND 2000 PSI. CONSULT MIDLAND.

RIG LUBRICATOR ON WELL RIH TO SHEAR PINS. THEN RIH W/ RETREIVING TOOL. PUT 900 PSI ON TBG POOH W/ PROFILE PLUG. PLUG DRUG ALL THE WAY UP THE HOLE. SLICKLINE RDMO.

RD RU & PU. PREP TO MOVE TO CDU 418H IN THE AM: **** FINAL REPORT****

CREW TRAVEL